CURRICULUM VITAE

Dr. Piotr Piecuch, University Distinguished Professor, MSU Foundation Professor
Department of Chemistry, Michigan State University
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Education

Ph.D., 1988, University of Wrocław, Poland (with Distinction)
M.S., 1983, University of Wrocław, Poland (with Distinction)

Professional Experience

Michigan State University

MSU Foundation Professor, Department of Chemistry, Michigan State University, 2020–present
University Distinguished Professor, Department of Chemistry, Michigan State University, 2007–present
Adjunct Professor, Department of Physics and Astronomy, Michigan State University, 2004–2010, 2014–present
Professor (with tenure), Department of Chemistry, Michigan State University, 2004–present
Adjunct Associate Professor, Department of Physics and Astronomy, Michigan State University, 2003–2004
Associate Professor (with tenure), Department of Chemistry, Michigan State University, 2002–2004
Assistant Professor (tenure track), Department of Chemistry, Michigan State University, 1998–2002

Other Institutions

Clark Way Harrison Distinguished Visiting Professor, Department of Chemistry, Washington University in St. Louis, 2016 (5 months)
Invited Professor and Scientist (equivalent to Visiting Professor), Institute for Molecular Science, National Institutes of Natural Sciences, Okazaki, Japan, 2012/2013 (3 months)
Visiting Professor (Professor Catedrático Visitante), Department of Chemistry, University of Coimbra, Portugal, 2006 (3 months)
Visiting Professor, Fukui Institute for Fundamental Chemistry, Kyoto University, Japan, 2005 (2 months)
Adjunct Assistant Professor, Department of Applied Mathematics, University of Waterloo, Canada, 2000–2003
Postdoctoral Research Associate, Department of Chemistry (QTP), University of Florida, 1997–1998
Visiting Assistant Professor, Department of Chemistry, University of Toronto, Canada, 1995–1997
Visiting Assistant Professor, Department of Applied Mathematics, University of Waterloo, Canada, 1994–1995
Postdoctoral Research Associate, Department of Chemistry, University of Arizona, 1992–1993
Assistant Professor (tenure track; in Polish, "Adiunkt"), Institute of Chemistry (presently, Faculty of Chemistry), University of Wrocław, Poland, 1990–1992 (resigned)

* Also, Adjunct Professor at Department of Physics and Astronomy, Michigan State University.

Postdoctoral Fellow, Department of Applied Mathematics, University of Waterloo, Canada, 1988–1991
Senior Assistant (in Polish, "Starszy Asystent"), Institute of Chemistry (presently, Faculty of Chemistry), University of Wrocław, Poland, 1985–1990
Assistant (in Polish, "Asystent"), Institute of Chemistry (presently, Faculty of Chemistry), University of Wrocław, Poland, 1984–1985
Junior Assistant (in Polish, "Młodszy Asystent"), Institute of Chemistry (presently, Faculty of Chemistry), University of Wrocław, Poland, 1983–1984

Awards and Honors

MSU Foundation Professor, Michigan State University, 2020
The Xingda Lectureship, College of Chemistry and Molecular Engineering, Peking University, Beijing, China, 2019
Elected Member of the International Academy of Quantum Molecular Science, 2018
The Lawrence J. Schaad Lectureship in Theoretical Chemistry, Vanderbilt University, 2017
Fellow of the Royal Society of Chemistry, 2016
Clark Way Harrison Distinguished Visiting Professor, Washington University in St. Louis, 2016
Distinguished Fellow of the Kosciuszko Foundation Collegium of Eminent Scientists, 2015
Outstanding Reviewer for *Chemical Physics Letters* (Elsevier), 2014
Invited Professor and Scientist (Visiting Professor) at the Institute for Molecular Science, Okazaki, Japan, 2012/2013
Fellow of the American Association for the Advancement of Science, 2011
Fellow of the American Physical Society, 2008
University Distinguished Professor, Michigan State University, 2007
The S.R. Palit Memorial Lecture, Indian Association for the Cultivation of Science, Kolkata, India, 2007
Professor Catedrático Visitante (Visiting Professor) at the University of Coimbra, Portugal, 2006
Invitation Fellowship of the Japan Society for the Promotion of Science and Visiting Professorship at Kyoto University, 2005
QSCP Promising Scientist Prize of Centre de Mécanique Ondulatoire Appliquée (France) "For Scientific and Human Endeavour and Achievement," 2004
Elected Corresponding Member of the European Academy of Sciences, Arts, and Humanities (Paris, France), 2003
Alfred P. Sloan Research Fellow, 2002-2004
Wiley–International Journal of Quantum Chemistry Young Investigator Award, 2000
The Polish Chemical Society Award for Research (twice), 1992, 1986
The Minister of National Education of Poland Award for Outstanding Doctoral Dissertation, 1989
The President of the University of Wrocław Award for Research (five times), 1991, 1987, 1986, 1985, 1983
The Polish Chemical Society Award for the Best Master of Science Dissertation in Poland in Academic Year 1982/83, 1983
The Polish Academy of Sciences Award for Undergraduate Research in Chemistry (twice), 1982

Publications, Invited Lectures, and Conference Papers (August 7th, 2022)

- 232 publications in peer-reviewed journals and books (142 after submitting the tenure promotion package; 169 after joining MSU), including 23 invited book chapters, advanced reviews, and feature articles (17 written after submitting the tenure promotion package; 19 from MSU) and 53 other invited articles (42 written after submitting the tenure promotion package; 45 from MSU).

- 6 edited books and 2 edited special journal issues.
- 279 invited lectures (247 given after submitting the tenure promotion package; 265 after joining MSU), including 144 invited talks at national and international symposia and three named lectures.
- 351 conference presentations (280 given after submitting the tenure promotion package; 308 after joining MSU).
- Citations: 12,685 (Web of Science; MSU subscription), 15,354 (Google Scholar).
- Citations per paper: 55.88; articles excluding self-citations citing Piotr Piecuch's papers: 3,942; 1 paper cited 400+ times, 4 papers cited 300+ times, 13 papers cited 200+ times, and 36 papers cited 100+ times (Web of Science; MSU subscription). Google Scholar reported 1 paper cited 500+ times, 3 papers cited 400+ times, 7 papers cited 300+ times, 18 papers cited 200+ times, and 48 papers cited 100+ times.
- h-index: 62 (Web of Science), 70 (Google Scholar).

Research Interests

Theoretical and computational chemistry and physics, in particular: many-body problem in quantum mechanics; quantum theory of molecular electronic structure; quantum theory of nuclear structure; coupled-cluster theory for finite and extended systems; new *ab initio* methods; new algorithms and computer codes for quantum chemistry; local correlation and fragmentation electronic structure approaches for large molecular systems; accurate *ab initio* calculations of molecular potential energy surfaces, property functions, and excited states; theoretical reaction dynamics and spectroscopy; reaction mechanisms in organic and bioinorganic chemistry; catalysis; structural and electronic properties of transition metal nanoparticles; photochemistry; theory of intermolecular forces, including non-additive interactions between atoms and molecules. *Mathematical methods in chemistry and physics*, in particular: diagrammatic and algebraic methods for many-body systems; the Racah-Wigner algebra; graphical methods of the angular momentum theory; group theory; numerical methods; nonlinear equations; symbolic computations.

Teaching Interests

Development of course curriculum that stresses computer applications in chemistry. Emphasizing precision in formulating and addressing scientific problems. Giving equal weight to analytic reasoning and broadly based education. Using active learning and in-class discussions to encourage students to be creative and think critically. Teaching history of scientific discoveries.

Grant Support

U.S. Department of Energy, Office of Science, "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States," PI, $474,999, 12/01/21–06/30/25 (recommended for funding).
National Science Foundation, CHE–Chemical Theory, Models and Computational Methods, "High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," PI, $420,000, 07/01/18–06/30/22.
U.S. Department of Energy, Office of Science, "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States," PI, $493,061, 12/01/18–11/30/21.
Defense Advanced Research Projects Agency, "Super-Photoreagents as a Gateway to Precision

Chemistry," co-PI (with M. Dantus, G.J. Blanchard, B. Borhan, and J.E. Jackson), $799,403 12/01/19–11/30/20.
National Science Foundation, OAC–Office of Advanced Cyberinfrastructure, via Virginia Polytechnic Institute and State University, "S2I2: Impl: The Molecular Sciences Software Institute," PI: T.D. Crawford, co-PIs: T. Head-Gordon, V. Pande, T. Windus, and S. Jha, Michigan State University subaward PI: P. Piecuch, Phase I and Phase II MolSSI Software Fellowships awarded to a Ph.D. student in the Piecuch group, J.E. Deustua, $90,739, 07/01/18–06/30/20.
Michigan State University Foundation, Strategic Partnership Grants Program, "De Novo Computational Methods for Simulating Energy Materials," co-PI (with Y. Qi, H.M. Aktulga, and W. Lai), $399,299 (25 % for P. Piecuch), 07/01/16–06/30/19.
U.S. Department of Energy, Office of Science, "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States," PI, $482,950, 12/01/15–11/30/18.
U.S. Department of Energy, Office of Science, "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States," PI, $360,000, 06/01/13–11/30/15.
U.S. Department of Energy, Office of Science, "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States," PI, $518,000, 06/01/10–05/31/13.
The Air Force Office of Scientific Research (AFOSR) through Spectral Sciences, Inc., the Small Business Technology Transfer (STTR) Program, "Innovative Approaches to Scalable and Multi-reference Coupled Cluster Methods," co-PI (with M. Braunstein and M.S. Gordon), $100,000 ($30,000 for P. Piecuch), 05/03/10–02/02/11.
National Science Foundation, PHY–Nuclear Theory, "Nuclear Structure, Nuclear Astrophysics, and Mesoscopic Physics," co-PI (with B.A. Brown, M. Horoi, and V. Zelevinsky), $540,000, 06/01/08–05/31/11 (awarded; unused by P. Piecuch due to budget reduction).
U.S. Department of Energy, Office of Science, "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States," PI, $360,000, 06/01/07–05/31/10.
Japan Society for the Promotion of Science, the JSPS Invitation Fellowship for Research in Japan, awardee, a daily maintenance allowance of 18,000 Japanese yen, domestic research travel allowance of 150,000 Japanese yen, and host's cooperation allowance of 50,000 Japanese yen (to be used by the host), 10/01/05-11/30/05.
Michigan State University, REF Program, "A High Performance Computing Center for Michigan State University," co-PI (with L. Kempel, S. Mahanti, F. Jaberi, and G. Bao), $3,105,000, 11/11/04–06/30/09.
U.S. Department of Energy, Office of Science, "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States," PI, $330,000, 09/01/04–05/31/07.
National Science Foundation, ITR Small Grants, "Development of Parallel Coupled-Cluster Methods," co-PI (with M.S. Gordon, R.A. Kendall, and M.W. Schmidt), $499,843 ($166,646 for P. Piecuch), 09/01/03–08/31/06.
The Alfred P. Sloan Research Foundation, $40,000, 09/16/02–09/15/04.
U.S. Department of Energy, Office of Science, "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces," PI, $340,545, 09/01/01–08/31/04.
National Science Foundation, CHE–Chemical Instrumentation, "Purchase of a High-Performance Parallel Computer," co-PI (with G.T. Babcock, J.F. Harrison, K.L. Hunt, and J.E. Jackson), $200,000, 08/15/99–07/31/02.
Michigan State University, Intramural Research Grant Program, Science and Engineering Award (New Faculty), "Ab Initio Studies of Photoinduced Charge Transfer in van der Waals Molecules," PI, $50,000, 05/15/99–09/15/00.

List of Graduate and Undergraduate Research Students, and Postdoctoral Scholars Sponsored

Postdoctoral and visiting scholars (15): Dr. Suhita Basu Mallick, Postdoctoral Research Associate, September 2021 – present (Ph.D., August 2021); Dr. Jun Shen, Postdoctoral Research Associate, December 2010 – November 2013, Research Assistant Professor (fixed-term), December 2013 – November 2014, Postdoctoral Research Associate, December 2014 – May 2016, Senior Research Associate, May 2016 – present (Ph.D., October 2008; 29 papers from work with P. Piecuch at MSU); Dr. Wei Li, Postdoctoral Associate, October 2007 – May 2010, Research Assistant Professor, June–December 2010 (Ph.D., August 2007; 10 papers from work with P. Piecuch at MSU; currently, Associate Professor in School of Chemistry and Chemical Engineering at Nanjing University, China); Dr. Jeffrey R. Gour, Postdoctoral Associate, May–July 2010 [Ph.D., April 2010, 37 papers from work with P. Piecuch at MSU; Postdoctoral Associate at Stanford University with Professor Todd J. Martinez (2010-2011); Technical Support Analyst at Epic (2011-2014); IT Analyst at Alliant Energy (2014-2015); Software Design Engineer at Sonic Foundry (2015-2017); Software Development Engineer at Amazon (2017-2018); Software Development Lead at Sonic Foundry (2018-2020); currently (2020-), Senior Software Engineer at Microsoft]; Dr. Marta Włoch, Postdoctoral Associate, November 2003 and January 2004 – February 2006, Research Assistant Professor, March 2006 – July 2007 [Ph.D., January 2004; 31 publications from work with P. Piecuch at MSU plus 8 more in collaboration with P. Piecuch after leaving MSU; Assistant Professor at Michigan Technological University (2007-2011); Assistant Professor at Oakland University (2011-2019); Student Teacher at Seaholm High School, Birmingham, Michigan (2019); Chemistry Teacher at Stoney Creek High School, Rochester, Michigan (2019); Chemistry Instructor, Macomb Community College, Warren, Michigan (2020); Academic Specialist and Chemistry Instructor in the Lyman Briggs College at Michigan State University (2020-2021); currently (2022-), Chemistry Teacher at St. Mary's Preparatory, Orchard Lake, Michigan]; Professor Jozef Noga, Visiting Professor, May 2010 (Professor at Comenius University and Slovak Academy of Sciences, Bratislava, Slovakia); Professor Masahiro Ehara, Visiting Professor, October 2007 – November 2007, March 2011 (5 publications with P. Piecuch; currently, Professor at the Institute for Molecular Science, Okazaki, Japan); Dr. Armagan Kinal, NATO-B1/TUBITAK Postdoctoral Fellow, September 2004 – March 2005, Postdoctoral Associate, March 2005 – August 2006 (Ph.D., June 2004; 6 publications from work with P. Piecuch at MSU; currently, Full Professor at Ege University, Izmir, Turkey); Dr. Karol Kowalski, Postdoctoral Associate, April 1999 – June 2004, Research Assistant Professor, June 2004 – September 2004 [Ph.D., March 1999; 44 publications from work with P. Piecuch at MSU plus 2 more in collaboration with P. Piecuch after leaving MSU; since September 2004 at the Pacific Northwest National Laboratory: Research Scientist Level III (2004-2007), Research Scientist Level IV (2007-2010), Research Scientist Level V (Chief Scientist, 2010-2019), currently (2019-), Laboratory Fellow]; Dr. Tomasz Kuś, Visiting Scholar, January 2004 – March 2004 (1 publication from work with P. Piecuch at MSU); Professor Stanisław A. Kucharski, Visiting Professor, January 2004 – February 2004 [11 publications with P. Piecuch; Professor and former Vice President for Finance and Development and former Director of the Institute of Chemistry at the University of Silesia (Poland)]; Dr. Jiri Pittner, Visiting Scholar, April 2004 (1 publication from MSU; currently, Head of the Department of Theorerical Chemistry at the J. Heyrovský Institute of Physical Chemistry, Academy of Sciences of the Czech Republic); Dr. Rudolf Burcl, Postdoctoral Associate, July 1999 – December 2000 [Ph.D., April 1999; 3 publications from work with P. Piecuch at MSU; Assistant Professor at Marshall University (2004-2011); currently, physician (MD) at Cheyenne Regional Medical Center]; Dr. Jesse Edwards, the 1999-00 Affirmative Action Postdoctoral Fellow, September 1999 – August 2000 (Ph.D., August 1999; since August 2000 on the faculty of Florida Agricultural and Mechanical University, currently Full Professor); Dr. Vladimir Špirko, Visiting Associate Professor, November 1998, November and December 1999 (11 publications with P. Piecuch, including 6 publications from MSU; currently, Emeritus at the Institute of Organic Chemistry and Biochemistry of

the Academy of Sciences of the Czech Republic). *Graduate (Ph.D.) students (19):* Dr. Ian S.O. Pimienta, former Ph.D. student [1999-2003, Ph.D., December 2003, 7 papers from work with P. Piecuch at MSU; Postdoctoral Associate at Iowa State University with Professor M.S. Gordon (2004-2007) and at the University of Utah with Professor J.C. Facelli (2007-2010); Assistant Professor at Troy University (2010-2016); Postdoctoral Associate at Auburn University with Professor K. Patkowski (2017-2019); currently (2019-), Assistant Professor at the University of Pikeville]; Dr. Peng-Dong Fan, former Ph.D. student [2001-2005, Ph.D., April 2005, 9 papers from work with P. Piecuch at MSU; Postdoctoral Associate at the University of Florida with Professor S. Hirata (2005-2007); Postdoctoral Associate at the Pacific Northwest National Laboratory (2007-2009)]; Dr. Ruth L. Jacobsen, former Ph.D. student [1999-2005, co-advised with Professor Katharine C. Hunt, Ph.D., August 2005; Visiting Lecturer at Michigan State University (2005-2007); Research Analyst at Center for Naval Analyses (2007-2009); NIST-ARRA (American Reinvestment and Recovery Act) Senior Fellowship (2010-2011); Visiting Senior Research Scientist at NIST (2011-2015); currently, Chemist at Marine Corps Base Quantico]; Dr. Michael J. McGuire, former Ph.D. student (2000-2006, Ph.D., May 2006, 7 papers from work with P. Piecuch at MSU); Dr. Maricris Lodriguito Mayes, former Ph.D. student [2002-2007, Ph.D., August 2007, 6 papers from work with P. Piecuch at MSU; Postdoctoral Associate at Northwestern University with Professor G.C. Schatz (2007-2011); Postdoctoral Appointee at the Leadership Computing Facility at Argonne National Laboratory (with Dr. G. Fletcher and Professor M.S. Gordon, 2011-2013); since 2014, on the faculty of the University of Massachussetts Dartmouth, currently (2020-), Associate Professor]; Dr. Jeffrey R. Gour, former Ph.D. student [2005-2010, Ph.D., April 2010, 37 papers from work with P. Piecuch at MSU; NSF Graduate Research Fellow (2005-2009); Postdoctoral Associate at Stanford University with Professor T.J. Martinez (2010-2011); Technical Support Analyst at Epic (2011-2014); IT Analyst at Alliant Energy (2014-2015); Software Design Engineer at Sonic Foundry (2015-2017); Software Development Engineer at Amazon (2017-2018); Software Development Lead at Sonic Foundry (2018-2020); currently (2020-), Senior Software Engineer at Microsoft]; Dr. Jesse J. Lutz, former Ph.D. student [2006-2011, Ph.D., August 2011, 13 papers from work with P. Piecuch at MSU; Postdoctoral Associate at Durham University, U.K., with Professor J.M. Hutson (2011-2014); Visiting Scientist at the University of Florida with Professor R.J. Bartlett (2015-2016); Research Assistant Professor at the Air Force Institute of Technology with Professor L.W. Burggraf (2015-2019); currently (2019-), Senior Member of Technical Staff in the Center for Computing Research at the Sandia National Laboratories]; Krzysztof Jedziniak, former graduate student (2001-2002, 1 paper from work with P. Piecuch at MSU; last known appointments, Investment Director, UK Trade and Investment, and Consultant in Warsaw-based Bureau of A.T. Kearney); Dr. Janelle A. Bradley, former graduate student (2008-2010); Dr. Jared A. Hansen, former Ph.D. student [2010-2015, Ph.D., September 2015, 10 papers from work with P. Piecuch at MSU; Postdoctoral Associate at the University of Michigan in Ann Arbor with Professor P.M. Zimmerman (2015-2016)]; Dr. Nicholas P. Bauman, former Ph.D. student [2011-2016, Ph.D., November 2016, 7 papers from work with P. Piecuch at MSU; Postdoctoral Associate at the University of Florida with Professor R.J. Bartlett (2017); Postdoctoral Associate at the Pacific Northwest National Laboratory with Dr. Karol Kowalski (2018-2022); currently (2022-), Research Scientist Level III at the Pacific Northwest National Laboratory]; Dr. Adeayo O. Ajala, former Ph.D. student [2012-2017, Ph.D., December 2017, 3 papers from work with P. Piecuch at MSU; Postdoctoral Associate at the University of Calfornia San Diego with Professor Francesco Paesani (2018-2019); currently (2019-), Process Chemist at TOK America]; Dr. Jorge Emiliano Deustua, former Ph.D. student [2014-2020, Ph.D., May 2020, 10 papers from work with P. Piecuch at MSU; Phase I and Phase II MolSSI Software Fellow (2018-2020); until recently (2020-2022), Postdoctoral Associate at California Institute of Technology with Professor Thomas F. Miller III]; Dr. Ilias Magoulas, former Ph.D. student [2015-2021; Ph.D., March 2021, 14 papers from work with P. Piecuch at MSU; currently (2021-), Postdoctoral Associate at Emory University with Professor Francesco Evangelista]; Dr. Stephen H. Yuwono, former Ph.D. student

[2017-2022; Ph.D., May 2022, 12 papers from work with P. Piecuch at MSU; currently (2022-), Postdoctoral Associate at Florida State University with Professor A. Eugene DePrince III]; Arnab Chakraborty, current Ph.D. student (2018-present; 2 papers from work with P. Piecuch at MSU); Karthik Gururangan, current Ph.D. student (2019-present; 2 papers from work with P. Piecuch at MSU); Tiange Deng, current Ph.D. student (2021-present); Swati Snigdha Priyadarsini, current Ph.D. student (2021-present; 1 paper from work with P. Piecuch at MSU). *Undergraduate Research Students (6):* Dan Hogan, Spring 1999; Jason Heist, Fall 1999; Elizabeth Kratz, Summer 2000 (the NSF REU Program); Jeffrey R. Gour, Summer 2004 (the NSF REU Program), Fall 2004 and Spring 2005 (an NSF Graduate Research Fellow and a former Ph.D. graduate student and postdoc in our group; cf. above); Bradley S. Elkus, Fall 2006, Fall 2007, Summer 2009, Fall 2009; Jonathon Clapham, Fall 2011.

Other Former and Current Senior Collaborators

Professor Ludwik Adamowicz, University of Arizona; Professor Igor Aharonovich, University of Technology Sydney (Australia); Professor H. Metin Aktulga, Michigan State University; Professor Ali Alavi, Max-Planck-Institut für Festkörperforschung (Germany) and University of Cambridge (United Kingdom); Professor Wesley D. Allen, University of Georgia; Professor Rodney J. Bartlett, University of Florida; Professor Gary J. Blanchard, Michigan State University; Dr. Valérie Blanchet, Université de Bordeaux (France); Dr. Ota Bludský, Academy of Sciences of the Czech Republic; Professor Babak Borhan, Michigan State University; Professor Weston Thatcher Borden, University of North Texas; Dr. Carlo Bradac, University of Technology Sydney (Australia); Professor B. Alex Brown, Michigan State University; Professor Grzegorz Chałasiński, University of Warsaw (Poland); Professor Garnet Kin-Lic Chan, California Institute of Technology; Professor Rajat K. Chaudhuri, Indian Institute of Astrophysics; Professor Cheol Ho Choi, Kyungpook National University (South Korea); Professor Jiří Čížek, University of Waterloo (Canada); Professor Christopher J. Cramer, University of Minnesota; Professor Imre G. Csizmadia, University of Toronto (Canada); Professor Marcos Dantus, Michigan State University; Dr. David J. Dean, Oak Ridge National Laboratory; Professor Roger L. DeKock, Calvin College; Professor Masahiro Ehara, Institute for Molecular Science, Okazaki (Japan); Professor Janus J. Eriksen, Technical University of Denmark (Denmark); Professor Michael Filatov, Kyungpook National University (South Korea); Professor Michael J. Ford, University of Technology Sydney (Australia); Professor Karl F. Freed, University of Chicago; Professor Laura Gagliardi, University of Chicago; Professor Jürgen Gauss, Johannes Gutenberg-Universität Mainz (Germany); Professor Yingbin Ge, Central Washington University; Professor Mark S. Gordon, Iowa State University and Ames Laboratory; Professor William H. Green, Massachusetts Institute of Technology; Professor Martin Head-Gordon, University of California, Berkeley; Professor So Hirata, University of Illinois at Urbana-Champaign; Professor Morten Hjorth-Jensen, University of Oslo (Norway; currently, also, Michigan State University); Professor Mark R. Hoffmann, University of North Dakota; Professor Mihai Horoi, Central Michigan University; Professor James E. Jackson, Michigan State University; Professor Karol Jankowski, Nicholas Copernicus University (Poland); Professor Maria Jaworska, University of Silesia (Poland); Professor Bogumił Jeziorski, University of Warsaw (Poland); Professor Taiha Joo, Pohang University of Science and Technology (POSTECH; South Korea); Dr. Mehran Kianinia, University of Technology Sydney (Australia); Professor Paweł M. Kozłowski, University of Louisville; Professor Stanisław A. Kucharski, University of Silesia (Poland); Dr. Joseph I. Landman, Scalable Informatics; Professor Zdzisław Latajka, University of Wrocław (Poland); Professor Benjamin G. Levine, Stony Brook University; Professor Shuhua Li, Nanjing University (China); Professor Wenjian Liu, Shandong University (China); Professor Horia Metiu, University of California, Santa Barbara; Dr. Felicja Mrugała, Nicholas Copernicus University (Poland); Professor Debashis Mukherjee, Indian Association for the Cultivation of Science (India); Professor Monika Musiał, University of Silesia (Poland); Professor Hiroshi Nakatsuji, Kyoto University (Japan); Dr. Petr Navrátil, TRIUMF (Canada); Professor Marcel Nooijen, University

of Waterloo (Canada); Professor William J. Orville-Thomas, University of Salford (United Kingdom); Professor Sourav Pal, Indian Institute of Science Education and Research, Kolkata (India); Professor Josef Paldus, University of Waterloo (Canada); Professor Thomas F. Papenbrock, University of Tennessee; Professor Katarzyna Pernal, Łódź University of Technology (Poland); Dr. Jiri Pittner, Academy of Sciences of the Czech Republic; Professor John C. Polanyi, University of Toronto (Canada); Professor Cristina Puzzarini, University of Bologna (Italy); Professor Yue Qi, Brown University; Professor Chintamani N.R. Rao, Jawaharlal Nehru Centre for Advanced Scientific Research (India); Professor Henryk Ratajczak, University of Wrocław (Poland); Professor Jeffrey R. Reimers, University of Technology Sydney (Australia) and Shanghai University (China); Professor Robert Roth, Technische Universität Darmstadt (Germany); Professor Pascale Roubin, Université de Provence-CNRS (France); Professor Henry F. Schaefer III, University of Georgia; Dr. Michael W. Schmidt, Iowa State University and Ames Laboratory; Professor Sandeep Sharma, University of Colorado at Boulder; Professor C. David Sherrill, Georgia Institute of Technology; Professor Pedro J. Silva, Universidade Fernando Pessoa (Portugal); Dr. Vladimir Špirko, Academy of Sciences of the Czech Republic; Professor Péter Surján, Eötvös University (Hungary); Professor Malgorzata M. Szczęśniak, Oakland University; Professor Seiichiro L. Ten-no, Kobe University (Japan); Professor Donald G. Truhlar, University of Minnesota; Professor Cyrus J. Umrigar, Cornell University; Professor Adri C.T. van Duin, Pennsylvania State University; Professor Antonio J.C. Varandas, University of Coimbra (Portugal); Professor Tomasz A. Wesołowski, University of Geneva (Switzerland); Professor K. Birgitta Whaley, University of California, Berkeley; Professor Angela K. Wilson, Michigan State University; Professor Theresa L. Windus, Iowa State University.

Former Graduate and Postdoctoral Advisors

Professor Henryk Ratajczak, University of Wrocław, Poland, M.S. and Ph.D. advisor
Professor Josef Paldus, University of Waterloo, Canada, postdoctoral advisor
Professor Ludwik Adamowicz, University of Arizona, postdoctoral advisor
Professor John C. Polanyi, University of Toronto, Canada, postdoctoral advisor
Professor Rodney J. Bartlett, University of Florida, postdoctoral advisor.

Editorial Boards

International Journal of Quantum Chemistry (published by Wiley), Member of the Editorial Board (January 2005–present).
Journal of Computational Methods in Science and Engineering (published by IOS Press), Member of the Editorial Board (January 2005–present).
The Open Chemical Physics Journal (published by Bentham Science Publishers), Member of the Editorial Board (Vol. 1, 2007–2014).
Open Chemical Physics Reviews (published by Bentham Science Publishers), Member of the Editorial Board (Vol. 1, 2007–2009).
Progress in Theoretical Chemistry and Physics (book series published by Springer), Member of the Editorial Board (Vol. 16, 2007 – present).
Interdisciplinary Sciences: Computational Life Sciences (the official publication of the International Association of Scientists in the Interdisciplinary Areas, IASIA, in partnership with Springer), Member of the Editorial Board (Vol. 1, 2008–present).
Research Letters in Physical Chemistry (published by Hindawi Publishing Corporation), Member of the Editorial Board (July–November 2009).
Advances in Physical Chemistry (published by Hindawi Publishing Corporation), Member of the Editorial Board (November 2009–present).
Handbook of Research on Computational and Systems Biology: Interdisciplinary Applications (published by IGI Global, 2010).

Meetings Organized and Membership in Organizing Committees and International Advisory Boards

Organizer of the Workshop "High-Performance Computer Center at Michigan State University," Michigan State University, East Lansing, Michigan, U.S.A., November 2, 2003 (Chair of the Organizing Committee).
Organizer of the 36th Midwest Theoretical Chemistry Conference, Michigan State University, East Lansing, Michigan, U.S.A., June 17-19, 2004 (Chair of the Organizing Committee).
Member of the Local Organizing Committee for the Workshop "Nuclei and Mesoscopic Physics," Michigan State University, East Lansing, Michigan, U.S.A., October 23-26, 2004.
Co-organizer of the 2nd Workshop on Nuclei and Mesoscopic Physics, WNMP07, Michigan State University, East Lansing, Michigan, U.S.A., October 20-22, 2007.
Chair of the Local Organizing Committee for the Thirteenth International Workshop Quantum Systems in Chemistry and Physics (QSCP-XIII), Lansing, Michigan, U.S.A., July 6-12, 2008.
Member of the Local Organizing Committee for the Sixth Congress of the International Society for Theoretical Chemical Physics (ISTCP-VI), Vancouver, British Columbia, Canada, July 19-24, 2008.
Organizer of the Symposium on Coupled-Cluster Theory (CCT) during the Sixth Congress of the International Society for Theoretical Chemical Physics (ISTCP-VI), Vancouver, British Columbia, Canada, July 19-24, 2008 (July 19-20, 2008).
Member of the International Scientific Committee for a conference series Quantum Systems in Chemistry and Physics (QSCP; 2006–2013), including QSCP-XI, St. Petersburg, Russia, August 20-25, 2006, QSCP-XII, London, U.K., August 30 - September 5, 2007, QSCP-XIII, Lansing, Michigan, U.S.A., July 6-12, 2008, QSCP-XIV, San Lorenzo de El Escorial, Madrid, Spain, September 13-19, 2009, QSCP-XV, Cambridge, U.K., August 31 - September 5, 2010, QSCP-XVI, Kanazawa, Japan, September 11-17, 2011, QSCP-XVII, Turku, Finland, August 19-25, 2012, QSCP-XVIII, Paraty (Rio de Janeiro), Brazil, December 1-7, 2013.
Member of the International Advisory Committee for a conference series "Molecular Spectroscopy" (IXth edition; Wrocław – Lądek-Zdrój, Poland, September 12-16, 2007).
Member of the International Scientific Committee for the Sixth Congress of the International Society for Theoretical Chemical Physics (ISTCP-VI), Vancouver, British Columbia, Canada, July 19-24, 2008.
Member of the International Scientific Committee for the Seventh Congress of the International Society for Theoretical Chemical Physics (ISTCP-VII), Tokyo, Japan, September 2-8, 2011.
Member of the International Advisory Board for the Eighth Congress of the International Society for Theoretical Chemical Physics (ISTCP-VIII), Budapest, Hungary, August 25-31, 2013.
Co-organizer of the symposium "Recent Progress in Molecular Theory for Excited-State Electronic Structure and Dynamics" at the 2015 International Chemical Congress of Pacific Basin Societies (Pacifichem 2015), Honolulu, Hawaii, U.S.A., December 15-20, 2015.
Co-organizer of the Symposium on Electronic Structure Theory (entitled "Advances in Electron Correlation: From Strongly Correlated to Large Systems") during the Ninth Congress of the International Society for Theoretical Chemical Physics (ISTCP-IX), Grand Forks, North Dakota, U.S.A., July 17-22, 2016.
Co-organizer of the 49th Midwest Theoretical Chemistry Conference, Michigan State University, East Lansing, Michigan, U.S.A., June 1-3, 2017 (Member of the Organizing Committee).
Member of the International Scientific Committee for the conference "Quantum International Frontiers 2018," Changsha, Hunan Province, China, October 17-21, 2018.
Member of the International Scientific Committee for the Utah Workshop on Quantum Methods in Molecular and Solid-State Theory, Park City, Utah, U.S.A., September 22-27, 2019.
Member of the International Scientific Committee for the conference "Quantum International Frontiers 2019," Shanghai, China, November 18-22, 2019.

Other Examples of National and International Professional Service

Session Chair, The symposium "Electronic Structure Theory: From Methods to Molecules and Materials," 100th Annual Meeting of the American Physical Society, Atlanta, Georgia, U.S.A., March 21-26, 1999.
Session Chair, "Vth International Conference on Molecular Spectroscopy," Lądek-Zdrój, Poland, September 26-30, 1999.
Session Chair, International Symposium on Frontiers in Molecular Science 2002, Qingdao, China, July 15-18, 2002.
Special Session Chair, Ninth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-IX, Les Houches, France, September 25-30, 2004.
Session Chair, the symposium "Theoretical Determination of Energy Landscapes: Methodology and Applications," 230th American Chemical Society National Meeting, Washington, DC, U.S.A., August 28-September 1, 2005.
Session Chair, Tenth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-X, Carthage, Tunisia, September 1-7, 2005.
Session Chair, International Conference "Recent Trends in Many-Body Methods for Electronic Structure and Properties of Atoms and Molecules," Bhubaneswar and Puri, Orissa, India, January 11-13, 2007.
Session Chair, Twelfth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-XII, London, U.K., August 30 - September 5, 2007.
Session Chair, 2nd Workshop on Nuclei and Mesoscopic Physics, WNMP07, Michigan State University, East Lansing, Michigan, U.S.A., October 20-22, 2007.
Session Chair, Thirteenth International Workshop on Quantum Systems in Chemistry and Physics, QSCP-XIII, Lansing, Michigan, U.S.A., July 6-12, 2008.
Session Chair, Sixth Congress of the International Society for Theoretical Chemical Physics (ISTCP-VI), Vancouver, British Columbia, Canada, July 19-24, 2008.
Session Chair, the WE-Heraeus-Seminar "Ab-Initio Nuclear Structure - Where do we stand?", Bad Honnef, Germany, July 28-30, 2008.
Session Chair, The International Conference on the Theory and Applications of Computational Chemistry in 2008 (TACC 2008), Shanghai, China, September 23-27, 2008.
Session Chair, The symposium "Advances in Electronic Structure Theory and First Principles Dynamics," 237th American Chemical Society National Meeting, Salt Lake City, Utah, U.S.A., March 22-26, 2009.
Session Chair, International Workshop "Linking Nuclei, Molecules, and Condensed Matter: Computational Quantum Many-Body Approaches," European Centre for Theoretical Studies in Nuclear Physics and Related Areas, Trento, Italy, July 6-10, 2009.
Session Chair, The symposium "New Developments in Strongly Correlated Electrons," 238th American Chemical Society National Meeting, Washington, DC, U.S.A., August 16-20, 2009.
Session Chair, Fourteenth International Workshop on Quantum Systems in Chemistry and Physics, QSCP-XIV, San Lorenzo de El Escorial, Madrid, Spain, September 13-19, 2009.
Session Chair, An International Symposium "Recent Advances in Many Electron Theories," Shankarpur, West Bengal, India, January 5-7, 2010.
Session Chair, 31st Annual Combustion Research Meeting, Airlie Conference Center, Warrenton, Virginia, U.S.A., June 1-4, 2010.
Session Chair, Fifteenth International Workshop on Quantum Systems in Chemistry and Physics, QSCP-XV, Magdalene College, Cambridge University, Cambridge, U.K., August 31 - September 5, 2010.
Session Chair, The symposium "Fragment and Local Orbital Methods in Electronic Structure Theory," 241st American Chemical Society National Meeting, Anaheim, California, U.S.A., March 27-31, 2011.
Session Chair, Seventh Congress of the International Society for Theoretical Chemical Physics (ISTCP-VII), Tokyo, Japan, September 2-8, 2011.
Session Chair, Sixteenth International Workshop on Quantum Systems in Chemistry and Physics, QSCP-XVI, Kanazawa, Japan, September 11-17, 2011.
Session Chair, An International Symposium "Recent Advances on Many Electron Theories II, 2011," Puri, Orissa, India, December 1-4, 2011.

Session Chair, The Fifth Asian Pacific Conference of Theoretical and Computational Chemistry (APCTCC 2011), Rotorua, New Zealand, December 9-13, 2011.
Session Chair, 6th Conference "Current Trends in Theoretical Chemistry" (CTTC VI), Cracow, Poland, September 1-5, 2013.
Session Chair, Eighteenth International Workshop on Quantum Systems in Chemistry, Physics, and Biology, QSCP-XVIII, Paraty (Rio de Janeiro), Brazil, December 1-7, 2013.
Session Chair, Nordita program on "Computational Challenges in Nuclear and Many-Body Physics," Stockholm, Sweden, September 15 - October 10, 2014.
Session Chair, Tenth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2014), Santiago, Chile, October 5-10, 2014.
Session Chair, Workshop of the Espace de Structure Nucléaire Théorique on "Near-Degenerate Systems in Nuclear Structure and Quantum Chemistry from Ab-Initio Many-Body Methods," CEA Saclay, France, March 30 - April 2, 2015.
Session Chair, 35th Annual Combustion Research Meeting, Bolger Center, Potomac, Maryland, U.S.A., May 26-29, 2015.
Session Chair, The symposium "Recent Advances in Electronic Structure Theory (RAEST2015)," A Satellite Symposium to the 15th International Congress of Quantum Chemistry, Nanjing, China, June 1-6, 2015.
Session Chair, The symposium "From Diradicals and Polyradicals to Functionalized Materials: Theory Meets Experiment," 250th American Chemical Society National Meeting, Boston, Massachusetts, U.S.A., August 16-20, 2015.
Session Chair, The symposium "Recent Progress in Molecular Theory for Excited-State Electronic Structure and Dynamics" at the 2015 International Chemical Congress of Pacific Basin Societies (Pacifichem 2015), Honolulu, Hawaii, U.S.A., December 15-20, 2015.
Session Chair, TSRC Workshop "Low-Scaling and Unconventional Electronic Structure Techniques" (LUEST 2016), 3rd edition, Telluride, Colorado, U.S.A., June 1-5, 2016.
Session Chair, Symposium on Electronic Structure Theory (entitled "Advances in Electron Correlation: From Strongly Correlated to Large Systems") during the Ninth Congress of the International Society for Theoretical Chemical Physics (ISTCP-IX), Grand Forks, North Dakota, U.S.A., July 17-22, 2016.
Session Chair, TSRC Workshop "Low-Scaling and Unconventional Electronic Structure Techniques" (LUEST 2018), 4th edition, Telluride, Colorado, U.S.A., June 4-8, 2018.
Session Chair, 8th Conference "Current Trends in Theoretical Chemistry" (CTTC VIII), Cracow, Poland, September 1-4, 2019.
Session Chair, The Utah Workshop on Quantum Methods in Molecular and Solid-State Theory, Park City, Utah, U.S.A., September 22-27, 2019.
Session Chair, Workshop on New Methods for Strongly Correlated Electrons, Qingdao, China, October 9-13, 2019.
Session Chair, the "Quantum International Frontiers 2019" conference, Shanghai, China, November 18-22, 2019.
Session Chair, Virtual TSRC Workshop "Low-Scaling and Unconventional Electronic Structure Techniques" (LUEST 2020), Telluride, Colorado, U.S.A., June 1-5 and June 8-9, 2020.
Session Chair, Hybrid TSRC Workshop "New Developments in Coupled-Cluster Theory," Telluride, Colorado, U.S.A., July 19-23, 2021.
Session Chair, Modeling and Design of Molecular Materials 2022 (MDMM 2022) Conference, Gdańsk, Poland, September 19-22, 2022.
Referee for *Science, Physical Review Letters, Physical Review A, Physical Review B, Physical Review C, Physical Review E, Chemical Physics Letters, Chemical Physics, Journal of Chemical Physics, Journal of Applied Physics, Molecular Physics, Computer Physics Communications, European Physics Journal A, European Physics Journal D, Theoretica Chimica Acta, Theoretical Chemistry Accounts, International Journal of Quantum Chemistry, Journal of Chemical Theory and Computation, Journal of Molecular Structure (THEOCHEM), Journal of Computational Chemistry, Physical Chemistry Chemical Physics, Journal of Physical Chemistry Letters, Journal of Physical Chemistry A, Journal of the American Chemical Society, Organometallics, Chemical Science, Canadian Journal of Chemistry, New Journal of Chemistry, Collection of Czechoslovak Chemical Communications, Spectroscopy Letters, Pra-*

mana, *International Journal of Molecular Sciences, Progress of Theoretical Chemistry and Physics*, *Cambridge University Press*, and *Oxford University Press.*
Reviewer of proposals submitted to the *National Science Foundation*, the *US Department of Energy*, the *Petroleum Research Fund*, the *Air Force Office of Scientific Research*, the *United States Civilian Research and Development Foundation for the Independent States of the Former Soviet Union*, the *Alfred P. Sloan Foundation*, the *Research Corporation*, the *Computational Center for Molecular Structure and Interactions* sponsored by the *National Science Foundation's CREST Program*, the *Fonds voor Wetenschappelijk Onderzoek – Vlaanderen* (Belgium), the *Grant Agency at the Academy of Sciences of the Czech Republic*, the *National Science Centre* (Poland), the *Danish Council for Independent Research*, the *Icelandic Research Fund*, and the *Swiss National Supercomputing Centre (CSCS).*
Member of the US Department of Energy (DOE) Theory, Modeling, and Simulation in Nanoscience Review Panel in 2003, panelist at the DOE Office of Science Workshop on Computational Materials Science and Chemistry for Innovation in 2010, on-site reviewer of the Chemical Dynamics in the Gas Phase Program at Argonne National Laboratory, in 2010 and 2016, panel member for a joint Council for Chemical Research and Department of Energy workshop, entitled "Harnessing DOE's High Performance Computing Expertise to Strengthen the US Chemical Enterprise," in 2011, and member of review panels for the Chemical Theory, Models, and Computational Methods program at the National Science Foundation (2012/2013, 2021, 2022).
Member of the Selection Committee for one of the American Chemical Society National Awards (2013–2015; chair, 2015).

Service to the Department, College, and the University (MSU)

• *Department of Chemistry*
Member of the Chemistry Department Computer Committee, 1998–2018
Chair of the Chemistry Department Computer Committee, 2000–2003
Member of the Chemistry Department Graduate Admissions Committee, 2003/2004
Member of the Chemistry Department Graduate Advising Committee, 2004/2005
Member of the Chemistry Department Reappointment and Promotion Committee, 2008/2009, 2013/2014
Member of the Chemistry Department Academic Competitiveness Committee, 2014/2015
Chair of the Chemistry Department Reappointment and Promotion Committee, 2016/2017
Member of the Chemistry Department Colloquium Committee, 2018/2019, 2019/2020
Chair of the Chemistry Department Colloquium Committee, 2020/2021, 2021/2022
Member of the Office Supervisor II Search Committee, 2019
Member of the Chemistry Department Information Technology Committee, 2020/2021, 2021/2022
• *College of Natural Science*
Member of the Chemical Physics Committee, 2000–present
Member of the Center for Biological Modeling, 2000–2004
Member of the Quantitative Biology and Modeling Initiative, 2004–present
Member of the Complex Materials Faculty Search Committee, 2010/2011
• *University*
Member of the University Appeals Board, 2001–2007
Co-founder and Member of the Advisory Committee of the High Performance Computing Center, 2004–2009
Member of the Mesoscopic Theory Center, 2006–present
Instructor for the Frontiers in Science Weekend Workshop series for Secondary Science Teachers, 2007
Member of Visioning Committee for Cyber Enabled Discovery, 2008
Member of the Leadership Team for Institute for Cyber Enabled Research, 2008

Other Examples of Synergistic Activities

Co-author of the electronic structure package GAMESS (coupled-cluster, equation-of-motion coupled-cluster, and cluster-in-molecule coupled-cluster and many-body perturbation theory codes; user base of over 150,000 in more than 100 countries).
Co-author of a plugin to the electronic structure package PSI4 available on GitHub (selected coupled-cluster options).
Contributor of potential energy surfaces to the on-line library POTLIB.
Creator of online lecture series entitled "Algebraic and Diagrammatic Methods for Many-Fermion Systems," consisting of more than 40 HD videos based on CHEM 580 and PHYSICS 580 graduate course offered at Washington University in St. Louis (WUSTL) during research leave in Spring 2016, recorded by the Teaching Center at WUSTL (offered also to students at Michigan State University via video-recorded lectures and online materials), available on YouTube (https://www.youtube.com/results?search_query=Chem+580+Piecuch&sp=CAM%253D; search for 'Chem 580 Piecuch').

Press Releases, Popular Feature Articles, and Other Facts Highlighting Our Research (Selected Examples)

"MSU prof provides insight on atomic nuclei," by Matthew Miller, *Lansing State Journal*, April 23, 2007, "Coupled-clusters point to faster computation," *CERN Courier*, Vol. 47, No. 4, May 1, 2007, "Physicists wipe away complexity for a clearer view of heavy nuclei," *AAAS EurekAlert!* and *Phys.org*, March 14, 2007, "Beyond the nuclear shell model," *Physics Today*, November 2007, and dozens of other articles have discussed our nuclear structure coupled-cluster effort [inspired by our article M. Horoi, J.R. Gour, M. Włoch, M.D. Lodriguito, B.A. Brown, and P. Piecuch, "Coupled-Cluster and Configuration-Interaction Calculations for Heavy Nuclei," *Phys. Rev. Lett.* **98**, 112501-1 – 112501-4 (2007) and, in part, by the Michigan State University news releases, such as "Physicists wipe away complexity for a clearer view of atomic nuclei" published by *MSU Today* on March 15, 2007].
An article C.J. Cramer, M. Włoch, P. Piecuch, C. Puzzarini, and L. Gagliardi, *J. Phys. Chem. A* **110**, 1991-2004 (2006) was recognized as one of the "Most-Cited Articles Published in 2006" in *The Journal of Physical Chemistry A*.
The Air Force Office of Scientific Research STTR 09.B solicitation calling for proposals on Coupled Cluster Methods for Multi-Reference Applications (AF09-BT40) used our advances in areas of renormalized and equation-of-motion coupled-cluster methods as a motivation for a call for new proposals. Two of the three papers cited in this solicitation [*Adv. Quantum Chem.* **34**, 295 (1999) and *Int. Rev. Phys. Chem.* **21**, 527 (2002)] are by P. Piecuch and co-workers.
An article W. Li, P. Piecuch, J.R. Gour, and S. Li, *J. Chem. Phys.* **131**, 114109-1–114109-30 (2009) was selected for the October 5, 2009 issue of *Virtual Journal of Nanoscale Science & Technology* and the October 1, 2009 issue of *Virtual Journal of Biological Physics Research*, published in the past by the American Institute of Physics and the American Physical Society in cooperation with other societies and publishers.
An article J.A. Hansen, P. Piecuch, and B.G. Levine, "Communication: Determining the Lowest-Energy Isomer of Au_8: 2D, or not 2D," *J. Chem. Phys.* **139**, 091101-1 – 091101-4 (2013) was identified by *The Journal of Chemical Physics* as one of the Top 20 Most Read articles in September 2013.
One of our most frequently cited articles, P. Piecuch and M. Włoch, "Renormalized Coupled-Cluster Methods Exploiting Left Eigenstates of the Similarity-Transformed Hamiltonian," *J. Chem. Phys.* **123**, 224105-1–224105-10 (2005), was identified by *Thomson Reuters Web of Science* as a Highly Cited Paper. According to *Web of Science*, as of January/February 2015 and in selected time periods afterwards, this paper received enough citations to place it in the top 1 % of its academic field (Physics) based on a highly cited threshold for the field and publication year (data taken from *Thomson Reuters Essential Science Indicators*).
The Michigan State University news releases published by *MSU Today* (January 12, 2018)

and MSU's College of Natural Science (December 20, 2017), entitled "Quantum Leap: Novel Computational Approach Launches New Paradigm in Electronic Structure Theory," which discuss the significance of our article J.E. Deustua, J. Shen, and P. Piecuch, "Converging High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," *Phys. Rev. Lett.* **119**, 223003-1 – 223003-5 (2017), were posted as a University Research Highlight on the US Department of Energy Office of Science homepage (see the 'University and Stakeholder News" section, note dated December 21, 2017) and in *Phys.org* (December 22, 2017), *AAAS EurekAlert!* (January 12, 2018), and several other media outlets.

Our *Science Advances* article S.H. Yuwono, I. Magoulas, and P. Piecuch, "Quantum Computation Solves a Half-Century-Old Enigma: Elusive Vibrational States of Magnesium Dimer Found," *Sci. Adv.* **6**, eaay4058 (2020) has been featured by *Phys.org* (April 13, 2020; "Quantum computation solves an old enigma: Finding the vibrational states of magnesium dimer" by Thamarasee Jeewandara) and several other media outlets. The Michigan State University news releases published by *MSU Today* (May 11, 2020) and MSU's College of Natural Science (May 11, 2020), entitled "MSU Scientists Solve Half-Century-Old Magnesium Dimer Mystery," which discuss the significance of the research reported in this article, were posted in *AAAS EurekAlert!* (May 22, 2020) and publicized in other science news outlets as well. In particular, the *MSU Today* article was highlighted on the US Department of Energy Office of Science homepage (see the "University and Stakeholder News" section, note dated June 4, 2020).

Our paper J. Lahiri, M. Moemeni, I. Magoulas, S.H. Yuwono, J. Kline, B. Borhan, P. Piecuch, J.E. Jackson, G.J. Blanchard, and M. Dantus, "Steric Effects in Light-Induced Solvent Proton Abstraction," *Phys. Chem. Chem. Phys.* **22**, 19613-19622 (2020) has been selected by the Editors of *Phys. Chem. Chem. Phys.* as a 2020 HOT PCCP article.

Our article, G.M.J. Barca, C. Bertoni, L. Carrington, D. Datta, N. De Silva, J.E. Deustua, D.G. Fedorov, J.R. Gour, A.O. Gunina, E. Guidez, T. Harville, S. Irle, J. Ivanic, K. Kowalski, S.S. Leang, H. Li, W. Li, J.J. Lutz, I. Magoulas, J. Mato, V. Mironov, H. Nakata, B.Q. Pham, P. Piecuch, D. Poole, S.R. Pruitt, A.P. Rendell, L.B. Roskop, K. Ruedenberg, T. Sattasathuchana, M.W. Schmidt, J. Shen, L. Slipchenko, M. Sosonkina, V. Sundriyal, A. Tiwari, J.L.G. Vallejo, B. Westheimer, M. Włoch, P. Xu, F. Zahariev, and M.S. Gordon, "Recent Developments in the General Atomic and Molecular Electronic Structure System," *J. Chem. Phys.* **152**, 154102-1 – 154102-26 (2020), has been identified by *Web of Science* as a Highly Cited Paper. According to *Web of Science*, as of November/December 2020 and in more recent months (most recently, January/February 2022), this paper received enough citations to place it in the top 1 % of its academic field (Physics) based on a highly cited threshold for the field and publication year. *Web of Science* has also idenfied it as a Hot Paper, i.e., the paper that in November/December 2020 and in more recent months (most recently, January/February 2022) and within two years of its publication date received enough citations to place it in the top 0.1 % of papers in its academic field (data taken from *Essential Science Indicators*).

Our paper W. Park, J. Shen, S. Lee, P. Piecuch, M. Filatov, and C.H. Choi, "Internal Conversion between Bright ($1^1B_u^+$) and Dark ($2^1A_g^-$) States in s-*trans*-Butadiene and s-*trans*-Hexatriene," *J. Phys. Chem. Lett.* **12**, 9720-9729 (2021) has been selected for a supplementary cover in the October 7th, 2021 issue of *J. Phys. Chem. Lett.* MSU's College of Natural Science published a news story about it, entitled "MSU Chemistry Article Honored with Supplementary Cover," on November 16, 2021.

Our invited article S.H. Yuwono, A. Chakraborty, J.E. Deustua, J. Shen, and P. Piecuch, "Accelerating Convergence of Equation-of-Motion Coupled-Cluster Computations Using the Semi-Stochastic CC(P;Q) Formalism," *Mol. Phys.* **118**, e1817592 (2020) (17 pages; included in the Special Issue of *Molecular Physics* in Honour of Professor Jürgen Gauss) has been chosen by the panel of Editors as the best paper published in *Mol. Phys.* in 2020. As a result, Stephen Yuwono has also been awarded the 2020 Longuet-Higgins Early Career Researcher Prize. For more information, see the articles G. Jackson (Chairman of the Editors),"Announcement of the Winner of the Longuet-Higgins Early Career Researcher Prize 2020," *Mol. Phys.* **119**, e2010864 (2021) and "Molecular Physics Longuet-Higgins Early Career Researcher Prize 2020 Winner's Profile," *Mol. Phys.* **119**, e2003963 (2021). See, also, the MSU's College of Natural

Science news story, published on December 14, 2021, entitled "Chemistry Graduate Student Wins Prestigious Early Career Award."
Our article J. Lahiri, S.H. Yuwono, I. Magoulas, M. Moemeni, B. Borhan, G.J. Blanchard, P. Piecuch, and M. Dantus, "Controlling Quantum Interference between Virtual and Dipole Two-Photon Optical Excitation Pathways Using Phase-Shaped Laser Pulses," *J. Phys. Chem. A* **125**, 7534-7544 (2021) has been included in a *Virtual Issue of the Journal of Physical Chemistry A* entitled "A Venue for Advances in Experimental and Theoretical Methods in Physical Chemistry." For more information about it, see the preface by A.J. Orr-Ewing, T.D. Crawford, M.T. Zanni, G. Hartland, and J.-E. Shea, *J. Phys. Chem. A* **126**, 177 (2022).

Professional Societies

European Academy of Sciences, Arts, and Humanities (Paris, France; Elected Corresponding Member since 2003), International Academy of Quantum Molecular Science (Menton, France; Elected Member since 2018), American Physical Society (Regular Member since 1999, Fellow since 2008), American Chemical Society (Regular Member since 1996), American Association for the Advancement of Science (Professional Member since 2008, Fellow since 2011), Royal Society of Chemistry (Fellow since 2016), International Society for Theoretical Chemical Physics (Regular Member since 1994), World Association of Theoretical and Computational Chemists (Regular Member since 1990, Life Member since 2005).

LIST OF PUBLICATIONS[†]

1. Monographs, Book Chapters, and Feature Articles[††]

1. P. Piecuch, "Cartesian-Spherical Transformation Formalism and the Theoretical Insight into Many-Body Long-Range Forces of the Electrostatic Origin in Multimolecular Systems," in: *Interactions of Water in Ionic and Nonionic Hydrates,* edited by H. Kleeberg (Springer, Berlin, 1987), pp. 299-302 [invited book chapter].
2. P. Piecuch, "Towards Classification and Analytical Description of Molecular Interactions Including Quantum-Mechanical Many-Body Effects," in: *Molecules in Physics, Chemistry and Biology, Topics in Molecular Organization and Engineering,* Vol. 2, *Physical Aspects of Molecular Systems,* edited by J. Maruani (Kluwer, Dordrecht, 1988), pp. 417-505 [monograph, invited book chapter].
3. J. Paldus, P. Piecuch, B. Jeziorski, and L. Pylypow, "Extension of Coupled Cluster Methodology to Open Shells: State Universal Approach," in: *Recent Progress in Many-Body Theories,* Vol. 3, edited by T. L. Ainsworthy, C. E. Campbell, B. E. Clements, and E. Krotschek (Plenum Press, New York, 1992), pp. 287-303 [invited book chapter].
4. P. Piecuch and R.J. Bartlett, "EOMXCC: A New Coupled-Cluster Method for Electronic Excited States," *Adv. Quantum Chem.* **34**, 295-380 (1999) [invited book chapter].
5.[*] P. Piecuch and K. Kowalski, "In Search of the Relationship between Multiple Solutions Characterizing Coupled-Cluster Theories," in: *Computational Chemistry: Reviews of Current Trends*, edited by J. Leszczynski (World Scientific, Singapore, 2000), Vol. 5, pp. 1-104 [monograph, invited book chapter].
6.[*] P. Piecuch, K. Kowalski, I.S.O. Pimienta, and S.A. Kucharski, "Method of Moments of Coupled-Cluster Equations: A New Theoretical Framework for Designing "Black-Box" Approaches for Molecular Potential Energy Surfaces," in: *Low-Lying Potential Energy Surfaces*, ACS Symposium Series, Vol. 828, edited by M.R. Hoffmann and K.G. Dyall (American Chemical Society, Washington, D.C., 2002), pp. 31-64 [invited book chapter].
7.[**] P. Piecuch, K. Kowalski, I.S.O. Pimienta, and M.J. McGuire, "Recent Advances in Electronic Structure Theory: Method of Moments of Coupled-Cluster Equations and Renormalized Coupled-Cluster Approaches," *Int. Rev. Phys. Chem.* **21**, 527-655 (2002) [invited advanced review].

[†] Papers written at Michigan State University before submitting the tenure promotion package in the Fall of 2001 are marked by $*$. Papers written at Michigan State University after submitting the tenure promotion package in the Fall of 2001 are marked by $**$

[††] All other invited papers are listed with the remaining original articles.

8.** P. Piecuch, K. Kowalski, P.-D. Fan, and I.S.O. Pimienta, "New Alternatives for Electronic Structure Calculations: Renormalized, Extended, and Generalized Coupled-Cluster Theories," in: *Progress in Theoretical Chemistry and Physics*, Vol. 12, *Advanced Topics in Theoretical Chemical Physics*, edited by J. Maruani, R. Lefebvre, and E. Brändas (Kluwer, Dordrecht, 2003), pp. 119-206 [invited advanced review book chapter].

9.** P. Piecuch, K. Kowalski, I.S.O. Pimienta, P.-D. Fan, M. Lodriguito, M.J. McGuire, S.A. Kucharski, T. Kuś, and M. Musiał, "Method of Moments of Coupled-Cluster Equations: A New Formalism for Designing Accurate Electronic Structure Methods for Ground and Excited States," *Theor. Chem. Acc.* **112**, 349-393 (2004) [invited overview Feature Article].

10.** P. Piecuch, M. Włoch, J.R. Gour, D.J. Dean, M. Hjorth-Jensen, and T. Papenbrock, "Bridging Quantum Chemistry and Nuclear Structure Theory: Coupled-Cluster Calculations for Closed- and Open-Shell Nuclei," in: *Nuclei and Mesoscopic Physics: Workshop on Nuclei and Mesoscopic Physics WNMP 2004*, AIP Conference Proceedings, Vol. 777, edited by V. Zelevinsky (American Institute of Physics, Melville, NY, 2005), pp. 28-45 [invited book chapter in conference proceedings].

11.** D.J. Dean, M. Hjorth-Jensen, K. Kowalski, T. Papenbrock, M. Włoch, and P. Piecuch, "Coupled Cluster Approaches to Nuclei, Ground States and Excited States," in: *Key Topics in Nuclear Structure*, *Proceedings of the 8th International Spring Seminar on Nuclear Physics*, edited by A. Covello (World Scientific, Singapore, 2005), pp. 147-157.

12.** D.J. Dean, M. Hjorth-Jensen, K. Kowalski, P. Piecuch, and M. Włoch, "Coupled-Cluster Theory for Nuclei," in: *Condensed Matter Theories*, Vol. 20, edited by J.W. Clark, R.M. Panoff, and H. Li (Nova Science Publishers, 2006), pp. 89-97 [invited book chapter].

13.** T. Papenbrock, D.J. Dean, J.R. Gour, G. Hagen, M. Hjorth-Jensen, P. Piecuch, and M. Włoch, "Coupled-Cluster Theory for Nuclei," in: *Recent Progress in Many-Body Theories*, Vol. 10, edited by S. Hernández and H. Cataldo (World Scientific, Singapore, 2006), pp. 385-392 [invited book chapter].

14.** P. Piecuch, M. Włoch, M. Lodriguito, and J.R. Gour, "Noniterative Coupled-Cluster Methods for Excited Electronic States," in: *Progress in Theoretical Chemistry and Physics*, Vol. 15, "Recent Advances in the Theory of Chemical and Physical Systems," edited by J.-P. Julien, J. Maruani, D. Mayou, S. Wilson, and G. Delgado-Barrio (Springer, Dordrecht, 2006), pp. 45-106 [invited advanced review book chapter].

15.** P.-D. Fan and P. Piecuch, "The Usefulness of Exponential Wave Function Expansions Employing One- and Two-Body Cluster Operators in Electronic Structure Theory: The Extended and Generalized Coupled-Cluster Methods," *Adv. Quantum Chem.* **51**, 1-57 (2006) [invited book chapter].

16.** P. Piecuch, M. Włoch, and A.J.C. Varandas, "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Application to Potential Function of Water," in: *Progress in Theoretical Chemistry and Physics*, Vol. 16, "Topics in the Theory of Chemical and Physical Systems," edited by S. Lahmar, J. Maruani, S. Wilson, and G. Delgado-Barrio (Springer, Dordrecht, 2007), pp. 63-121 [invited book chapter].

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"Frontiers of Stochastic Electronic Structure Calculations"; invited contribution, in response to an invitation issued to P. Piecuch].

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232.** S. Li, B. Jochim, J. Stamm, S.H. Yuwono, S.S. Priyadarsini, P. Piecuch, and M. Dantus, "Femtosecond Intramolecular Rearrangement of the CH_3NCS Radical Cation," *J. Chem. Phys.*, submitted (2022).

LIST OF EDITED JOURNAL ISSUES AND BOOKS[†]

1. *International Journal of Quantum Chemistry*, Volume 107, Issue 14 (2007). Special Issue: Proceedings from the Eleventh European Workshop on Quantum Systems in Chemistry and Physics (St. Petersburg, Russia, August 20-25, 2006). Issue Edited by Oleg Vasyutinskii, Jean Maruani, Piotr Piecuch, Gerardo Delgado-Barrio, and Stephen Wilson. Preface: *Int. J. Quantum Chem.* **107** (14), 2565-2566 (2007). List of Participants: *Int. J. Quantum Chem.* **107** (14), 2567-2574 (2007).

2. *Progress in Theoretical Chemistry and Physics* (book series published by Springer), Volume 18 (2008), "Frontiers in Quantum Systems in Chemistry and Physics." Proceedings from the Twelfth European Workshop on Quantum Systems in Chemistry and Physics (London, U.K., August 30 - September 5, 2007). Edited by S. Wilson, P. Grout, J. Maruani, G. Delgado-Barrio, and P. Piecuch. Preface: pp. vii-viii.

3. *Nuclei and Mesoscopic Physics, Workshop on Nuclei and Mesoscopic Physics, WNMP 2007*, AIP Conference Proceedings, Vol. 995, edited by P. Danielewicz, P. Piecuch, and V. Zelevinsky (American Institute of Physics, Melville, NY, 2008). Preface: p. vii.

4. *Progress in Theoretical Chemistry and Physics* (book series published by Springer), Volume 19 (2009), "Advances in the Theory of Atomic and Molecular Systems: Conceptual and Computational Advances in Quantum Chemistry." Proceedings from the Thirteenth International Workshop on Quantum Systems in Chemistry and Physics (Lansing, Michigan, U.S.A., July 6-12, 2008). Edited by P. Piecuch, J. Maruani, G. Delgado-Barrio, and S. Wilson. Preface: pp. vii-ix.

5. *Progress in Theoretical Chemistry and Physics* (book series published by Springer), Volume 20 (2009), "Advances in the Theory of Atomic and Molecular Systems: Dynamics, Spectroscopy, Clusters, and Nanostructures." Proceedings from the Thirteenth International Workshop on Quantum Systems in Chemistry and Physics (Lansing, Michigan, U.S.A., July 6-12, 2008). Edited by P. Piecuch, J. Maruani, G. Delgado-Barrio, and S. Wilson. Preface: pp. vii-ix.

6. *International Journal of Quantum Chemistry*, Volume 111, Issue 2 (2011). Special Issue: Proceedings from the Fourteenth European Workshop on Quantum Systems in Chemistry and Physics (San Lorenzo de El Escorial, Madrid, Spain, September 13-19, 2009). Issue Edited by Gerardo Delgado-Barrio, Jean Maruani, Piotr Piecuch, and Erkki Brändas. Preface: *Int. J. Quantum Chem.* **111** (2), 203-204 (2011). List of Participants: *Int. J. Quantum Chem.* **111** (2), 205-212 (2011).

7. *Progress in Theoretical Chemistry and Physics* (book series published by Springer), Volume 22 (2012), "Advances in the Theory of Quantum Systems in Chemistry and Physics." Proceedings from the Fifteenth International Workshop on Quantum Systems in Chemistry and Physics (Cambridge, U.K., August 31 - September 5, 2010). Edited by P.E. Hoggan, E. Brändas, J. Maruani, P. Piecuch, and G. Delgado-Barrio. Preface: pp. xv-xvii.

[†] Excluding memberships of editorial boards, which are listed in section Editorial Boards of Curriculum Vitae.

8. *Progress in Theoretical Chemistry and Physics* (book series published by Springer), Volume 26 (2012), "Quantum Systems in Chemistry and Physics: Progress in Methods and Applications." Proceedings from the Sixteenth International Workshop on Quantum Systems in Chemistry and Physics (Kanazawa, Japan, September 11-17, 2011). Edited by K. Nishikawa, J. Maruani, E. Brändas, G. Delgado-Barrio, and P. Piecuch. Preface: pp. vii-ix.

LIST OF INVITED TALKS AT NATIONAL AND INTERNATIONAL SYMPOSIA[†]

1. "Application of the Hilbert-Space Coupled-Cluster Theory to Electronic States of the H_4 Model System," Workshop "Coupled Clusters in the Theory of Atoms and Molecules," Quantum Chemistry Laboratory, Faculty of Chemistry, University of Warsaw, Warsaw, Poland, October 23-24, 1992.

2. "Linear Response Coupled-Cluster Approach to Static Molecular Properties," The symposium "Frontiers in Electronic Structure Theory," 213th American Chemical Society National Meeting, San Francisco, California, U.S.A., April 13-17, 1997.

3. "Coupled-Cluster Approach to Static Molecular Properties," "Coupled Cluster Theory and Electron Correlation" workshop, "Fifty Years of the Correlation Problem," Cedar Key, Florida, U.S.A., June 15-19, 1997, a satellite meeting of the 9th International Congress of Quantum Chemistry, Atlanta, Georgia, U.S.A., June 9-14, 1997.

4.* "Single-Reference Coupled-Cluster Methods for Quasi-Degenerate Electronic States," The symposium "Electronic Structure Theory: From Methods to Molecules and Materials," 100th Annual Meeting of the American Physical Society, Atlanta, Georgia, U.S.A., March 21-26, 1999.

5.* "Dynamics of Harpooning in van der Waals Molecules," The symposium "11th European Seminar on Computational Methods in Quantum Chemistry," Zakopane, Poland, September 23-25, 1999.

6.* "Dynamics of Harpooning in van der Waals Molecules," "Vth International Conference on Molecular Spectroscopy," Lądek-Zdrój, Poland, September 26-30, 1999.

7.* "Method of Moments of Coupled-Cluster Equations: A New Approach to the Many-Electron Correlation Problem," The 2000 Florida Award Symposium (honoring Dr. Rodney J. Bartlett's work), FAME 2000 (Florida Annual Meeting and Exposition, organized by the Florida Section of the American Chemical Society), Orlando, Florida, U.S.A., May 12, 2000.

8.* "Dynamics of Photo-Induced Charge Transfer in van der Waals Molecules," Joint Polish-German Conference on Modern Optics: Fundamental Aspects of Spectroscopy and Environmental Applications, Jurata near Gdańsk, Poland, September 17-22, 2000.

9.* "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces," the 41st Sanibel Symposium on Atomic, Molecular, Biophysical, and Condensed Matter Theory, St. Augustine, Florida, U.S.A., February 24-March 2, 2001.

[†] Invited talks at symposia that Dr. P. Piecuch gave after joining Michigan State University in August 1998 and before submitting the tenure promotion package in the Fall of 2001 are marked by $*$. Invited talks at symposia that Dr. P. Piecuch gave after submitting the tenure promotion package in the Fall of 2001 are marked by $**$. Invited talks given by co-authors at conferences are listed with papers presented at conferences.

10.* "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces," First Southern School on Computational Chemistry (one of the two formal lectures), Orange Beach, Alabama, March 23-24, 2001.

11.* "Effect of the Potential Energy Surface on the Dynamics of Weakly Bound Precursor Complexes and New "Black-Blox" Coupled-Cluster Methods for Entire Potential Energy Surfaces of Reactive Molecular Systems," The symposium "First Principles Chemical Reaction Dynamics," 222nd American Chemical Society National Meeting, Chicago, Illinois, U.S.A., August 26–30, 2001.

12.* "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited States," 34th Midwest Theoretical Chemistry Conference, University of Minnesota, Minneapolis, Minnesota, U.S.A., October 5–6, 2001.

13.** "Advances in Electronic Structure Theory: New Coupled-Cluster Methods for Quasi-Degenerate Ground States, Molecular Potential Energy Surfaces, and Excited States," Institute for Nuclear Theory workshop on "Advanced Computational Methods for Solving the Nuclear Many-Body Problem," Seattle, Washington, U.S.A., March 12–15, 2002.

14.** "New Single- and Multi-Reference Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited States," The symposium "Recent Advances in Electron Correlation Methodology," 223rd American Chemical Society National Meeting, Orlando, Florida, U.S.A., April 7–11, 2002.

15.** "Method of Moments of Coupled-Cluster Equations: A New Framework for Designing Accurate Electronic Structure Methods," Fourth International Congress of the International Society for Theoretical Chemical Physics (ICTCP-IV), Marly-le-Roi near Paris, France, July 9-16, 2002 [invited plenary lecture].

16.** "Method of Moments of Coupled-Cluster Equations: A New Theoretical Framework for Designing Highly Accurate Electronic Structure Methods," International Symposium on Frontiers in Molecular Science 2002, Qingdao, China, July 15-18, 2002.

17.** "Advances in Electronic Structure Theory: New Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited States," 6th World Congress of Theoretically Oriented Chemists (WATOC02), Lugano, Switzerland, August 4-9, 2002 [invited contributed talk].

18.** "Method of Moments of Coupled-Cluster Equations: A New Theoretical Framework for Designing Highly Accurate (Virtually Exact) and Inexpensive Electronic Structure Methods," 11th Conference on Current Trends in Computational Chemistry, Jackson, Missisipi, U.S.A., November 1-2, 2002.

19.** "New Alternatives for Accurate Electronic Structure Calculations of Molecular Potential Energy Surfaces," The symposium "New Electronic Structure Methods: From Molecules to Materials," 225th American Chemical Society National Meeting, New Orleans, Louisiana, U.S.A., March 23-27, 2003.

20.** "Single- and Multi-reference Coupled-Cluster Methods for Quasidegenerate Electronic States and Bond Breaking," The symposium "Bond-Breaking Methods in Gas and Condensed Phases," 226th American Chemical Society National Meeting, New York, New York, U.S.A., September 7-11, 2003.

21.** "Noniterative Coupled-Cluster Methods for Accurate Calculations of Excited Electronic States," The symposium "The Systematic Treatment of Electron Correlation. A Celebration of the Science of Rodney J. Bartlett," St. Simons Island, Georgia, U.S.A., April 23-25, 2004.

22.** "Coupled-Cluster Method: An Accurate Ab Initio Theory of Atoms, Molecules, Nuclei, and Other Many-Fermion Systems," International Workshop on Microscopic Approaches to Nuclear Structure Calculations," UMIST, Manchester, U.K., July 4–8, 2004.

23.** "Coupled-Cluster Approaches to Atoms, Molecules, and Nuclei," Workshop "New Perspectives on p-Shell Nuclei," Michigan State University, East Lansing, Michigan, U.S.A., July 22-24, 2004.

24.** "Noniterative Coupled-Cluster Methods for Bond Breaking, Diradicals, and Excited Electronic States," International conference "Molecular Quantum Mechanics: the No Nonsense Path to Progress" honoring Professor Nicholas Handy's work, St. John's College, Cambridge University, Cambridge, U.K., July 24-29, 2004.

25.** "Renormalized Coupled-Cluster Methods and their Automated Parallel Computer Implementation with Tensor Contraction Engine," The symposium "Symbolic Calculation in Chemistry," 228th American Chemical Society National Meeting, Philadelphia, Pennsylvania, U.S.A., August 22-26, 2004.

26.** "Coupled Cluster Calculations of Ground and Excited States of Nuclei," International Conference on Exotic Nuclei and Atomic Masses, ENAM-04, Pine Mountain, Georgia, U.S.A., September 12-16, 2004.

27.** "Non-Iterative Coupled-Cluster Methods For Accurate Calculations of Excited Electronic States," Ninth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-IX, Les Houches, Grenoble, France, September 25-30, 2004.

28.** "Coupled Cluster Calculations of Ground and Excited States of Nuclei," Ninth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-IX, Les Houches, Grenoble, France, September 25-30, 2004.

29.** "Coupled-Cluster Approaches to Atoms, Molecules, and Nuclei," Institute for Nuclear Theory workshop "Microscopic Nuclear Structure Theory," "Nuclear Forces and the Quantum Many-Body Problem," Seattle, Washington, U.S.A., October 4-8, 2004.

30.** "Coupled-Cluster Method: Highly Accurate Microscopic Approach to Molecular Systems and Nuclei," Workshop "Nuclei and Mesoscopic Physics," Michigan State University, East Lansing, Michigan, U.S.A., October 23-26, 2004.

31.** "Noniterative Coupled-Cluster Methods for Bond Breaking, Diradicals, and Excited Electronic States," 7th World Congress of Theoretically Oriented Chemists (WATOC05), Cape Town, South Africa, January 16-21, 2005.

32.** "Renormalized and Active-Space Coupled-Cluster Methods: Two Approaches to Electronic Quasi-Degeneracies and Open-Shell Problems," Fifth Congress of the International Society for Theoretical Chemical Physics (ICTCP-V), New Orleans, Louisiana, U.S.A., July 20-26, 2005 [invited plenary lecture].

33.** "Noniterative Coupled-Cluster Methods for Bond Breaking, Diradicals, and Excited Electronic States," The symposium "Theoretical Determination of Energy Landscapes: Methodology and Applications," 230th American Chemical Society National Meeting, Washington, DC, U.S.A., August 28-September 1, 2005.

34.** "Renormalized and Active-Space Coupled-Cluster Methods: Two Approaches to Quasi-Degeneracies and Open-Shell Problems," Conference on Microscopic Approaches to Many-Body Theory, in honor of Professor Raymond Bishop, The University of Manchester, Manchester, U.K., August 31–September 3, 2005.

35.** "Active-Space Coupled-Cluster Method: An Inexpensive and Highly Accurate Approach to Electronic Quasi-Degeneracies and Open-Shell Problems," Tenth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-X, Carthage, Tunisia, September 1-7, 2005.

36.** "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," 12th International Congress of Quantum Chemistry, Kyoto, Japan, May 21-26, 2006.

37.** "Accurate Quantum Calculations for Many-Electron and Other Many-Fermion Systems: From Bond Breaking and Electronic Excitations in Molecules to Properties of Atomic Nuclei," The Centro Internacional de Matemática Workshop "Mathematics in Chemistry," Lisbon, Portugal, July 19-21, 2006.

38.** "Advances in Electronic Structure Theory: Single-Reference Coupled-Cluster Methods for Multi-Reference Problems," Sixth Canadian Computational Chemistry Conference (CCCC6), Vancouver, British Columbia, Canada, July 26-30, 2006 [invited plenary lecture].

39.** "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," Eleventh European Workshop on Quantum Systems in Chemistry and Physics, QSCP-XI, St. Petersburg, Russia, August 20-25, 2006.

40.** "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," International Conference "Recent Trends in Many-Body Methods for Electronic Structure and Properties of Atoms and Molecules," Bhubaneswar and Puri, Orissa, India, January 11-13, 2007.

41.** "Active-Space Coupled-Cluster Methods for Bond Breaking, Excited Electronic States, and Open-Shell Systems," International Conference "Practicing Chemistry with Theoretical Tools, on the Occasion of Professor Mark S. Gordon's 65th Birthday," Kihei, Hawaii, U.S.A., January 15-18, 2007.

42.** "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," 39th Midwest Theoretical Chemistry Conference, Indiana University, Bloomington, Indiana, U.S.A., June 28-30, 2007.

43.** "Coupled-Cluster Theory: An Overview of the Basic Formalism and Applications to Molecular and Nuclear Structure Problems," Workshop on Advanced Many-body Methods for Nuclear Structure European Centre for Theoretical Studies in Nuclear Physics and Related Areas, Trento, Italy, July 2-6, 2007.

44.** "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Applications to Radicals, Biradicals, and Bond Breaking," Twelfth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-XII, London, U.K., August 30 - September 5, 2007.

45.** "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Applications to Radicals, Biradicals, Reaction Pathways, and Photochemistry," "IXth International Conference on Molecular Spectroscopy: From Molecules to Molecular Biological Systems and Molecular Materials: Role of Molecular Interactions and Recognition," Wrocław – Lądek-Zdrój, Poland, September 12-16, 2007.

46.** "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Extension to Open-Shell Systems," The symposium "Electronic Structure and Reaction Dynamics of Open-shell Species," 235th American Chemical Society National Meeting, New Orleans, Louisiana, U.S.A., April 6-10, 2008.

47.** "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Extension to Open-Shell and Large Systems," Sixth Congress of the International Society for Theoretical Chemical Physics (ICTCP-VI), Vancouver, British Columbia, Canada, July 19-24, 2008 [invited plenary lecture].

48.** "Coupled-Cluster Theory: A Brief Overview of Modern Methods and Applications to Nuclear Structure," the WE-Heraeus-Seminar "Ab-Initio Nuclear Structure - Where do we stand?", Bad Honnef, Germany, July 28-30, 2008.

49.** "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Extension to Open-Shell and Large Systems," Eighth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2008), Sydney, Australia, September 14-19, 2008.

50.** "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Extension to Open-Shell and Large Systems," The International Conference "Theory and Applications of Computational Chemistry 2008 (TACC 2008)," Shanghai, China, September 23-27, 2008 [invited plenary lecture].

51.** "Extending Electronic Structure Theory to Complex Molecular Problems: Local Correlation Coupled-Cluster and Correlation Energy Scaling Methodologies," The symposium "Advances in Electronic Structure Theory and First Principles Dynamics," 237th American Chemical Society National Meeting, Salt Lake City, Utah, U.S.A., March 22-26, 2009.

52.** "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States," 30th Annual Combustion Research Meeting, Airlie Conference Center, Warrenton, Virginia, U.S.A., May 26-29, 2009.

53.** "Coupled-Cluster Theory: From Quantum Chemistry to Applications in Nuclear Physics," International Workshop "Linking Nuclei, Molecules, and Condensed Matter: Computational Quantum Many-Body Approaches," European Centre for Theoretical Studies in Nuclear Physics and Related Areas, Trento, Italy, July 6-10, 2009.

54.** "Dealing with Strong Electron Correlations in Quantum Chemistry via Renormalized, Active-Space, and Multi-Reference Coupled-Cluster Methods," The symposium "New Developments in Strongly Correlated Electrons," 238th American Chemical Society National Meeting, Washington, DC, U.S.A., August 16-20, 2009.

55.** "Extending Electronic Structure Theory to Complex Molecular Problems: Local Correlation Coupled-Cluster and Correlation Energy Scaling Methodologies," Fourteenth International Workshop on Quantum Systems in Chemistry and Physics, QSCP-XIV, San Lorenzo de El Escorial, Madrid, Spain, September 13-19, 2009.

56.** "Dealing with Strong Electron Correlations in Quantum Chemistry via Renormalized, Active Space, and Multireference Coupled-Cluster Methods," An International Symposium "Recent Advances in Many Electron Theories," Shankarpur, West Bengal, India, January 5-7, 2010.

57.** "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," the 50th Sanibel Symposium, St. Simons Island, Georgia, U.S.A., February 24-March 2, 2010.

58.** "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," International conference "Molecular Quantum Mechanics: From Methylene to DNA and Beyond" honoring Professor Henry F. Schaefer's work, University of California at Berkeley, Berkeley, California, May 24-29, 2010.

59.** "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," 17th Canadian Symposium on Theoretical Chemistry, Edmonton, Alberta, Canada, July 25-30, 2010.

60.** "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," Fifteenth International Workshop on Quantum Systems in Chemistry and Physics, QSCP-XV, Magdalene College, Cambridge University, Cambridge, U.K., August 31 - September 5, 2010.

61.** "Dealing with Chemical Reaction Pathways and Electronic Excitations in Molecular Systems via Renormalized and Active-Space Coupled-Cluster Methods," 18th European Conference on Dynamics of Molecular Systems, MOLEC XVIII, Curia, Portugal, September 5-10, 2010.

62.** "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," 9th Central European Symposium on Theoretical Chemistry, CESTC 2010, Nový Smokovec, Slovakia, September 12-15, 2010.

63.** "Dealing with Chemical Reaction Pathways and Electronic Excitations in Molecular Systems via Renormalized and Active-Space Coupled-Cluster Methods," 8th International Conference of Computational Methods in Sciences and Engineering (ICCMSE

2010), symposium "Methods in Quantum Chemistry" in honor of Jiri Čížek and Josef Paldus, Kos, Greece, October 3-8, 2010 [invited featured lecture].

64.** "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," The symposium "Fragment and Local Orbital Methods in Electronic Structure Theory," 241st American Chemical Society National Meeting, Anaheim, California, U.S.A., March 27-31, 2011.

65.** "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," 11th Annual CERMM Symposium, Centre for Research in Molecular Modeling, Concordia University, Montreal, Canada, June 4-5, 2011 [invited keynote lecture].

66.** "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," 94th Canadian Chemistry Conference and Exhibition, General Physical, Theoretical, and Computational Chemistry Session, Montreal, Canada, June 5-9, 2011.

67.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems and their Multi-Level Generalizations," Ninth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2011), Santiago de Compostela, Spain, July 17-22, 2011.

68.** "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," WATOC 2011 Satellite Conference "Strongly Correlated Systems, Cooperativity, and Valence-Bond Theory," A Coruña, Spain, July 23-24, 2011.

69.** "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," The symposium "Reduced Density Matrices in Quantum Chemistry," 242nd American Chemical Society National Meeting, Denver, Colorado, U.S.A., August 28 - September 1, 2011.

70.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems and their Multi-Level Generalizations," The symposium "Quantum Chemistry: Methodology," 242nd American Chemical Society National Meeting, Denver, Colorado, U.S.A., August 28 - September 1, 2011.

71.** "Shifts in Excitation Energies Induced by Hydrogen Bonding: A Comparison of the Embedding and Supermolecular Time-Dependent Density Functional Theory Calculations with the Equation-of-Motion Coupled-Cluster Results," The symposium "Quantum Chemistry: DFT," 242nd American Chemical Society National Meeting, Denver, Colorado, U.S.A., August 28 - September 1, 2011.

72.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems and their Multi-Level Generalizations," Seventh Congress of the International Society for Theoretical Chemical Physics (ICTCP-VII), Tokyo, Japan, September 2-8, 2011.

73.** "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," XVI-th International Workshop on Quantum Systems in Chemistry and Physics, QSCP-XVI, Kanazawa, Japan, September 11-17, 2011.

74.** "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," An International Symposium "Recent Advances in Many Electron Theories II, 2011," Puri, Orissa, India, December 1-4, 2011.

75.** "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," The Fifth Asian Pacific Conference of Theoretical and Computational Chemistry (APCTCC 2011), Rotorua, New Zealand, December 9-13, 2011.

76.** "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States (Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods)," 33rd Annual Combustion Research Meeting, Bolger Center, Potomac, Maryland, U.S.A., May 29 - June 1, 2012.

77.** "Recent Progress in Renormalized and Active-Space Coupled-Cluster Methods," The symposium "Coupled-Cluster Theory and Related Methods," A Satellite Symposium to the 14th International Congress of Quantum Chemistry, Boulder, Colorado, U.S.A., July 1-3, 2012.

78.** "Multi-level Extensions of the Cluster-in-Molecule Local Correlation Methodology Aimed at Chemical Reaction Pathways Involving Large Molecular Systems," The symposium "Bridging the Gap between Ab Initio and Classical Simulations," 244th American Chemical Society National Meeting, Philadelphia, Pennsylvania, U.S.A., August 19-23, 2012.

79.** "Combining Active-Space Coupled-Cluster Methods with Moment Energy Corrections via the CC($P;Q$) Methodology, with Benchmark Calculations for Bond Breaking and Biradical Transition States," The symposium "Exploring Potential Energy Surfaces in Quantum Chemistry: A Tribute to H. Bernhard Schlegel," 244th American Chemical Society National Meeting, Philadelphia, Pennsylvania, U.S.A., August 19-23, 2012.

80.** "Accurate Characterization of Reaction Pathways Relevant to Combustion and Electronic Excitations in Radicals and Biradicals via Renormalized and Active-Space Coupled-Cluster Theories, their Merger, and Open-Shell Extensions," The symposium on Combustion Chemistry, 245th American Chemical Society National Meeting, New Orleans, Lousiana, U.S.A., April 7-11, 2013.

81.** "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," The symposium "Quantum Chemistry: Methodology," 245th American Chemical Society National Meeting, New Orleans, Lousiana, U.S.A., April 7-11, 2013.

82.** "The Cobalt-Methyl Dissociation and Electronic Transitions in Methylcobalamin: Insights from the Coupled-cluster, Multireference Perturbation Theory, and Density Functional Theory Calculations," The symposium "Bioinorganic Chemistry: Proteins and Enzymes and Model Systems," 245th American Chemical Society National Meeting, New Orleans, Lousiana, U.S.A., April 7-11, 2013.

83.** "Recent Progress in the Active-Space Electron-Attached and Ionized Equation-of-Motion Coupled-Cluster Methodologies," 7th International Conference "Molecular Quantum Mechanics" entitled "Electron Correlation: The Many-Body Problem at the Heart of Chemistry," in honor of Professor Rodney J. Bartlett, Lugano, Switzerland, June 2-7, 2013.

84.** "Recent Progress in the Active-Space Electron-Attached and Ionized Equation-of-Motion Coupled-Cluster Methodologies," Eighth Congress of the International Society for Theoretical Chemical Physics (ISTCP-VIII), Budapest, Hungary, August 25-31, 2013.

85.** "Single-Reference Coupled-Cluster Methods for Multi-Reference Molecular Problems," 6th Conference "Current Trends in Theoretical Chemistry" (CTTC VI), Cracow, Poland, September 1-5, 2013.

86.** "Understanding Photochemistry and Photo-ionization Dynamics with Highly Correlated Electronic Structure Methods: Two Examples that Highlight the Transformative Role of Theory in the Interpretation of Experimental Observations," XVIII-th International Workshop on Quantum Systems in Chemistry, Physics, and Biology (QSCP-XVIII), Paraty (Rio de Janeiro), Brazil, December 1-7, 2013.

87.** "Understanding Photochemistry and Photo-ionization Dynamics with Highly Correlated Electronic Structure Methods: Two Examples that Highlight the Transformative Role of Theory in the Interpretation of Experimental Observations," The symposium "A Little Insight Goes a Long Way," 247th American Chemical Society National Meeting, Dallas, Texas, U.S.A., March 16-20, 2014.

88.** "Combining Active-Space Coupled-Cluster Approaches with Moment Energy Corrections via the CC(P;Q) Methodology: Connected Triple and Quadruple Excitations," The symposium "Quantum Chemistry: Methodology," 247th American Chemical Society National Meeting, Dallas, Texas, U.S.A., March 16-20, 2014.

89.** "Utility of New Generations of Coupled-Cluster Methods and Algorithms in Catalytic and Structural Properties of Gold Nanoparticles," The symposium "Quantum Chemistry: Applications," 247th American Chemical Society National Meeting, Dallas, Texas, U.S.A., March 16-20, 2014.

90.** "Single-Reference Coupled-Cluster Methods for Multi-Reference Molecular Problems," Nordita program on "Computational Challenges in Nuclear and Many-Body Physics," Stockholm, Sweden, September 15 - October 10, 2014.

91.** "Combining Active-Space Coupled-Cluster Approaches with Moment Energy Corrections via the CC(P;Q) Methodology," Tenth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2014), Santiago, Chile, October 5-10, 2014.

92.** "Combining Active-Space Coupled-Cluster Approaches with Moment Energy Corrections via the CC(P;Q) Methodology," The Fourteenth Theoretical Chemistry Symposium (TCS 2014), Pune, India, December 18-21, 2014 [invited keynote lecture].

93.** "Understanding Photochemistry and Photoelectron Spectra with Highly Correlated Electronic Structure Methods Based on Coupled-Cluster Theory," The symposium "Modeling Excited States of Complex Systems," 249th American Chemical Society National Meeting, Denver, Colorado, U.S.A., March 22-26, 2015.

94.** "Aerobic Oxidation of Methanol to Formic Acid on Au_8^-: Benchmark Analysis Based on Completely Renormalized Coupled-Cluster and Density Functional Theory Calculations," The symposium "Computational Chemical Dynamics: Advancing Our Understanding of Chemical Processes in Gas-Phase, Biomolecular and Condensed-Phase Systems," 249th American Chemical Society National Meeting, Denver, Colorado, U.S.A., March 22-26, 2015.

95.** "Combining Active-Space Coupled-Cluster Approaches with Moment Energy Corrections via the CC(P;Q) Methodology: Ground and Excited States," The symposium "Quantum Chemistry: Methodology," 249th American Chemical Society National Meeting, Denver, Colorado, U.S.A., March 22-26, 2015.

96.** "Molecular Systems from the Equation-of-Motion Coupled-Cluster Theory" or "Understanding Electronic Excitation, Multi-Photon Ionization, and Photo-Electron Spectra with the Equation-of-Motion Coupled-Cluster Theory," Workshop of the Espace de Structure Nucléaire Théorique on "Near-Degenerate Systems in Nuclear Structure and Quantum Chemistry from Ab-Initio Many-Body Methods," CEA Saclay, France, March 30 - April 2, 2015.

97.** "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems," The symposium "Recent Advances in Electronic Structure Theory (RAEST2015)," A Satellite Symposium to the 15th International Congress of Quantum Chemistry, Nanjing, China, June 1-6, 2015.

98.** "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Theories for High-Accuracy *Ab Initio* Computations of Chemical Reaction Profiles Involving Biradical Transition States and Electronic Spectra of Radical and Polyradical Species," The symposium "From Diradicals and Polyradicals to Functionalized Materials: Theory Meets Experiment," 250th American Chemical Society National Meeting, Boston, Massachusetts, U.S.A., August 16-20, 2015.

99.** "Utility of New Generations of Coupled-Cluster Methods and Algorithms in Catalytic, Structural, and Optical Properties of Gold Nanoparticles," The symposium "Interplay between Theory and Experiment in Catalytic Research," the 2015 International Chemical Congress of Pacific Basin Societies (Pacifichem 2015), Honolulu, Hawaii, U.S.A., December 15-20, 2015.

100.** "Coupled-Cluster Interpretation of the Photoelectron Spectra of Ag_3^- and Au_3^-," 26th Austin Symposium on Molecular Structure and Dynamics, Dallas, Texas, U.S.A., March 5-7, 2016.

101.** "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States (Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems: CC(P;Q) Formalism)," 2nd Computational and Theoretical Chemistry Research PI Meeting, Gaithersburg, Maryland, U.S.A., May 15-18, 2016.

102.** "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems," TSRC Workshop "Low-Scaling and Unconventional Electronic Structure Techniques" (LUEST 2016), 3rd edition, Telluride, Colorado, U.S.A., June 1-5, 2016.

103.** "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems: CC(P;Q) Formalism," Ninth Congress of the International Society for Theoretical Chemical Physics (ISTCP-IX), Grand Forks, North Dakota, U.S.A., July 17-22, 2016.

104.** "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems: CC(P;Q) Formalism," The International Conference "Theory and Applications of Computational Chemistry 2016 (TACC 2016)," Seattle, Washington, August 28 - September 2, 2016.

105.** "Understanding Photochemistry and Photoelectron Spectra with Highly Correlated Electronic Structure Methods based on Coupled-Cluster Theory," 7th Conference "Current Trends in Theoretical Chemistry" (CTTC VII), Cracow, Poland, September 4-8, 2016.

106.** "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," EMN Meeting on Computation and Theory (Energy, Materials, and Nanotechnology), workshop "Novel Electron Correlation Methods for Complex Systems," Las Vegas, Nevada, U.S.A., October 10-14, 2016.

107.** "Coupled-Cluster Interpretation of the Photoelectron Spectra of Ag_3^- and Au_3^-," GAMESS*7557*SSEMAG Palindromic Birthday Theory Symposium, on the Occasion of Professor Mark S. Gordon's 75th and Professor Kim K. Baldridge 57th Birthdays," Lihue, Hawaii, U.S.A., January 16-18, 2017.

108.** "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," An International Conference "Recent Advances in Many-Electron Theory (RAMET-2017)," Goa, India, February 9-12, 2017.

109.** "The 1966 *Journal of Chemical Physics* Article by Jiří Čížek: What Is in It and Why Is It so Important," the 57th Sanibel Symposium, a special symposium recognizing the 50th Anniversary of Jiří Čížek's 1966 Paper on Coupled-Cluster Theory, St. Simons Island, Georgia, U.S.A., February 19-24, 2017.

110.** "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems: CC(P;Q) Formalism," The symposium "Electronic Structure of Complex Chemical Systems," 254th American Chemical Society National Meeting, Washington, DC, U.S.A., August 20-24, 2017.

111.** "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," PHYS Awards Symposium, 254th American Chemical Society National Meeting, Washington, DC, U.S.A., August 20-24, 2017.

112.** "Stochastic CC(P;Q) Theory: Converging High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," Eleventh Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2017), Munich, Germany, August 27 - September 1, 2017.

113.** "High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," 15th Central European Symposium on Theoretical Chemistry, CESTC 2017, Wisła, Poland, September 3-6, 2017.

114.** "High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," 27th Austin Symposium on Molecular Structure and Dynamics, Dallas, Texas, U.S.A., March 3-5, 2018.

115.** "Introduction to Single-Reference Many-Body Perturbation Theory and its Diagrammatic Representation," Workshop of the Espace de Structure Nucléaire Théorique on "Many-Body Perturbation Theories in Modern Quantum Chemistry and Nuclear Physics," CEA Saclay, France, March 26-30, 2018.

116.** "Perturbative Corrections to Non-perturbative Methods" or "High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," Workshop of the Espace de Structure Nucléaire Théorique on "Many-Body Perturbation Theories in Modern Quantum Chemistry and Nuclear Physics," CEA Saclay, France, March 26-30, 2018.

117.** "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," 4th Computational and Theoretical Chemistry Research PI Meeting, Gaithersburg, Maryland, U.S.A., May 21-24, 2018.

118.** "High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," TSRC Workshop "Low-Scaling and Unconventional Electronic Structure Techniques" (LUEST 2018), 4th edition, Telluride, Colorado, U.S.A., June 4-8, 2018.

119.** "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," The joint Annual Workshop on Recent Developments in Electronic Structure Methods (ES18) and Penn Conference in Theoretical Chemistry (PCTC18), Philadelphia, Pennsylvania, U.S.A., June 10-14, 2018.

120.** "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," The symposium "Strong Correlation in Electronic Structure Theory," A Satellite Symposium to the 16th International Congress of Quantum Chemistry, Strasbourg, France, June 24-27, 2018.

121.** "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," 28th Canadian Symposium on Theoretical and Computational Chemistry (CSTCC 2018), Windsor, Ontario, Canada, July 15-19, 2018.

122.** "Toward Exact Quantum Chemistry: Accurate Electronic Energies by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," The international conference "Quantum International Frontiers 2018," Changsha, Hunan Province, China, October 17-21, 2018 [invited Frontier Lecture].

123.** "Toward Exact Quantum Chemistry by Combining Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Mainz-Kobe Joint Workshop on "Solving the Full Configuration Interaction Problem," RIKEN Center for Computational Science, Kobe, Japan, November 26-27, 2018 [teleconference session].

124.** "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," TSRC Workshop "New Frontiers in Electron Correlation," 2nd edition, Telluride, Colorado, U.S.A., June 10-14, 2019.

125.** "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Tenth Congress of the International Society for Theoretical Chemical Physics (ISTCP-X), symposium entitled "Emergent Electronic Structure Methods," Tromsø, Norway, July 11-17, 2019.

126.** "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," 8th Conference "Current Trends in Theoretical Chemistry" (CTTC VIII), Cracow, Poland, September 1-4, 2019.

127.** "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," 20th International Conference on Recent Progress in Many-Body Theories, Toulouse, France, September 9-13, 2019.

128.** "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," The Utah Workshop on Quantum Methods in Molecular and Solid-State Theory, Park City, Utah, U.S.A., September 22-27, 2019.

129.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Workshop on New Methods for Strongly Correlated Electrons, Qingdao, China, October 9-13, 2019.

130.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," The international conference "Quantum International Frontiers 2019," Shanghai, China, November 18-22, 2019 [invited Frontier Lecture].

131.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," the 60th Sanibel Symposium, St. Simons Island, Georgia, U.S.A., February 16-21, 2020.

132.** "High-Accuracy Electronic Energetics by Stochastic and Deterministic Wave Function Sampling and Coupled-Cluster Computations," TSRC Workshop "Low-Scaling and Unconventional Electronic Structure Techniques" (LUEST 2020), 5th edition, Telluride, Colorado, U.S.A., June 1-5, 2020.
DUE TO COVID-19, REPLACED BY VIRTUAL WORKSHOP, June 1-5 and June 8-9, 2020 [lecture via Zoom].

133.** "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States (Toward Exact Quantum Chemistry)," 2020 Computational and Theoretical Chemistry Virtual Conference Series (July 16, July 30, August 13, 2020), Germantown, Maryland, U.S.A., August 13, 2020 [lecture via Zoom].

134.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," The Physical, Theoretical, and Computational Chemistry Virtual Seminar Series, Chemical Institute of Canada, December 1, 2020 [lecture via Zoom].

135.** "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," TSRC Workshop "New Frontiers in Electron Correlation," 3rd edition, Telluride, Colorado, U.S.A., June 14-18, 2021 [virtual workshop; lecture via Zoom].

136.** "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," TSRC Workshop "New Developments in Coupled-Cluster Theory," Telluride, Colorado, U.S.A., July 19-23, 2021 [hybrid format; lecture via Zoom].

137.** "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," International Symposium on Correlated Electrons (SymCorrel21), Munich Center for Quantum Science and Technology, Munich, Germany, October 5-7, 2021 [virtual workshop; lecture via Zoom].

138.** "Computational Studies of FR0-SB, a Novel Organic Compound that Deprotonates Alcohols Upon Photoexcitation," International conference in the series "New Horizons in Scientific Software (NHISS 2021)" entitled "Light-Matter Interaction: Theory Meets Experiment," Jeju Island, South Korea, November 22-25, 2021 [hybrid format; lecture via Zoom].

139.** "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," The Seventeenth Theoretical Chemistry Symposium (TCS 2021), Indian Institute of Science Education and Research Kolkata, Mohanpur, Nadia, West Bengal, India, December 11-14, 2021 [virtual symposium; plenary lecture].

140.** "Externally Corrected Coupled-Cluster Methods Using Selected Configuration Interaction and FCIQMC," the 61st Sanibel Symposium, invited session on New Directions in CC Theory, St. Simons Island, Georgia, U.S.A., February 13-18, 2022 [in-person plenary lecture].

141.** "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," Chris Cramer 60th Birthday Symposium, 263rd American Chemical Society National Meeting, San Diego, California, U.S.A., March 20-24, 2022 [in-person and virtual meeting; pre-recorded virtual presentation].

142.** "Recent Advances in Externally Corrected Coupled-Cluster Methods," 10th International Conference "Molecular Quantum Mechanics" entitled "Molecular Quantum Mechanics: Innovation, Impact, and Insight," in honor of Professors Gustavo Scuseria and Martin Head-Gordon, Blacksburg, Virginia, U.S.A., June 26 - July 1, 2022 [plenary lecture].

143.** "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," Twelfth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2020), Vancouver, British Columbia, Canada, August 16-21, 2020.
DUE TO COVID-19, RESCHEDULED TO July 3-8, 2022.

144.** "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," The 2020 American Conference on Theoretical Chemistry (ACTC 2020), Palisades Tahoe (formerly Squaw Valley), California, U.S.A., July

26-30, 2020.
DUE TO COVID-19, RESCHEDULED TO July 24-28, 2022; renamed ACTC 2022.

145.** "Recent Advances in Externally Corrected Coupled-Cluster Methods," The symposium "Quantum Chemistry: Current and Future Frontiers," 264th American Chemical Society National Meeting, Chicago, Illinois, U.S.A., August 21-25, 2022 [in-person and virtual meeting; in-person talk].

146.** "Recent Advances in Externally Corrected Coupled-Cluster Methods," OPERA-2020 (Operators, Perturbations, Electrons, Relativity, and Multi-Scale Applications), an international symposium on theoretical chemistry in honour of Prof. Jürgen Gauss on the occasion of his 60th birthday, Ingelheim am Rhein, Germany, September 1-3, 2021.
DUE TO COVID-19, RESCHEDULED TO August 31 - September 2, 2022.

147.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations" (tentative), Modeling and Design of Molecular Materials 2020 (MDMM 2020) Conference, Gdańsk, Poland, September 21-24, 2020.
DUE TO COVID-19, RESCHEDULED TO September 19-22, 2022; renamed MDMM 2022.

148.** TBD, The symposium "Strong Correlation in Molecules," A Satellite Symposium to the 17th International Congress of Quantum Chemistry, Znojmo, Czech Republic, **DUE TO COVID-19, RESCHEDULED TO June 20-23, 2023.**

149.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations" (tentative), 17th International Congress of Quantum Chemistry, Bratislava, Slovakia, June 21-26, 2021.
DUE TO COVID-19, RESCHEDULED TO June 26 - July 1, 2023.

150.** TBD, The 5th Conference on Theory and Applications of Computational Chemistry (TACC 2020), Sapporo, Japan, September 7-12, 2020.
DUE TO COVID-19, RESCHEDULED TO September 2-10, 2023.

151.** TBD, International Symposium of Theoretical Chemistry, Kyoto, Japan, September 2-4, 2020.
DUE TO COVID-19, RESCHEDULED (dates to be determined).

In addition, Dr. Piotr Piecuch presented an invited paper "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces" at the 262nd WE-Heraeus-Seminar entitled "Modern Aspects of Many-Electron Theory," Bad Honnef, Germany, October 21–24, 2001 [classified as invited poster].

LIST OF ALL INVITED TALKS[†]

1. "Invariance Properties of the Multipole Expansion," Quantum Chemistry Laboratory, Faculty of Chemistry, University of Warsaw, Warsaw, Poland, May 12, 1983.

2. "What Was Most Fascinating for Me in my Master of Science Research Project and will I Continue this Kind of Research in the Future," The Scientific Convention of the Polish Chemical Society and of the Association of Chemical Industry Engineers and Technicians, Katowice, Poland, September 22, 1983 [lecture on the occasion of receiving the Individual Prize of the Polish Chemical Society].

3. "Irreducible Tensor Operators in Theory of Long-Range Intermolecular Interactions," Quantum Chemistry Laboratory, Faculty of Chemistry, University of Warsaw, Warsaw, Poland, April 5, 1984.

4. "Perturbation-Theoretical Description of Long-Range Intermolecular Interactions - the Application of Racah-Wigner Algebra and the Formalism of Irreducible Tensors," Nonlinear Optics Division, Institute of Physics, University of Poznań, Poland, March 29, 1988.

5. "Orthogonally Spin-Adapted Multi-Reference Coupled-Cluster Theory and Its Application to Model Systems with Varying Degree of Quasidegeneracy," Quantum Chemistry Laboratory, Faculty of Chemistry, University of Warsaw, Warsaw, Poland, December 5, 1991.

6. "Application of the Hilbert-Space Coupled-Cluster Theory to Electronic States of the H_4 Model System," Workshop "Coupled Clusters in the Theory of Atoms and Molecules," Quantum Chemistry Laboratory, Faculty of Chemistry, University of Warsaw, Warsaw, Poland, October 23-24, 1992.

7. "Recent Progress in Coupled Cluster Theory," Physical Chemistry Division Seminar, Department of Chemistry, University of Arizona, Tucson, Arizona, U.S.A., September 27, 1993.

8. "Recent Progress in Coupled Cluster Theory," Department of Chemistry, Indiana University, Bloomington, Indiana, U.S.A., January 3, 1994.

9. "Linear Response Coupled-Cluster Approach to Static Molecular Properties," The symposium "Frontiers in Electronic Structure Theory," 213th American Chemical Society National Meeting, San Francisco, California, U.S.A., April 13-17, 1997 [co-authors: A.E. Kondo, J. Paldus, and V. Špirko].

[†] Invited talks that Dr. P. Piecuch gave after joining Michigan State University in August 1998 and before submitting the tenure promotion package in the Fall of 2001 are marked by $*$. Invited talks that Dr. P. Piecuch gave after submitting the tenure promotion package in the Fall of 2001 are marked by $**$. Invited talks given by co-authors at conferences are listed with papers presented at conferences.

10. "Electron Correlation in Chemical Bonding," Department of Chemistry, York University, North York, Ontario, Canada, March, 1996.

11. "Coupled-Cluster Approach to Static Molecular Properties," "Coupled Cluster Theory and Electron Correlation" workshop, "Fifty Years of the Correlation Problem," Cedar Key, Florida, U.S.A., June 15-19, 1997, a satellite meeting of the 9th International Congress of Quantum Chemistry, Atlanta, Georgia, U.S.A., June 9-14, 1997.

12. "Electron Correlation in Molecules," Special Physical Chemistry Seminar, Department of Chemistry, Michigan State University, East Lansing, Michigan, U.S.A., August 14, 1997.

13. "Dynamics of Harpooning in van der Waals Molecules," Department of Chemistry, Michigan State University, East Lansing, Michigan, U.S.A., December 16, 1997.

14. "Dynamics of Harpooning in van der Waals Molecules," Quantum Theory Project Seminar, Quantum Theory Project, University of Florida, Gainesville, Florida, U.S.A., March 18, 1998.

15.* "Single-Reference Coupled-Cluster Methods for Quasi-Degenerate Electronic States," The symposium "Electronic Structure Theory: From Methods to Molecules and Materials," 100th Annual Meeting of the American Physical Society, Atlanta, Georgia, U.S.A., March 21-26, 1999.

16.* "Coupled-Cluster Theory: A Powerful Approach to Many-Electron Correlation Problem," Departmental Seminar, Department of Chemistry, University of Minnesota, Minneapolis, Minnesota, U.S.A., April 26, 1999.

17.* "Dynamics of Harpooning in van der Waals Molecules," The symposium "11th European Seminar on Computational Methods in Quantum Chemistry," Zakopane, Poland, September 23-25, 1999.

18.* "Dynamics of Harpooning in van der Waals Molecules," "Vth International Conference on Molecular Spectroscopy," Lądek-Zdrój, Poland, September 26-30, 1999.

19.* "Method of Moments of Coupled-Cluster Equations: A New Approach to the Many-Electron Correlation Problem," Quantum Theory Seminar, Department of Applied Mathematics, University of Waterloo, Waterloo, Ontario, Canada, May 4, 2000.

20.* "Dynamics of Photo-Induced Charge Transfer in van der Waals Molecules," Chemical Physics Research Seminar, Department of Chemistry, University of Waterloo, Waterloo, Ontario, Canada, May 5, 2000.

21.* "Method of Moments of Coupled-Cluster Equations: A New Approach to the Many-Electron Correlation Problem," The 2000 Florida Award Symposium (honoring Dr. Rodney J. Bartlett's work), FAME 2000 (Florida Annual Meeting and Exposition, organized by the Florida Section of the American Chemical Society), Orlando, Florida, U.S.A., May 12, 2000.

22.* "Dynamics of Photo-Induced Charge Transfer in van der Waals Molecules," Joint Polish-German Conference on Modern Optics: Fundamental Aspects of Spectroscopy and Environmental Applications, Jurata near Gdańsk, Poland, September 17-22, 2000.

23.* "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited States," Quantum Chemistry Laboratory, Faculty of Chemistry, University of Warsaw, Warsaw, Poland, September 29, 2000.

24.* "Dynamics of Photo-Induced Charge Transfer in van der Waals Molecules," Department of Chemistry, University of Arizona, Tucson, Arizona, U.S.A., October 23, 2000.

25.* "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces," the 41st Sanibel Symposium on Atomic, Molecular, Biophysical, and Condensed Matter Theory, St. Augustine, Florida, U.S.A., February 24-March 2, 2001.

26.* "Dynamics of Photo-Induced Charge Transfer in van der Waals Molecules," Department of Chemistry and Computational Center for Molecular Structure and Interactions, Distinguished Lecture Series in Computational Chemistry and Physics, Jackson State University, Jackson, Missisipi, U.S.A., March 23, 2001.

27.* "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces," First Southern School on Computational Chemistry (one of the two formal lectures), Orange Beach, Alabama, March 23-24, 2001.

28.* "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces," NSCL Theory Journal Club, National Superconducting Cyclotron Laboratory, Michigan State University, East Lansing, Michigan, U.S.A., June 22 and 26, 2001.

29.* "Effect of the Potential Energy Surface on the Dynamics of Weakly Bound Precursor Complexes and New "Black-Blox" Coupled-Cluster Methods for Entire Potential Energy Surfaces of Reactive Molecular Systems," The symposium "First Principles Chemical Reaction Dynamics," 222nd American Chemical Society National Meeting, Chicago, Illinois, U.S.A., August 26–30, 2001.

30.* "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited States," 34th Midwest Theoretical Chemistry Conference, University of Minnesota, Minneapolis, Minnesota, U.S.A., October 5–6, 2001.

31.* "Dynamics of Photo-Induced Charge Transfer in van der Waals Molecules," Institute of Physical and Theoretical Chemistry, Faculty of Chemistry, Wrocław University of Technology, Wrocław, Poland, October 19, 2001.

32.* "Advances in Electronic Structure Theory: New Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited States," J. Heyrovský Institute of Physical Chemistry, Academy of Sciences of the Czech Republic, Prague, Czech Republic, October 26, 2001.

33.** "Advances in Electronic Structure Theory: New Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited States," Faculty of Chemistry, University of Wrocław, Wrocław, Poland, November 9, 2001.

34.** "Advances in Electronic Structure Theory: New Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited States," Condensed Matter Physics Seminar, Department of Physics and Astronomy, Michigan State University, East Lansing, Michigan, U.S.A., November 29, 2001.

35.** "Advances in Electronic Structure Theory: New Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited States," Department of Chemistry, Iowa State University, Ames, Iowa, U.S.A., March 6, 2002.

36.** "Advances in Electronic Structure Theory: Multi-Reference Coupled-Cluster Methods," Scalable Computing Laboratory, Ames Laboratory, USDOE, Iowa State University, Ames, Iowa, U.S.A., March 7, 2002.

37.** "Advances in Electronic Structure Theory: New Coupled-Cluster Methods for Quasi-Degenerate Ground States, Molecular Potential Energy Surfaces, and Excited States," Institute for Nuclear Theory workshop on "Advanced Computational Methods for Solving the Nuclear Many-Body Problem," Seattle, Washington, U.S.A., March 12–15, 2002.

38.** "New Single- and Multi-Reference Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited States," The symposium "Recent Advances in Electron Correlation Methodology," 223rd American Chemical Society National Meeting, Orlando, Florida, U.S.A., April 7–11, 2002.

39.** "Method of Moments of Coupled-Cluster Equations: A New Framework for Designing Accurate Electronic Structure Methods," Fourth International Congress of the International Society for Theoretical Chemical Physics (ICTCP-IV), Marly-le-Roi near Paris, France, July 9-16, 2002 [invited plenary lecture].

40.** "Method of Moments of Coupled-Cluster Equations: A New Theoretical Framework for Designing Highly Accurate Electronic Structure Methods," International Symposium on Frontiers in Molecular Science 2002, Qingdao, China, July 15-18, 2002.

41.** "Advances in Electronic Structure Theory: New Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited States," 6th World Congress of Theoretically Oriented Chemists (WATOC02), Lugano, Switzerland, August 4-9, 2002 [invited contributed talk].

42.** "Method of Moments of Coupled-Cluster Equations: A New Theoretical Framework for Designing Highly Accurate (Virtually Exact) and Inexpensive Electronic Structure Methods," 11th Conference on Current Trends in Computational Chemistry, Jackson, Missisipi, U.S.A., November 1-2, 2002.

43.** "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited Electronic States," Lawrence Livermore National Laboratory, Livermore, California, U.S.A., November 13, 2002.

44.** "New Ideas in Electronic Structure Theory: Method of Moments of Coupled-Cluster Equations," Department of Chemistry, University of California at Berkeley, Berkeley, California, U.S.A., November 15, 2002.

45.** "New Ideas in Electronic Structure Theory: Method of Moments of Coupled-Cluster Equations," Department of Chemistry, University of North Dakota, Grand Forks, North Dakota, U.S.A., November 21, 2002.

46.** "New Ideas in Electronic Structure Theory: Method of Moments of Coupled-Cluster Equations," Department of Chemistry, North Dakota State University, Fargo, North Dakota, U.S.A., November 22, 2002.

47.** "New Alternatives for Accurate Electronic Structure Calculations of Molecular Potential Energy Surfaces," Department of Chemistry, Ohio State University, Columbus, Ohio, U.S.A., December 5, 2002.

48.** "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited Electronic States," National Superconducting Cyclotron Laboratory, Michigan State University, East Lansing, Michigan, U.S.A., March 20, 2003.

49.** "New Alternatives for Accurate Electronic Structure Calculations of Molecular Potential Energy Surfaces," The symposium "New Electronic Structure Methods: From Molecules to Materials," 225th American Chemical Society National Meeting, New Orleans, Louisiana, U.S.A., March 23-27, 2003.

50.** "Single- and Multi-reference Coupled-Cluster Methods for Quasidegenerate Electronic States and Bond Breaking," The symposium "Bond-Breaking Methods in Gas and Condensed Phases," 226th American Chemical Society National Meeting, New York, New York, U.S.A., September 7-11, 2003.

51.** "New Alternatives for Accurate Electronic Structure Calculations for Molecular Systems," Department of Chemistry and Biochemistry, Southern Illinois University at Carbondale, Carbondale, Illinois, U.S.A., October 3, 2003.

52.** "New Alternatives for Accurate Quantum Calculations for Many-Electron and Other Many-Fermion Systems," Department of Physics, Central Michigan University, Mount Pleasant, Michigan, U.S.A., March 18, 2004.

53.** "Noniterative Coupled-Cluster Methods for Accurate Calculations of Excited Electronic States," The symposium "The Systematic Treatment of Electron Correlation. A Celebration of the Science of Rodney J. Bartlett," St. Simons Island, Georgia, U.S.A., April 23-25, 2004.

54.** "Coupled-Cluster Method: An Accurate Ab Initio Theory of Atoms, Molecules, Nuclei, and Other Many-Fermion Systems," International Workshop on Microscopic Approaches to Nuclear Structure Calculations," UMIST, Manchester, U.K., July 4–8, 2004.

55.** "Coupled-Cluster Approaches to Atoms, Molecules, and Nuclei," Workshop "New Perspectives on p-Shell Nuclei," Michigan State University, East Lansing, Michigan, U.S.A., July 22-24, 2004.

56.** "Noniterative Coupled-Cluster Methods for Bond Breaking, Diradicals, and Excited Electronic States," International conference "Molecular Quantum Mechanics: the No Nonsense Path to Progress" honoring Professor Nicholas Handy's work, St. John's College, Cambridge University, Cambridge, U.K., July 24-29, 2004.

57.** "Renormalized Coupled-Cluster Methods and their Automated Parallel Computer Implementation with Tensor Contraction Engine," The symposium "Symbolic Calculation in Chemistry," 228th American Chemical Society National Meeting, Philadelphia, Pennsylvania, U.S.A., August 22-26, 2004.

58.** "Coupled Cluster Calculations of Ground and Excited States of Nuclei," International Conference on Exotic Nuclei and Atomic Masses, ENAM-04, Pine Mountain, Georgia, U.S.A., September 12-16, 2004.

59.** "Non-Iterative Coupled-Cluster Methods For Accurate Calculations of Excited Electronic States," Ninth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-IX, Les Houches, Grenoble, France, September 25-30, 2004.

60.** "Coupled Cluster Calculations of Ground and Excited States of Nuclei," Ninth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-IX, Les Houches, Grenoble, France, September 25-30, 2004.

61.** "Coupled-Cluster Approaches to Atoms, Molecules, and Nuclei," Institute for Nuclear Theory workshop "Microscopic Nuclear Structure Theory," "Nuclear Forces and the Quantum Many-Body Problem," Seattle, Washington, U.S.A., October 4-8, 2004.

62.** "New Alternatives for Accurate Quantum Calculations for Molecular Systems: Bond Breaking, Diradicals, and Excited Electronic States," Department of Physical Chemistry, University of Geneva, Switzerland, October 15, 2004.

63.** "Coupled-Cluster Method: Highly Accurate Microscopic Approach to Molecular Systems and Nuclei," Workshop "Nuclei and Mesoscopic Physics," Michigan State University, East Lansing, Michigan, U.S.A., October 23-26, 2004.

64.** "Noniterative Coupled-Cluster Methods for Bond Breaking, Diradicals, and Excited Electronic States," 7th World Congress of Theoretically Oriented Chemists (WATOC05), Cape Town, South Africa, January 16-21, 2005.

65.** "New Alternatives for Accurate Quantum Calculations for Many-Electron and Other Many-Fermion Systems: From Bond Breaking and Diradicals to Excited Electronic States in Molecules and Atomic Nuclei," Department of Chemistry, Wayne State University, Detroit, Michigan, U.S.A., March 9, 2005.

66.** "New Alternatives for Accurate Quantum Calculations for Many-Electron and Other Many-Fermion Systems: From Bond Breaking and Diradicals to Excited Electronic States in Molecules and Atomic Nuclei," James Franck Institute, University of Chicago, Chicago, Illinois, U.S.A., March 15, 2005.

67.** "New Alternatives for Accurate Quantum Calculations for Molecular Systems: Bond Breaking, Diradicals, and Excited Electronic States," Department of Chemistry, Oakland University, Rochester, Michigan, U.S.A., April 6, 2005.

68.** "New Alternatives for Accurate Quantum Calculations for Many-Electron and Other Many-Fermion Systems: From Bond Breaking and Diradicals to Excited States in Molecules and Atomic Nuclei," Department of Chemistry and Theoretical Chemistry Institute, University of Wisconsin, Madison, U.S.A., May 9, 2005.

69.** "Renormalized and Active-Space Coupled-Cluster Methods: Two Approaches to Electronic Quasi-Degeneracies and Open-Shell Problems," Fifth Congress of the International Society for Theoretical Chemical Physics (ICTCP-V), New Orleans, Louisiana, U.S.A., July 20-26, 2005 [invited plenary lecture].

70.** "Noniterative Coupled-Cluster Methods for Bond Breaking, Diradicals, and Excited Electronic States," The symposium "Theoretical Determination of Energy Landscapes: Methodology and Applications," 230th American Chemical Society National Meeting, Washington, DC, U.S.A., August 28-September 1, 2005.

71.** "Renormalized and Active-Space Coupled-Cluster Methods: Two Approaches to Quasi-Degeneracies and Open-Shell Problems," Conference on Microscopic Approaches to Many-Body Theory, in honor of Professor Raymond Bishop, The University of Manchester, Manchester, U.K., August 31–September 3, 2005.

72.** "Active-Space Coupled-Cluster Method: An Inexpensive and Highly Accurate Approach to Electronic Quasi-Degeneracies and Open-Shell Problems," Tenth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-X, Carthage, Tunisia, September 1-7, 2005.

73.** "New Alternatives for Accurate Quantum Calculations for Many-Electron and Other Many-Fermion Systems: From Bond Breaking and Biradicals to Excited States in Molecules and Atomic Nuclei," Department of Synthetic Chemistry and Biological Chemistry, Graduate School of Engineering, Kyoto University, Kyoto, Japan, October 6, 2005.

74.** "Advances in Electronic Structure Theory: Multi-Reference Coupled-Cluster Methods," Fukui Institute for Fundamental Chemistry, Kyoto University, Kyoto, Japan, October 31, 2005.

75.** "New Alternatives for Accurate Quantum Calculations for Molecular Systems: From Bond Breaking and Biradicals to Excited Electronic States," Department of Applied Chemistry, School of Engineering, The University of Tokyo, Tokyo, Japan, November 18, 2005.

76.** "New Alternatives for Accurate Quantum Calculations for Molecular Systems: From Bond Breaking and Biradicals to Excited Electronic States," 9th Quantum Chemistry Seminar, Department of Chemistry, School of Science and Engineering, Waseda University, Tokyo, November 19, 2005.

77.** "New Alternatives for Accurate Quantum Calculations for Molecular Systems: From Bond Breaking and Biradicals to Excited Electronic States," Department of Knowledge-Based Information Engineering, Toyohashi University of Technology, Toyohashi, Japan, November 24, 2005.

78.** "New Alternatives for Accurate Quantum Calculations for Molecular Systems: From Bond Breaking and Biradicals to Excited Electronic States," Department of Chemistry, University of Coimbra, Portugal, March 23, 2006.

79.** "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," 12th International Congress of Quantum Chemistry, Kyoto, Japan, May 21-26, 2006.

80.** "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," Unidad Asociada Universidad Autónoma de Madrid – Consejo Superior de

Investigaciones Cientificas (UAM-CSIC), Instituto de Matemáticas y Física Fundamental, Departamento de Física Atómica, Molecular y de Agregados (Department of Atomic, Molecular, and Cluster Physics), Madrid, Spain, July 14, 2006.

81.** "Accurate Quantum Calculations for Many-Electron and Other Many-Fermion Systems: From Bond Breaking and Electronic Excitations in Molecules to Properties of Atomic Nuclei," The Centro Internacional de Matemática Workshop "Mathematics in Chemistry," Lisbon, Portugal, July 19-21, 2006.

82.** "Advances in Electronic Structure Theory: Single-Reference Coupled-Cluster Methods for Multi-Reference Problems," Sixth Canadian Computational Chemistry Conference (CCCC6), Vancouver, British Columbia, Canada, July 26-30, 2006 [invited plenary lecture].

83.** "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," Eleventh European Workshop on Quantum Systems in Chemistry and Physics, QSCP-XI, St. Petersburg, Russia, August 20-25, 2006.

84.** "Accurate Quantum Calculations for Many-Body Systems: From Reaction Mechanisms in Organic and Bioinorganic Chemistries to Properties of Atomic Nuclei," Michigan State University High Performance Computing Center 2006 Symposium, East Lansing, Michigan, U.S.A., October 7, 2006.

85.** "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," Department of Chemistry, The University of Western Ontario, London, Ontario, Canada, November 8, 2006.

86.** "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," Department of Chemistry, University of Waterloo, Waterloo, Ontario, Canada, November 10, 2006.

87.** "Accurate Quantum Calculations for Many-Electron and Other Many-Fermion Systems: From Reaction Pathways in Chemistry to Properties of Atomic Nuclei," the S.R. Palit Memorial Lecture, Indian Association for the Cultivation of of Science, Kolkata (Calcutta), India, January 9th, 2007.

88.** "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," International Conference "Recent Trends in Many-Body Methods for Electronic Structure and Properties of Atoms and Molecules," Bhubaneswar and Puri, Orissa, India, January 11-13, 2007.

89.** "Active-Space Coupled-Cluster Methods for Bond Breaking, Excited Electronic States, and Open-Shell Systems," International Conference "Practicing Chemistry with Theoretical Tools, on the Occasion of Professor Mark S. Gordon's 65th Birthday," Kihei, Hawaii, U.S.A., January 15-18, 2007.

90.** "Accurate Quantum Calculations for Many-Electron and Other Many-Fermion Systems: From Reaction Pathways in Chemistry to Properties of Atomic Nuclei," Department of Chemistry, Western Michigan University, Kalamazoo, Michigan, U.S.A., April 2, 2007.

91.** "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," 39th Midwest Theoretical Chemistry Conference, Indiana University, Bloomington, Indiana, U.S.A., June 28-30, 2007.

92.** "Coupled-Cluster Theory: An Overview of the Basic Formalism and Applications to Molecular and Nuclear Structure Problems," Workshop on Advanced Many-body Methods for Nuclear Structure European Centre for Theoretical Studies in Nuclear Physics and Related Areas, Trento, Italy, July 2-6, 2007.

93.** "Coupled-Cluster Theory: Basic Formalism, Recent Developments, and Applications to Molecular and Nuclear Structure Problems," Institut für Kernphysik, Fachbereich Physik, Technische Universität Darmstadt, Darmstadt, Germany, August 29, 2007.

94.** "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Applications to Radicals, Biradicals, and Bond Breaking," Twelfth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-XII, London, U.K., August 30 - September 5, 2007.

95.** "Coupled-Cluster Theory: Basic Formalism, Recent Developments, and Applications to Molecular and Nuclear Structure Problems," Faculty of Chemistry, University of Wrocław, Wrocław, Poland, September 10, 2007.

96.** "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Applications to Radicals, Biradicals, Reaction Pathways, and Photochemistry," "IXth International Conference on Molecular Spectroscopy: From Molecules to Molecular Biological Systems and Molecular Materials, Role of Molecular Interactions and Recognition," Wrocław – Lądek-Zdrój, Poland, September 13-18, 2007.

97.** "Coupled-Cluster Theory: Basic Formalism, Recent Developments, and Applications to Molecular and Nuclear Structure Problems," Department of Chemistry, Wake Forest University, Winston-Salem, North Carolina, November 28, 2007.

98.** "Accurate Quantum Calculations for Many-Electron and Other Many-Fermion Systems: From Reaction Pathways in Chemistry to Properties of Atomic Nuclei," the Computational Materials Seminar Series, Department of Chemistry and Chemical Biology, Cornell University, Ithaca, New York, February 7, 2008.

99.** "Coupled-Cluster Calculations for Many-Electron and Other Many-Fermion Systems: From Reaction Pathways in Chemistry to Atomic Nuclei," Department of Chemistry, University of Michigan, Ann Arbor, Michigan, March 20, 2008.

100.** "Coupled-Cluster Calculations for Many-Electron and Other Many-Fermion Systems: From Reaction Pathways in Chemistry to Atomic Nuclei," Chemistry and Physics Colloquium, Michigan Technological University, Houghton, Michigan, March 27, 2008.

101.** "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Extension to Open-Shell Systems," The symposium "Electronic Structure and Reaction Dynamics of Open-shell Species," 235th American Chemical Society National Meeting, New Orleans, Louisiana, U.S.A., April 6-10, 2008.

102.** "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Molecular Applications," Center for Computational Chemistry, University of Georgia, Athens, Georgia, U.S.A., May 6, 2008.

103.** "Some Developments in Multi-Reference Coupled-Cluster Theory and Applications of Coupled-Cluster Methods to Atomic Nuclei," Center for Computational Chemistry, University of Georgia, Athens, Georgia, U.S.A., May 7, 2008.

104.** "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Extension to Open-Shell and Large Systems," Sixth Congress of the International Society for Theoretical Chemical Physics (ICTCP-VI), Vancouver, British Columbia, Canada, July 19-24, 2008 [invited plenary lecture].

105.** "Coupled-Cluster Theory: A Brief Overview of Modern Methods and Applications to Nuclear Structure," the WE-Heraeus-Seminar "Ab-Initio Nuclear Structure - Where do we stand?", Bad Honnef, Germany, July 28-30, 2008.

106.** "Coupled-Cluster Theory: An Overview of Modern Methods and Applications to Nuclear and Electronic Structure," Institut für Kernphysik, Fachbereich Physik, Technische Universität Darmstadt, Darmstadt, Germany, August 4, 2008.

107.** "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Extension to Open-Shell and Large Systems," Eighth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2008), Sydney, Australia, September 14-19, 2008.

108.** "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Extension to Open-Shell and Large Systems," The International Conference "Theory and Applications of Computational Chemistry 2008 (TACC 2008)," Shanghai, China, September 23-27, 2008 [invited plenary lecture].

109.** "Extending Electronic Structure Theory to Complex Molecular Problems: Local Correlation Coupled-Cluster and Correlation Energy Scaling Methodologies," The symposium "Advances in Electronic Structure Theory and First Principles Dynamics," 237th American Chemical Society National Meeting, Salt Lake City, Utah, U.S.A., March 22-26, 2009.

110.** "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States," 30th Annual Combustion Research Meeting, Airlie Conference Center, Warrenton, Virginia, May 26-29, 2009.

111.** "Coupled-Cluster Theory: From Quantum Chemistry to Applications in Nuclear Physics," International Workshop "Linking Nuclei, Molecules, and Condensed Matter: Computational Quantum Many-Body Approaches," European Centre for Theoretical Studies in Nuclear Physics and Related Areas, Trento, Italy, July 6-10, 2009.

112.** "Dealing with Strong Electron Correlations in Quantum Chemistry via Renormalized, Active-Space, and Multi-Reference Coupled-Cluster Methods," The symposium "New Developments in Strongly Correlated Electrons," 238th American Chemical Society National Meeting, Washington, DC, U.S.A., August 16-20, 2009.

113.** "Extending Electronic Structure Theory to Complex Molecular Problems: Local Correlation Coupled-Cluster and Correlation Energy Scaling Methodologies," Fourteenth International Workshop on Quantum Systems in Chemistry and Physics, QSCP-XIV, San Lorenzo de El Escorial, Madrid, Spain, September 13-19, 2009.

114.** "Extending *Ab Initio* Electronic Structure Theory to Complex Molecular Problems: Local Coupled-Cluster and Correlation Energy Scaling Methodologies," Department of Chemistry, Iowa State University, Ames, Iowa, U.S.A., October 2, 2009.

115.** "Dealing with Strong Electron Correlations in Quantum Chemistry via Renormalized, Active Space, and Multireference Coupled-Cluster Methods," An International Symposium "Recent Advances in Many Electron Theories," Shankarpur, West Bengal, India, January 5-7, 2010.

116.** "Extending Ab Initio Electronic Structure Theory to Complex Molecular Problems: Local Coupled-Cluster and Correlation Energy Scaling Methodologies," Physical Chemistry Division, National Chemical Laboratory, Pune, India, January 9, 2010.

117.** "Extending Ab Initio Electronic Structure Theory to Complex Molecular Problems: Local Coupled-Cluster and Correlation Energy Scaling Methodologies," Institute Colloquium, Indian Association for the Cultivation of of Science, Kolkata (Calcutta), India, January 11th, 2010.

118.** "Extending Ab Initio Electronic Structure Theory to Complex Molecular Problems: Local Coupled-Cluster Methodology and Its Multi-Level Generalizations," Center for Nanomaterials Design and Assembly Seminar, Michigan State University, East Lansing, Michigan, U.S.A., January 21, 2010.

119.** "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," the 50th Sanibel Symposium, St. Simons Island, Georgia, U.S.A., February 24-March 2, 2010.

120.** "Extending Ab Initio Electronic Structure Theory to Complex Molecular Problems: Local Coupled-Cluster and Correlation Energy Scaling Methodologies," The William R. Wiley Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory, Richland, Washington, U.S.A., May 12, 2010 [Distinguished Seminar].

121.** "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," International conference "Molecular Quantum Mechanics: From Methylene to DNA and Beyond" honoring Professor Henry F. Schaefer's work, University of California at Berkeley, Berkeley, California, May 24-29, 2010.

122.** "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," 17th Canadian Symposium on Theoretical Chemistry, Edmonton, Alberta, Canada, July 25-30, 2010.

123.** "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," Fifteenth International Workshop on Quantum Systems in Chemistry and Physics, QSCP-XV, Magdalene College, Cambridge University, Cambridge, U.K., August 31 - September 5, 2010.

124.** "Dealing with Chemical Reaction Pathways and Electronic Excitations in Molecular Systems via Renormalized and Active-Space Coupled-Cluster Methods," 18th European Conference on Dynamics of Molecular Systems, MOLEC XVIII, Curia, Portugal, September 5-10, 2010.

125.** "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," 9th Central European Symposium on Theoretical Chemistry, CESTC 2010, Nový Smokovec, Slovakia, September 12-15, 2010.

126.** "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Molecular Applications," Center for Advanced Computational Chemistry, Slovak Academy of Sciences, Bratislava, Slovakia, September 17, 2010.

127.** "Extending Ab Initio Electronic Structure Theory to Large Molecular Systems: Local Correlation Coupled-Cluster Methods and their Multi-level Generalizations," Institute for Cyber Enabled Research (iCER), Michigan State University, East Lansing, Michigan, U.S.A., September 23, 2010.

128.** "Dealing with Chemical Reaction Pathways and Electronic Excitations in Molecular Systems via Renormalized and Active-Space Coupled-Cluster Methods," 8th International Conference of Computational Methods in Sciences and Engineering (ICCMSE 2010), symposium "Methods in Quantum Chemistry" in honor of Jiri Čížek and Josef Paldus, Kos, Greece, October 3-8, 2010 [invited featured lecture].

129.** "Extending Ab Initio Electronic Structure Theory to Complex Molecular Problems: Local Coupled-Cluster and Correlation Energy Scaling Methodologies," Institute of Physical and Theoretical Chemistry, Faculty of Chemistry, Wrocław University of Technology, Wrocław, Poland, October 11, 2010.

130.** "Dealing with Chemical Reaction Pathways and Electronic Excitations in Molecular Systems via Renormalized and Active-Space Coupled-Cluster Methods," Faculty of Chemistry, University of Wrocław, Wrocław, Poland, October 11, 2010.

131.** "Extending Ab Initio Electronic Structure Theory to Complex Molecular Problems: Local Coupled-Cluster and Correlation Energy Scaling Methodologies," Faculty of Chemistry, University of Warsaw, Warsaw, Poland, October 13, 2010.

132.** "Coupled-Cluster Theory: From Quantum Chemistry to Applications in Nuclear Physics," Faculty of Physics, University of Warsaw, Warsaw, Poland, October 14, 2010.

133.** "Dealing with Chemical Reaction Pathways and Electronic Excitations in Molecular Systems via Renormalized and Active-Space Coupled-Cluster Methods," Quantum Chemistry Laboratory, Faculty of Chemistry, University of Warsaw, Warsaw, Poland, October 14, 2010.

134.** "Extending Ab Initio Electronic Structure Theory to Large Molecular Systems: Local Correlation Coupled-Cluster Methods and their Multi-level Generalizations," Department of Chemistry, Emory University, Atlanta, Georgia, U.S.A., December 6, 2010.

135.** "Dealing with Chemical Reaction Pathways and Electronic Excitations in Molecular Systems via Renormalized and Active-Space Coupled-Cluster Methods," Department of Chemistry, Michigan State University, East Lansing, Michigan, U.S.A., February 25, 2011.

136.** "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," The symposium "Fragment and Local Orbital Methods in Electronic Structure Theory," 241st American Chemical Society National Meeting, Anaheim, California, U.S.A., March 27-31, 2011.

137.** "Dealing with Chemical Reaction Pathways and Electronic Excitations in Molecular Systems via Renormalized and Active-Space Coupled-Cluster Methods," Department of Chemistry and Center for Advanced Scientific Computing and Modeling, University of North Texas, Denton, Texas, U.S.A., May 11, 2011.

138.** "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," 11th Annual CERMM Symposium, Centre for Research in Molecular Modeling, Concordia University, Montreal, Canada, June 4-5, 2011 [invited keynote lecture].

139.** "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," 94th Canadian Chemistry Conference and Exhibition, General Physical, Theoretical, and Computational Chemistry Session, Montreal, Canada, June 5-9, 2011.

140.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems and their Multi-Level Generalizations," Ninth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2011), Santiago de Compostela, Spain, July 17-22, 2011.

141.** "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," WATOC 2011 Satellite Conference "Strongly Correlated Systems, Cooperativity, and Valence-Bond Theory," A Coruña, Spain, July 23-25, 2011.

142.** "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," The symposium "Reduced Density Matrices in Quantum Chemistry," 242nd American Chemical Society National Meeting, Denver, Colorado, U.S.A., August 28 - September 1, 2011.

143.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems and their Multi-Level Generalizations," The symposium "Quantum Chemistry: Methodology," 242nd American Chemical Society National Meeting, Denver, Colorado, U.S.A., August 28 - September 1, 2011.

144.** "Shifts in Excitation Energies Induced by Hydrogen Bonding: A Comparison of the Embedding and Supermolecular Time-Dependent Density Functional Theory Calculations with the Equation-of-Motion Coupled-Cluster Results," The symposium "Quantum Chemistry: DFT," 242nd American Chemical Society National Meeting, Denver, Colorado, U.S.A., August 28 - September 1, 2011.

145.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems and their Multi-Level Generalizations," Seventh Congress of the International Society for Theoretical Chemical Physics (ICTCP-VII), Tokyo, Japan, September 2-8, 2011.

146.** "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," XVI-th International Workshop on Quantum Systems in Chemistry and Physics, QSCP-XVI, Kanazawa, Japan, September 11-17, 2011.

147.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems and their Multi-Level Generalizations," Department of Chemistry, Oakland University, Rochester, Michigan, U.S.A., November 9, 2011.

148.** "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," An International Symposium "Recent Advances in Many Electron Theories II, 2011," Puri, Orissa, India, December 1-4, 2011.

149.** "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," The Fifth Asian Pacific Conference of Theoretical and Computational Chemistry (APCTCC 2011), Rotorua, New Zealand, December 9-13, 2011.

150.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems and their Multi-Level Generalizations," Centre for Theoretical Chemistry and Physics (CTCP), The New Zealand Institute for Advanced Study (NZIAS), Massey University, Auckland, New Zealand, December 14, 2011.

151.** "Coupled-Cluster Theory: From Quantum Chemistry to Applications in Nuclear Physics," Department of Physics and Astronomy, University of Louisville, Lousville, Kentucky, March 7, 2012.

152.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems and their Multi-Level Generalizations," Department of Chemistry, University of Louisville, Lousville, Kentucky, March 9, 2012.

153.** "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States (Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods)," 33rd Annual Combustion Research Meeting, Bolger Center, Potomac, Maryland, U.S.A., May 29 - June 1, 2012.

154.** "Recent Progress in Renormalized and Active-Space Coupled-Cluster Methods," The symposium "Coupled-Cluster Theory and Related Methods," A Satellite Symposium to the 14th International Congress of Quantum Chemistry, Boulder, Colorado, U.S.A., July 1-3, 2012.

155.** "Renormalized and Active-Space Coupled-Cluster Methods: Key Concepts and Recent Advances," 23rd Quantum Chemistry Seminar, Department of Chemistry and Biochemistry, School of Advanced Science and Engineering, Waseda University, Tokyo, July 31, 2012.

156.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems and their Multi-Level Generalizations," 23rd Quantum Chemistry Seminar, Department of Chemistry and Biochemistry, School of Advanced Science and Engineering, Waseda University, Tokyo, August 1, 2012.

157.** "Renormalized and Active-Space Coupled-Cluster Methods: Key Concepts and Recent Advances," Quantum Chemistry Research Institute, Kyoto, Japan, August 7, 2012.

158.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems and their Multi-Level Generalizations," Quantum Chemistry Research Institute, Kyoto, August 7, 2012.

159.** "Renormalized and Active-Space Coupled-Cluster Methods: Key Concepts and Recent Advances," Institute for Molecular Science, National Institutes of Natural Sciences, Okazaki, Japan, August 10, 2012.

160.** "Multi-level Extensions of the Cluster-in-Molecule Local Correlation Methodology Aimed at Chemical Reaction Pathways Involving Large Molecular Systems," The symposium "Bridging the Gap between Ab Initio and Classical Simulations," 244th American Chemical Society National Meeting, Philadelphia, Pennsylvania, U.S.A., August 19-23, 2012.

161.** "Combining Active-Space Coupled-Cluster Methods with Moment Energy Corrections via the CC($P;Q$) Methodology, with Benchmark Calculations for Bond Breaking and Biradical Transition States," The symposium "Exploring Potential Energy Surfaces in Quantum Chemistry: A Tribute to H. Bernhard Schlegel," 244th American Chemical Society National Meeting, Philadelphia, Pennsylvania, U.S.A., August 19-23, 2012.

162.** "Renormalized and Active-Space Coupled-Cluster Methods: Key Concepts and Recent Advances," Department of Chemistry, Wayne State University, Detroit, Michigan, U.S.A., September 12, 2012.

163.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems," 844th IMS Colloquium, Institute for Molecular Science, National Institutes of Natural Sciences, Okazaki, Japan, February 15, 2013.

164.** "Renormalized and Active-Space Coupled-Cluster Methods: Key Concepts and Recent Advances," Fukui Institute for Fundamental Chemistry, Kyoto University, Kyoto, Japan, February 27, 2013.

165.** "Renormalized and Active-Space Coupled-Cluster Methods: Key Concepts and Recent Advances," Catalysis Research Center, Hokkaido University, Sapporo, Japan, March 19, 2013.

166.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems," Catalysis Research Center, Hokkaido University, Sapporo, Japan, March 19, 2013.

167.** "Renormalized and Active-Space Coupled-Cluster Methods: Key Concepts and Recent Advances," Graduate School of System Informatics, Kobe university Kobe, Japan, March 25, 2013.

168.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems," 5th Computational Molecular Science Seminar, RIKEN Advanced Institute for Computational Science, Kobe, Japan, March 26, 2013.

169.** "Accurate Characterization of Reaction Pathways Relevant to Combustion and Electronic Excitations in Radicals and Biradicals via Renormalized and Active-Space Coupled-Cluster Theories, their Merger, and Open-Shell Extensions," The symposium on Combustion Chemistry, 245th American Chemical Society National Meeting, New Orleans, Lousiana, U.S.A., April 7-11, 2013.

170.** "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," The symposium "Quantum Chemistry: Methodology," 245th American Chemical Society National Meeting, New Orleans, Lousiana, U.S.A., April 7-11, 2013.

171.** "The Cobalt-Methyl Dissociation and Electronic Transitions in Methylcobalamin: Insights from the Coupled-cluster, Multireference Perturbation Theory, and Density Functional Theory Calculations," The symposium "Bioinorganic Chemistry: Proteins and Enzymes and Model Systems," 245th American Chemical Society National Meeting, New Orleans, Lousiana, U.S.A., April 7-11, 2013.

172.** "Recent Progress in the Active-Space Electron-Attached and Ionized Equation-of-Motion Coupled-Cluster Methodologies," 7th International Conference "Molecular Quantum Mechanics" entitled "Electron Correlation: The Many-Body Problem at the Heart of Chemistry," in honor of Professor Rodney J. Bartlett, Lugano, Switzerland, June 2-7, 2013.

173.** "Renormalized and Active-Space Coupled-Cluster Methods: Key Concepts and Recent Advances," Department of Physical Chemistry, University of Geneva, Switzerland, June 11, 2013.

174.** "The Cobalt-Methyl Dissociation and Electronic Transitions in Methylcobalamin: Insights from Coupled-Cluster, Multireference Perturbation Theory, and Density Functional Theory Calculations," Department of Physical Chemistry, University of Geneva, Switzerland, June 11, 2013.

175.** "Renormalized and Active-Space Coupled-Cluster Methods: Key Concepts and Recent Advances," Quantum Chemistry Laboratory, Faculty of Chemistry, University of Warsaw, Warsaw, Poland, August 23, 2013.

176.** "Recent Progress in the Active-Space Electron-Attached and Ionized Equation-of-Motion Coupled-Cluster Methodologies," Eighth Congress of the International Society for Theoretical Chemical Physics (ISTCP-VIII), Budapest, Hungary, August 25-31, 2013.

177.** "Single-Reference Coupled-Cluster Methods for Multi-Reference Molecular Problems," 6th Conference "Current Trends in Theoretical Chemistry" (CTTC VI), Cracow, Poland, September 1-5, 2013.

178.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems," Faculty of Chemistry, Jagiellonian University, Cracow, Poland, September 6, 2013.

179.** "Renormalized and Active-Space Coupled-Cluster Methods: Key Concepts and Recent Advances," Institute of Chemistry, University of Silesia, Katowice, Poland, September 6, 2013.

180.** "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems," Institute of Physical and Theoretical Chemistry, Faculty of Chemistry, Wrocław University of Technology, Wrocław, Poland, September 9, 2013.

181.** "The Cobalt-Methyl Dissociation and Electronic Transitions in Methylcobalamin: Insights from Coupled-cluster, Multireference Perturbation Theory, and Density Functional Theory Calculations," Institute of Physical and Theoretical Chemistry, Faculty of Chemistry, Wrocław University of Technology, Wrocław, Poland, September 10, 2013.

182.** "Understanding Photochemistry and Photo-ionization Dynamics with Highly Correlated Electronic Structure Methods: Two Examples that Highlight the Transformative Role of Theory in the Interpretation of Experimental Observations," XVIII-th International Workshop on Quantum Systems in Chemistry, Physics, and Biology (QSCP-XVIII), Paraty (Rio de Janeiro), Brazil, December 1-7, 2013.

183.** "Understanding Photochemistry and Photo-ionization Dynamics with Highly Correlated Electronic Structure Methods: Two Examples that Highlight the Transformative Role of Theory in the Interpretation of Experimental Observations," The symposium "A Little Insight Goes a Long Way," 247th American Chemical Society National Meeting, Dallas, Texas, U.S.A., March 16-20, 2014.

184.** "Combining Active-Space Coupled-Cluster Approaches with Moment Energy Corrections via the CC(P;Q) Methodology: Connected Triple and Quadruple Excitations," The symposium "Quantum Chemistry: Methodology," 247th American Chemical Society National Meeting, Dallas, Texas, U.S.A., March 16-20, 2014.

185.** "Utility of New Generations of Coupled-Cluster Methods and Algorithms in Catalytic and Structural Properties of Gold Nanoparticles," The symposium "Quantum Chemistry: Applications," 247th American Chemical Society National Meeting, Dallas, Texas, U.S.A., March 16-20, 2014.

186.** "The Cobalt-Methyl Dissociation and Electronic Transitions in Methylcobalamin: Insights from Coupled-Cluster, Multireference Perturbation Theory, and Density Functional Theory Calculations," Department of Chemistry, Washington University in St. Louis, St. Louis, Missouri, U.S.A., May 22, 2014.

187.** "Renormalized and Active-Space Coupled-Cluster Methods: Key Concepts, Recent Advances, and Examples of Molecular Applications," Department of Chemistry, Washington University in St. Louis, St. Louis, Missouri, U.S.A., May 23, 2014.

188.** "Single-Reference Coupled-Cluster Methods for Multi-Reference Molecular Problems," Nordita program on "Computational Challenges in Nuclear and Many-Body Physics," Stockholm, Sweden, September 15 - October 10, 2014.

189.** "Combining Active-Space Coupled-Cluster Approaches with Moment Energy Corrections via the CC(P;Q) Methodology," Tenth Triennial Congress of the World Association

of Theoretical and Computational Chemists (WATOC 2014), Santiago, Chile, October 5-10, 2014.

190.** "Combining Active-Space Coupled-Cluster Approaches with Moment Energy Corrections via the CC(P;Q) Methodology," The Fourteenth Theoretical Chemistry Symposium (TCS 2014), Pune, India, December 18-21, 2014 [invited keynote lecture].

191.** "Understanding Photochemistry and Photoelectron Spectra with Highly Correlated Electronic Structure Methods Based on Coupled-Cluster Theory," The symposium "Modeling Excited States of Complex Systems," 249th American Chemical Society National Meeting, Denver, Colorado, U.S.A., March 22-26, 2015.

192.** "Aerobic Oxidation of Methanol to Formic Acid on Au_8^-: Benchmark Analysis Based on Completely Renormalized Coupled-Cluster and Density Functional Theory Calculations," The symposium "Computational Chemical Dynamics: Advancing Our Understanding of Chemical Processes in Gas-Phase, Biomolecular and Condensed-Phase Systems," 249th American Chemical Society National Meeting, Denver, Colorado, U.S.A., March 22-26, 2015.

193.** "Combining Active-Space Coupled-Cluster Approaches with Moment Energy Corrections via the CC(P;Q) Methodology: Ground and Excited States," The symposium "Quantum Chemistry: Methodology," 249th American Chemical Society National Meeting, Denver, Colorado, U.S.A., March 22-26, 2015.

194.** "Molecular Systems from the Equation-of-Motion Coupled-Cluster Theory" or "Understanding Electronic Excitation, Multi-Photon Ionization, and Photo-Electron Spectra with the Equation-of-Motion Coupled-Cluster Theory," Workshop of the Espace de Structure Nucléaire Théorique on "Near-Degenerate Systems in Nuclear Structure and Quantum Chemistry from Ab-Initio Many-Body Methods," CEA Saclay, France, March 30 - April 2, 2015.

195.** "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems," The symposium "Recent Advances in Electronic Structure Theory (RAEST2015)," A Satellite Symposium to the 15th International Congress of Quantum Chemistry, Nanjing, China, June 1-6, 2015.

196.** "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Theories for High-Accuracy *Ab Initio* Computations of Chemical Reaction Profiles Involving Biradical Transition States and Electronic Spectra of Radical and Polyradical Species," The symposium "From Diradicals and Polyradicals to Functionalized Materials: Theory Meets Experiment," 250th American Chemical Society National Meeting, Boston, Massachusetts, U.S.A., August 16-20, 2015.

197.** "Understanding Photochemistry, Multi-photon Ionization, and Photoelectron Spectra with the Equation-of-Motion Coupled-Cluster Theory," Center of Research Excellence in Complex Materials, Michigan State University, East Lansing, Michigan, U.S.A., September 10, 2015.

198.** "Understanding Photochemistry, Multi-photon Ionization, and Photoelectron Spectra with the Equation-of-Motion Coupled-Cluster Theory," Department of Chemistry and

Theoretical Chemistry Institute, University of Wisconsin, Madison, U.S.A., September 24, 2015.

199.** "Utility of New Generations of Coupled-Cluster Methods and Algorithms in Catalytic, Structural, and Optical Properties of Gold Nanoparticles," The symposium "Interplay between Theory and Experiment in Catalytic Research," the 2015 International Chemical Congress of Pacific Basin Societies (Pacifichem 2015), Honolulu, Hawaii, U.S.A., December 15-20, 2015.

200.** "Understanding Photochemistry, Multi-photon Ionization, and Photoelectron Spectra with the Equation-of-Motion Coupled-Cluster Theory," Department of Physics, Washington University in St. Louis, St. Louis, Missouri, U.S.A., January 28, 2016.

201.** "Utility of New Generations of Coupled-Cluster Methods and Algorithms in the Examination of Catalytic, Structural, and Optical Properties of Gold Nanoparticles," Department of Chemistry, Washington University in St. Louis, St. Louis, Missouri, U.S.A., February 11, 2016.

202.** "Coupled-Cluster Interpretation of the Photoelectron Spectra of Ag_3^- and Au_3^-," 26th Austin Symposium on Molecular Structure and Dynamics, Dallas, Texas, U.S.A., March 5-7, 2016.

203.** "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States (Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems: CC(P;Q) Formalism)," 2nd Computational and Theoretical Chemistry Research PI Meeting, Gaithersburg, Maryland, U.S.A., May 15-18, 2016.

204.** "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems," TSRC Workshop "Low-Scaling and Unconventional Electronic Structure Techniques" (LUEST 2016), 3rd edition, Telluride, Colorado, U.S.A., June 1-5, 2016.

205.** "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems: CC(P;Q) Formalism," Ninth Congress of the International Society for Theoretical Chemical Physics (ISTCP-IX), Grand Forks, North Dakota, U.S.A., July 17-22, 2016.

206.** "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems: CC(P;Q) Formalism," The International Conference "Theory and Applications of Computational Chemistry 2016 (TACC 2016)," Seattle, Washington, August 28 - September 2, 2016.

207.** "Understanding Photochemistry and Photoelectron Spectra with Highly Correlated Electronic Structure Methods based on Coupled-Cluster Theory," 7th Conference "Current Trends in Theoretical Chemistry" (CTTC VII), Cracow, Poland, September 4-8, 2016.

208.** "Utility of New Generations of Coupled-Cluster Methods and Algorithms in the Examination of Catalytic, Structural, and Optical Properties of Gold and Silver Nanoparticles," Institute of Chemistry, University of Silesia, Katowice, Poland, September 9, 2016.

209.** "The Cobalt-Methyl Dissociation and Electronic Transitions in Methylcobalamin: Insights from Coupled-Cluster, Multireference Perturbation Theory, and Density Functional Theory Calculations," Department of Chemistry and Institute of Physics, Lódź University of Technology, Lódź, Poland, September 12, 2016.

210.** "Coupled-Cluster Theory: From Quantum Chemistry to Applications in Nuclear Physics," Department of Chemistry and Institute of Physics, Lódź University of Technology, Lódź, Poland, September 12, 2016.

211.** "Utility of New Generations of Coupled-Cluster Methods and Algorithms in the Examination of Catalytic, Structural, and Optical Properties of Gold and Silver Nanoparticles," Institute of Physical and Theoretical Chemistry, Faculty of Chemistry, Wrocław University of Technology, Wrocław, Poland, September 15, 2016.

212.** "Quantum Chemistry and Physics," The Adam Mickiewicz High School No. 3, Wrocław, Poland, September 16, 2016 (special guest lecture on the occasion of the 70th anniversary of establishing the school).

213.** "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems: CC(P;Q) Formalism," Quantum Chemistry Laboratory, Faculty of Chemistry, University of Warsaw, Warsaw, Poland, September 19, 2016.

214.** "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," EMN Meeting on Computation and Theory (Energy, Materials, and Nanotechnology), workshop "Novel Electron Correlation Methods for Complex Systems," Las Vegas, Nevada, U.S.A., October 10-14, 2016.

215.** "Single-Reference Methods for Multi-Reference Problems: Renormalized and Active-Space Coupled-Cluster Approaches and CC(P;Q) Formalism," Department of Chemistry (Professor Gustavo Scuseria's Group), Rice University, Houston, Texas, U.S.A., October 25, 2016.

216.** "Understanding Photochemistry and Photoelectron Spectra with Highly Correlated *Ab Initio* Methods of Electronic Structure Theory," Department of Chemistry, Rice University, Houston, Texas, U.S.A., October 26, 2016.

217.** "Coupled-Cluster Interpretation of the Photoelectron Spectra of Ag_3^- and Au_3^-," GAMESS*7557*SSEMAG Palindromic Birthday Theory Symposium, on the Occasion of Professor Mark S. Gordon's 75th and Professor Kim K. Baldridge 57th Birthdays," Lihue, Hawaii, U.S.A., January 16-18, 2017.

218.** "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," An International Conference "Recent Advances in Many-Electron Theory (RAMET-2017)," Goa, India, February 9-12, 2017.

219.** "The 1966 *Journal of Chemical Physics* Article by Jiří Čížek: What Is in It and Why Is It so Important," the 57th Sanibel Symposium, a special symposium recognizing the 50th Anniversary of Jiří Čížek's 1966 Paper on Coupled-Cluster Theory, St. Simons Island, Georgia, U.S.A., February 19-24, 2017.

220.** "Understanding Photochemistry and Photoelectron Spectra with Coupled-Cluster Theory," The Lawrence J. Schaad Lectureship in Theoretical Chemistry (the fourth lecture in a series), Department of Chemistry, Vanderbilt University, Nashville, Tennessee, U.S.A., April 5, 2017.

221.** "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems: CC(P;Q) Formalism," The symposium "Electronic Structure of Complex Chemical Systems," 254th American Chemical Society National Meeting, Washington, DC, U.S.A., August 20-24, 2017.

222.** "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," PHYS Awards Symposium, 254th American Chemical Society National Meeting, Washington, DC, U.S.A., August 20-24, 2017.

223.** "Stochastic CC(P;Q) Theory: Converging High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," Eleventh Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2017), Munich, Germany, August 27 - September 1, 2017.

224.** "High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," 15th Central European Symposium on Theoretical Chemistry, CESTC 2017, Wisła, Poland, September 3-6, 2017.

225.** "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," Department of Chemistry, University of Nevada, Reno, Nevada, U.S.A., October 20, 2017.

226.** "High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," 27th Austin Symposium on Molecular Structure and Dynamics, Dallas, Texas, U.S.A., March 3-5, 2018.

227.** "New Paradigm in Quantum Chemistry: Accurate Electronic Energetics by Stochastic Wave Function Sampling Followed by Deterministic Coupled-Cluster Computations," Department of Chemistry, Washington University in St. Louis, St. Louis, Missouri, U.S.A., March 6, 2018.

228.** "Introduction to Single-Reference Many-Body Perturbation Theory and its Diagrammatic Representation," Workshop of the Espace de Structure Nucléaire Théorique on "Many-Body Perturbation Theories in Modern Quantum Chemistry and Nuclear Physics," CEA Saclay, France, March 26-30, 2018.

229.** "Perturbative Corrections to Non-perturbative Methods" or "High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," Workshop of the Espace de Structure Nucléaire Théorique on "Many-Body Perturbation Theories in Modern Quantum Chemistry and Nuclear Physics," CEA Saclay, France, March 26-30, 2018.

230.** "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," NSCL Theory Seminar, National Superconducting Cyclotron Laboratory, Michigan State University, East Lansing, Michigan, U.S.A., April 10, 2018.

231.** "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," Chemical Theory Center, University of Minnesota, Minneapolis, Minnesota, U.S.A., April 20, 2018.

232.** "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," 4th Computational and Theoretical Chemistry Research PI Meeting, Gaithersburg, Maryland, U.S.A., May 21-24, 2018.

233.** "High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," TSRC Workshop "Low-Scaling and Unconventional Electronic Structure Techniques" (LUEST 2018), 4th edition, Telluride, Colorado, U.S.A., June 4-8, 2018.

234.** "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," The joint Annual Workshop on Recent Developments in Electronic Structure Methods (ES18) and Penn Conference in Theoretical Chemistry (PCTC18), Philadelphia, Pennsylvania, U.S.A., June 10-14, 2018.

235.** "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," The symposium "Strong Correlation in Electronic Structure Theory," A Satellite Symposium to the 16th International Congress of Quantum Chemistry, Strasbourg, France, June 24-27, 2018.

236.** "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," 28th Canadian Symposium on Theoretical and Computational Chemistry (CSTCC 2018), Windsor, Ontario, Canada, July 15-19, 2018.

237.** "Toward Exact Quantum Chemistry: Accurate Electronic Energies by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Department of Chemistry, North Carolina State University, Raleigh, North Carolina, U.S.A., October 11, 2018.

238.** "Toward Exact Quantum Chemistry: Accurate Electronic Energies by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," The international conference "Quantum International Frontiers 2018," Changsha, Hunan Province, China, October 17-21, 2018 [invited Frontier Lecture].

239.** "Toward Exact Quantum Chemistry: Accurate Electronic Energies by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Center for Computational Chemistry, University of Georgia, Athens, Georgia, U.S.A., October 30, 2018.

240.** "Toward Exact Quantum Chemistry: Accurate Electronic Energies by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Department of Chemistry, Emory University, Atlanta, Georgia, U.S.A., October 31, 2018.

241.** "Toward Exact Quantum Chemistry: Accurate Electronic Energies by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Department of Chemistry and Biochemistry, Georgia Institute of Technology, Atlanta, Georgia, U.S.A., November 1, 2018.

242.** "Toward Exact Quantum Chemistry: Accurate Electronic Energies by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Department of Chemistry, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, U.S.A., November 12, 2018.

243.** "Toward Exact Quantum Chemistry by Combining Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Mainz-Kobe Joint Workshop on "Solving the Full Configuration Interaction Problem," RIKEN Center for Computational Science, Kobe, Japan, November 26-27, 2018 [teleconference session].

244.** "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Department of Chemistry, University of Michigan, Ann Arbor, Michigan, U.S.A., February 28, 2019.

245.** "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," TSRC Workshop "New Frontiers in Electron Correlation," 2nd edition, Telluride, Colorado, U.S.A., June 10-14, 2019.

246.** "Quantum Chemistry and Physics: My Academic Trajectory and Most Recent Interests," The 56th Meeting of the International Academy of Quantum Molecular Science (IAQMS), Menton, France, July 6-7, 2019.

247.** "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Tenth Congress of the International Society for Theoretical Chemical Physics (ISTCP-X), symposium entitled "Emergent Electronic Structure Methods," Tromsø, Norway, July 11-17, 2019.

248.** "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," 8th Conference "Current Trends in Theoretical Chemistry" (CTTC VIII), Cracow, Poland, September 1-4, 2019.

249.** "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," 20th International Conference on Recent Progress in Many-Body Theories, Toulouse, France, September 9-13, 2019.

250.** "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," The Utah Workshop on Quantum Methods in Molecular and Solid-State Theory, Park City, Utah, U.S.A., September 22-27, 2019.

251.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Workshop on New Methods for Strongly Correlated Electrons, Qingdao, China, October 9-13, 2019.

252.** "Introduction to the Single-Reference Many-Body Perturbation Theory and Its Diagrammatic Representation," Three-lecture mini-course given at the College of Chemistry and Molecular Engineering, Peking University, Beijing, China, November 12-14, 2019.

253.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," The Xingda Lectureship, College of Chemistry and Molecular Engineering, Peking University, Beijing, China, November 15, 2019.

254.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," The international conference "Quantum International Frontiers 2019," Shanghai, China, November 18-22, 2019 [invited Frontier Lecture].

255.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Department of Chemistry, North Carolina State University, Raleigh, North Carolina, U.S.A., January 20, 2020.

256.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," the 60th Sanibel Symposium, St. Simons Island, Georgia, U.S.A., February 16-21, 2020.

257.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Department of Physics, King's College London, London, U.K., March 3, 2020.

258.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Department of Chemistry, University of Cambridge, Cambdridge, U.K., March 4, 2020.

259.** "Toward Exact Quantum Chemistry," Computational Chemical Sciences Psi Group Zoom Meeting, April 15, 2020 [lecture via Zoom].

260.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Department of Chemistry, University of Chicago, May 1, 2020 [lecture via Zoom].

261.** "High-Accuracy Electronic Energetics by Stochastic and Deterministic Wave Function Sampling and Coupled-Cluster Computations," TSRC Workshop "Low-Scaling and Unconventional Electronic Structure Techniques" (LUEST 2020), 5th edition, Telluride, Colorado, U.S.A., June 1-5, 2020.
DUE TO COVID-19, REPLACED BY VIRTUAL WORKSHOP, June 1-5 and June 8-9, 2020 [lecture via Zoom].

262.** "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States (Toward Exact Quantum Chemistry)," 2020 Computational and Theoretical Chemistry Virtual Conference Series (July 16, July 30, August 13, 2020), Germantown, Maryland, U.S.A., August 13, 2020 [lecture via Zoom].

263.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Department of Chemistry, Purdue University, West Lafayette, Indiana, U.S.A., November 4, 2020 [lecture via Webex].

264.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Institute of Physics, Lódź University of Technology, Lódź, Poland, November 20, 2020 [lecture via Zoom].

265.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Seminar Series "Discussion on Many-Body Theory," CEA Saclay, France, November 27, 2020 [lecture via Zoom].

266.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," The Physical, Theoretical, and Computational Chemistry Virtual Seminar Series, Chemical Institute of Canada, December 1, 2020 [lecture via Zoom].

267.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Department of Chemistry, University of Florida, Gainesville, Florida, U.S.A., February 23, 2021 [lecture via Zoom].

268.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," School of Chemistry and Chemical Engineering, Nanjing University, Nanjing, China, April 8, 2021 [lecture via VooV].

269.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Department of Chemistry, University of Iowa, Iowa City, Iowa, U.S.A., April 16, 2021 [lecture via Zoom].

270.** "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," TSRC Workshop "New Frontiers in Electron Correlation," 3rd edition, Telluride, Colorado, U.S.A., June 14-18, 2021 [virtual workshop; lecture via Zoom].

271.** "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," TSRC Workshop "New Developments in Coupled-Cluster Theory," Telluride, Colorado, U.S.A., July 19-23, 2021 [hybrid format; lecture via Zoom].

272.** "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," International Symposium on Correlated Electrons (SymCorrel21), Munich Center for Quantum Science and Technology, Munich, Germany, October 5-7, 2021 [virtual workshop; lecture via Zoom].

273.** "Computational Studies of FR0-SB, a Novel Organic Compound that Deprotonates Alcohols Upon Photoexcitation," International conference in the series "New Horizons in Scientific Software (NHISS 2021)" entitled "Light-Matter Interaction: Theory Meets Experiment," Jeju Island, South Korea, November 22-25, 2021 [hybrid format; lecture via Zoom].

274.** "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," The Seventeenth Theoretical Chemistry Symposium (TCS 2021), Indian Institute of Science Education and Research Kolkata, Mohanpur, Nadia, West Bengal, India, December 11-14, 2021 [virtual symposium; plenary lecture].

275.** "Externally Corrected Coupled-Cluster Methods Using Selected Configuration Interaction and FCIQMC," the 61st Sanibel Symposium, invited session on New Directions in CC Theory, St. Simons Island, Georgia, U.S.A., February 13-18, 2022 [in-person plenary lecture].

276.** "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," Chris Cramer 60th Birthday Symposium, 263rd American Chemical Society National Meeting, San Diego, California, U.S.A., March 20-24, 2022 [in-person and virtual meeting; pre-recorded virtual presentation].

277.** "Recent Advances in Externally Corrected Coupled-Cluster Methods," 10th International Conference "Molecular Quantum Mechanics" entitled "Molecular Quantum Mechanics: Innovation, Impact, and Insight," in honor of Professors Gustavo Scuseria and Martin Head-Gordon, Blacksburg, Virginia, U.S.A., June 26 - July 1, 2022 [plenary lecture].

278.** "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," Twelfth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2020), Vancouver, British Columbia, Canada, August 16-21, 2020.
DUE TO COVID-19, RESCHEDULED TO July 3-8, 2022.

279.** "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," The 2020 American Conference on Theoretical Chemistry (ACTC 2020), Palisades Tahoe (formerly Squaw Valley), California, U.S.A., July 26-30, 2020.
DUE TO COVID-19, RESCHEDULED TO July 24-28, 2022; renamed ACTC 2022.

280.** "Recent Advances in Externally Corrected Coupled-Cluster Methods," The symposium "Quantum Chemistry: Current and Future Frontiers," 264th American Chemical Society National Meeting, Chicago, Illinois, U.S.A., August 21-25, 2022 [in-person and virtual meeting; in-person talk].

281.** "Recent Advances in Externally Corrected Coupled-Cluster Methods," OPERA-2020 (Operators, Perturbations, Electrons, Relativity, and Multi-Scale Applications), an international symposium on theoretical chemistry in honour of Prof. Jürgen Gauss on the occasion of his 60th birthday, Ingelheim am Rhein, Germany, September 1-3, 2021.
DUE TO COVID-19, RESCHEDULED TO August 31 - September 2, 2022.

282.** TBD, Faculty of Chemistry, University of Warsaw, Warsaw, Poland, September 13-15 (TBD), 2022.

283.** TBD, Faculty of Chemistry, Jagiellonian University, Cracow, Poland, September 16, 2022.

284.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations" (tentative), Modeling and Design of Molecular Materials 2020 (MDMM 2020) Conference, Gdańsk, Poland, September 21-24, 2020.
DUE TO COVID-19, RESCHEDULED TO September 19-22, 2022; renamed MDMM 2022.

285.** TBD, The symposium "Strong Correlation in Molecules," A Satellite Symposium to the 17th International Congress of Quantum Chemistry, Znojmo, Czech Republic, **DUE TO COVID-19, RESCHEDULED TO June 20-23, 2023.**

286.** "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations" (tentative), 17th International Congress of Quantum Chemistry, Bratislava, Slovakia, June 21-26, 2021.
DUE TO COVID-19, RESCHEDULED TO June 26 - July 1, 2023.

287.** TBD, The 5th Conference on Theory and Applications of Computational Chemistry (TACC 2020), Sapporo, Japan, September 7-12, 2020.
DUE TO COVID-19, RESCHEDULED TO September 2-10, 2023.

288.** TBD, International Symposium of Theoretical Chemistry, Kyoto, Japan, September 2-4, 2020.
DUE TO COVID-19, RESCHEDULED (dates to be determined).

In addition, Dr. Piotr Piecuch presented an invited paper "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces" at the 262nd WE-Heraeus-Seminar entitled "Modern Aspects of Many-Electron Theory," Bad Honnef, Germany, October 21–24, 2001 [classified as invited poster].

LIST OF PAPERS PRESENTED AT CONFERENCES[†]

1. P. Piecuch, "Invariance Properties of the Multipole Expansion," The Scientific Convention of the Polish Chemical Society and of the Association of Chemical Industry Engineers and Technicians, Lublin, Poland, September 22-25, 1982 [oral presentation].

2. P. Piecuch, "Spherical Tensor Operators in Theory of Long-Range Intermolecular Interactions," The Scientific Convention of the Polish Chemical Society and of the Association of Chemical Industry Engineers and Technicians, Lublin, Poland, September 22-25, 1982 [oral presentation].

3. P. Piecuch, "Spherical Tensor Theory of Long-Range Intermolecular Forces Including Quantum-Mechanical Many-Body Effects," Fourth School of Advanced Methods of Quantum Chemistry, Bachotek, Poland, May 27-31, 1985 [poster presentation].

4. P. Piecuch, "Simple Derivation of the Multipole Expansion in the Spherical Tensor Form. The Use of Stone's Cartesian-Spherical Transformation Formalism," Fourth School of Advanced Methods of Quantum Chemistry, Bachotek, Poland, May 27-31, 1985 [poster presentation].

5. P. Piecuch, "Mathematical Apparatus of the Quantum Theory of Angular Momentum and the Formalism of Irreducible Tensor Operators in the Perturbation Theory of Long-Range Interactions between N Molecules Including Many-Body Effects," Microsymposium of the Quantum Chemistry Section of the Polish Chemical Society organized during the Scientific Convention of the Polish Chemical Society and of the Association of Chemical Industry Engineers and Technicians, Poznań, Poland, September 4-7, 1985 [poster presentation].

6. P. Piecuch, "Magnitudes of Higher-Order Interaction Energy Contributions Appearing in the Perturbative Description of Long-Range Intermolecular Interactions. Interactions in the Typical Simple Molecular Complexes $H_2 - He$ and $H_2 - H_2$," Microsymposium of the Quantum Chemistry Section of the Polish Chemical Society organized during the Scientific Convention of the Polish Chemical Society and of the Association of Chemical Industry Engineers and Technicians, Poznań, Poland, September 4-7, 1985 [poster presentation].

7. P. Piecuch, "Anisotropic and Isotropic Two- and Many-Body Long-Range Intermolecular Interactions – the Use of Racah-Wigner Algebra and the Formalism of Irreducible Tensors," Conference "The Nature of Molecular Interactions," Karpacz, Poland, June 8-12, 1986 [poster presentation].

8. P. Piecuch, "Spherical Tensor Theory of Long-Range Molecular Interactions Including Quantum-Mechanical Many-Body Effects," International Symposium "Molecules in Physics, Chemistry and Biology," Paris, France, June 15-21, 1986 [poster presentation].

[†] Presentations of results that have been obtained at Michigan State University before submitting the tenure promotion package in the Fall of 2001 are marked by $*$. Presentations given after submitting the tenure promotion package in the Fall of 2001 are marked by $**$.

9. P. Piecuch, "Classification and Mathematical Description of Two- and Many-Body Long-Range Interactions in a System of N Arbitrary Molecules," Conference "Quantum Chemistry - 86," Wrocław, Poland, December 5-6, 1986 [oral presentation].

10. P. Piecuch, "Theoretical Insight into Many-Body Long-Range Effects of the Electrostatic Origin in Multimolecular Systems," 35. Bunsen-Kolloquium "Interactions of Water in Ionic and Nonionic Hydrates," Marburg, April 2-3, 1987 (and subsequent seminar of the Department of Physical Chemistry of the University of Marburg, April 4, 1987), Federal Republic of Germany [poster presentation].

11. P. Piecuch, "Elementary Derivation of the Addition Theorems for Solid Spherical Harmonics," Second School "Current Trends in Theoretical Chemistry," Zakopane, Poland, May 27-31, 1987 [poster presentation].

12. P. Piecuch, "Spherical Tensor Theory of Long-Range Intermolecular Forces Including Quantum-Mechanical Many-Body Effects: the Use of Cartesian-Spherical Transformation Formalism," Fifth School of Advanced Methods of Quantum Chemistry "Bachotek '87," Bachotek, Poland, May 31-June 5, 1987 [poster presentation].

13. P. Piecuch, "Analytical Description of Two- and Many-Body Fourth-Order Induction Interaction Energies in Multimolecular Systems within Spherical Tensor Formalism," Eighth International Symposium on Solute-Solute-Solvent Interactions, Regensburg, Federal Republic of Germany, August 9-14, 1987 [oral presentation].

14. P. Piecuch, "Classification and Analytical Description of Two- and Many-Body Fourth-Order Induction Interaction Energies in Multimolecular Systems within Spherical Tensor Formalism," VIII-th Workshop "Horizons in Hydrogen Bond Research," Polanica Zdrój near Wrocław, Poland, September 10-16, 1987 [poster presentation].

15. P. Piecuch, "Generalization of the Concept of Spherical Harmonic Expansions to Many-Body Intermolecular Forces. Application to the Case of Fourth-Order Induction Interactions in an Arbitrary Multimolecular System," Regional Symposium on Chemical Physics, University of Waterloo, Waterloo, Ontario, Canada, October 28-30, 1988 [poster presentation].

16. P. Piecuch and J. Paldus, "Orthogonally Spin-Adapted Coupled-Cluster Equations. Comparison of Different Procedures for Spin-Adaptation," Regional Symposium on Chemical Physics, University of Waterloo, Waterloo, Ontario, Canada, October 28-30, 1988 [poster presentation].

17. P. Piecuch, S. Zarrabian, J. Paldus, and J. Čížek, "Coupled-Cluster Approach with Approximate Account of Triple Excitations and its Application to the Cyclic Polyene Model Systems," 10th Canadian Symposium on Theoretical Chemistry, Banff, Alberta, Canada, August 24-30, 1989 [poster presentation].

18. P. Piecuch, S. Zarrabian, J. Paldus, and J. Čížek, "Limitations in Determining the Lower Bounds to the Ground State Correlation Energy of the Cyclic Polyenes Using Optimized Inner Projection Technique," 10th Canadian Symposium on Theoretical Chemistry, Banff, Alberta, Canada, August 24-30, 1989 [poster presentation].

19. P. Piecuch, S. Zarrabian, J. Paldus, and J. Čížek, "Account of Higher than Pair Cluster Contributions in Single Reference Coupled Cluster Theory," The 6^{th} Annual University of Waterloo Symposium on Chemical Physics, University of Waterloo, Waterloo, Ontario, Canada, October 26-28, 1990 [poster presentation].

20. P. Piecuch and J. Paldus, "Orthogonally Spin-Adapted Multi-Reference Coupled-Cluster Formalism. Comparison of Different Procedures for Spin-Adaptation," 1991 Sanibel Symposia on Atomic, Molecular, and Condensed Matter Theory, Computational Methods, and the Application of Fundamental Theory to Problems of Biology and Pharmacology, St. Augustine, Florida, U.S.A., March 9-16, 1991 [poster presentation].

21. J. Paldus, P. Piecuch, B. Jeziorski, and L. Pylypow, "Extension of Coupled Cluster Methodology to Open Shells: State-Universal Approach," Seventh International Conference on Recent Progress in Many-Body Theories, Minneapolis, Minnesota, U.S.A., August 26-31, 1991 [invited talk given by J. Paldus].

22. P. Piecuch, R. Toboła, J. Paldus, and H. Chojnacki, "Approximate Method of Accounting for Quadruple Excitations in Multi-Reference Coupled-Cluster Theory. Application to H_4 Model System," Quantum Chemistry Symposium on Methods and Applications of Quantum Chemistry in Studies of Molecular Systems organized by the Institute of Chemistry of the Silesian University in cooperation with Quantum Chemistry Section of the Polish Chemical Society, Katowice, Poland, September 18, 1992 [poster presentation].

23. P. Piecuch, "Application of the Hilbert-Space Coupled-Cluster Theory to Electronic States of the H_4 Model System," Workshop "Coupled Clusters in the Theory of Atoms and Molecules," Quantum Chemistry Laboratory, Faculty of Chemistry, University of Warsaw, Poland, October 23-24, 1992 [invited talk].

24. J. Paldus, X. Li, and P. Piecuch, "Degeneracy and Coupled-Cluster Methods ('Variations on a Theme')," 1993 Sanibel Symposia on Atomic, Molecular, and Condensed Matter Theory, Computational Methods, and the Application of Fundamental Theory to Problems of Biology and Pharmacology, St. Augustine, Florida, U.S.A., March 13-20, 1993 [poster presentation].

25. J. Paldus and P. Piecuch, "Exclusion Principle Violating (EPV) Diagrams: A Mathematical Convenience or a Physically Important Concept?," 5th International Conference on Mathematical and Computational Chemistry, University of Missouri-Kansas City, Kansas City, Missouri, U.S.A., May 17-21, 1993 [talk given by J. Paldus].

26. P. Piecuch and L. Adamowicz, "A State-Selective Multi-Reference Coupled-Cluster Method Employing the Single-Reference Formalism: Theory, Implementation and a Test Case Study," 14th Annual West Coast Theoretical Chemistry/Statistical Mechanics Conference, University of California, Los Angeles, California, U.S.A., June 17-19, 1993 [contributed talk given by P. Piecuch].

27. P. Piecuch and L. Adamowicz, "A State-Selective Multi-Reference Coupled-Cluster Method Employing the Single-Reference Formalism: Theory, Implementation and a Model Study," Eighth American Conference on Theoretical Chemistry, University of Rochester, Rochester, New York, U.S.A., June 27-July 2, 1993 [poster presentation].

28. P. Piecuch and L. Adamowicz, "Breaking Bonds with the SS MRCC Method," 15th Annual West Coast Theoretical Chemistry/Statistical Mechanics Conference, Sandia National Laboratories, Livermore, California, U.S.A., April 27-29, 1994 [poster presentation].

29. V. Alexandrov, P. Piecuch, and L. Adamowicz, "State-Selective Multireference Coupled-Cluster Theory Employing Single-Reference Formalism: Implementation and Application to Excited States of LiH and H_8," 15th Annual West Coast Theoretical Chemistry/Statistical Mechanics Conference, Sandia National Laboratories, Livermore, California, U.S.A., April 27-29, 1994 [contributed talk given by V. Alexandrov].

30. P. Piecuch and J. Paldus, "Orthogonally Spin-Adapted Hilbert-Space Coupled-Cluster Formalism. Importance of the High-Order Coupling Terms," Second Canadian Computational Chemistry Conference, Queen's University at Kingston, Kingston, Ontario, Canada, May 21-25, 1994 [plenary talk given by P. Piecuch].

31. P. Piecuch, V. Alexandrov, and L. Adamowicz, "A State-Selective Multi-Reference Coupled-Cluster Method Employing the Single-Reference Formalism: Theory, Implementation and a Model Study," 8th International Congress of Quantum Chemistry, Satellite Meeting "Electron Correlation in Atoms and Molecules; New Methods and Applications," Smolenice Castle near Bratislava, Slovak Republic, June 14-18, 1994 [talk given by L. Adamowicz].

32. R. Toboła, P. Piecuch, and J. Paldus, "Coupled Cluster Approaches with an Approximate Account of Triply and Quadruply Excited Clusters: Implementation of the Orthogonally Spin-Adapted CCD+ST(CCD), CCSD+T(CCSD) and ACPQ+ST(ACPQ) Formalisms," 8th International Congress of Quantum Chemistry, Satellite Meeting "Electron Correlation in Atoms and Molecules; New Methods and Applications," Smolenice Castle near Bratislava, Slovak Republic, June 14-18, 1994 [poster presentation].

33. R. Toboła, P. Piecuch, J. Paldus, and H. Chojnacki, "Coupled Cluster Approaches with an Approximate Account of Triply and Quadruply Excited Clusters: Implementation of the Orthogonally Spin-Adapted CCD+ST(CCD) and ACPQ+ST(ACPQ) Formalisms," The Scientific Convention of the Polish Chemical Society and of the Association of Chemical Industry Engineers and Technicians, Warsaw, Poland, September 12-15, 1994 [poster presentation].

34. P. Piecuch and J. Paldus, "Coupled-Cluster Methods for Quasidegenerate States. Calculation of Potential Energy Surfaces and Molecular Properties Using the State-Universal Multi-Reference Coupled-Cluster Approach," The 10^{th} Annual University of Waterloo Symposium on Chemical Physics, University of Waterloo, Waterloo, Ontario, Canada, November 4-6, 1994 [plenary talk given by P. Piecuch].

35. A.E. Kondo, P. Piecuch, and J. Paldus, "Orthogonally Spin-Adapted Single-Reference Coupled-Cluster Formalism: Linear Response Calculation of Static Properties," The 10^{th} Annual University of Waterloo Symposium on Chemical Physics, University of Waterloo, Waterloo, Ontario, Canada, November 4-6, 1994 [poster presentation].

36. P. Piecuch, A.E. Kondo, V. Špirko, and J. Paldus, "Calculation of Property Functions Using the Single- and Multi-Reference Coupled-Cluster Approaches," 12th Canadian

Symposium on Theoretical Chemistry, Fredericton, New Brunswick, Canada, August 6-11, 1995 [poster presentation].

37. J. Paldus, X. Li, and P. Piecuch, "Recent Developments in Coupled-Cluster Theory," 1995 International Chemical Congress of Pacific Basin Societies (PACIFICHEM '95), Honolulu, Hawaii, U.S.A., December 17-22, 1995 [invited talk given by J. Paldus].

38. J. Paldus, P. Piecuch, X. Li, and A.E. Kondo, "Coupled Cluster Approach to Static Properties," Canadian Society for Chemistry, 79th Conference and Exhibition, Memorial University of Newfoundland, St. John's, Canada, June 23-26, 1996 [invited talk given by J. Paldus].

39. P. Piecuch, A.E. Kondo, J. Paldus, and V. Špirko, "Linear Response Coupled-Cluster Approach to Static Molecular Properties," The symposium "Frontiers in Electronic Structure Theory," 213th American Chemical Society National Meeting, San Francisco, California, U.S.A., April 13-17, 1997 [invited talk given by P. Piecuch].

40. P. Piecuch, "Coupled-Cluster Approach to Static Molecular Properties," Workshop "Coupled Cluster Theory and Electron Correlation, Fifty Years of the Correlation Problem," Cedar Key, Florida, U.S.A., June 15-19, 1997, a satellite meeting of the 9th International Congress of Quantum Chemistry, Atlanta, Georgia, U.S.A., June 9-14, 1997 [invited talk].

41. M.S. Topaler, D.G. Truhlar, X.Y. Chang, P. Piecuch, and J.C. Polanyi, "Fit of Potential Energy Surfaces and Theoretical Study of NaFH Absorption and Photodissociation Cross Sections," 1997 Conference on the Dynamics of Molecular Collisions, Gull Lake, Minnesota, U.S.A., July 21-25, 1997 [poster presentation].

42. P. Piecuch and R.J. Bartlett, "EOMXCC: A New Coupled-Cluster Method for Electronically Excited States," Thirty-Eighth Sanibel Symposium on Atomic, Molecular, and Condensed Matter Theory, St. Augustine, Florida, U.S.A., February 21-27, 1998 [poster presentation].

43. P. Piecuch, S.A. Kucharski, and R.J. Bartlett, "Coupled-Cluster Methods with Internal and Semi-Internal Triply and Quadruply Excited Clusters: CCSDt and CCSDtq Approaches," Twenty-Seventh Southeastern Theoretical Chemistry Association Conference, Tallahassee, Florida, U.S.A., May 28-30, 1998 [contributed talk given by P. Piecuch].

44.* V. Špirko, P. Piecuch, and O. Bludsky, "Quasi-Bound States of the Na$\cdots$FH van der Waals Molecule," Thirty-Ninth Sanibel Symposium on Atomic, Molecular, Biophysical, and Condensed Matter Theory, St. Augustine, Florida, U.S.A., February 27-March 5, 1999 [poster presentation].

45.* S.A. Kucharski, P. Piecuch, and R.J. Bartlett, "Potential Energy Curves for the N_2 Molecule: A Coupled Cluster Study Including Connected Quadruply Excited Clusters," Thirty-Ninth Sanibel Symposium on Atomic, Molecular, Biophysical, and Condensed Matter Theory, St. Augustine, Florida, U.S.A., February 27-March 5, 1999 [poster presentation].

46.* P. Piecuch, "Single-Reference Coupled-Cluster Methods for Quasi-Degenerate Electronic States," The symposium "Electronic Structure Theory: From Methods to Molecules and Materials," 100th Annual Meeting of the American Physical Society, Atlanta, Georgia, U.S.A., March 21-26, 1999 [invited talk].

47.* J.B. Giorgi, T.G. Lee, A.J. Hudson, F. Naumkin, H.-B. Oh, P. Piecuch, and J.C. Polanyi, "Harpooning Studied by Transition-State Spectroscopy: $M \cdot\cdot XR + h\nu \rightarrow [M^* \cdot\cdot XR]^\ddagger \rightarrow [M^+ \cdots XR^-]^\ddagger \rightarrow$ products ($X = F, Cl, Br$; $R = H, CH_3$)," The symposium "Electronically Nonadiabatic Processes in Gaseous, Cluster, and Condensed Media," 218th American Chemical Society National Meeting, New Orleans, Louisiana, U.S.A., August 22-26, 1999 [invited talk given by J.C. Polanyi].

48.* P. Piecuch, "Dynamics of Harpooning in van der Waals Molecules," The symposium "11th European Seminar on Computational Methods in Quantum Chemistry," Zakopane, Poland, September 23-25, 1999 [invited talk].

49.* K. Kowalski and P. Piecuch, "On the Origin of Intruder State Problem in Multi-Reference Coupled-Cluster Theory," The symposium "11th European Seminar on Computational Methods in Quantum Chemistry," Zakopane, Poland, September 23-25, 1999 [poster presentation].

50.* K. Kowalski, P. Piecuch, and K. Jankowski, "A Complete Set of Solutions of Coupled-Cluster Equations Involving Triply and Quadruply Excited Clusters," The symposium "11th European Seminar on Computational Methods in Quantum Chemistry," Zakopane, Poland, September 23-25, 1999 [poster presentation].

51.* P. Piecuch and J.I. Landman, "Parallelization of Multi-Reference Coupled-Cluster Method," The symposium "11th European Seminar on Computational Methods in Quantum Chemistry," Zakopane, Poland, September 23-25, 1999 [poster presentation].

52.* P. Piecuch, S.A. Kucharski, and V. Špirko, "Coupled-Cluster Methods with Internal and Semi-Internal Triply Excited Clusters: Vibrational Spectrum of the HF Molecule," The symposium "11th European Seminar on Computational Methods in Quantum Chemistry," Zakopane, Poland, September 23-25, 1999 [poster presentation].

53.* R.J. Bartlett, S.A. Kucharski, P. Piecuch, K. Wilson, M. Kolaski, and S.A. Perera, "Coupled-Cluster Theory: Recent Progress," The symposium "11th European Seminar on Computational Methods in Quantum Chemistry," Zakopane, Poland, September 23-25, 1999 [invited talk given by R.J. Bartlett].

54.* P. Piecuch, "Dynamics of Harpooning in van der Waals Molecules," "Vth International Conference on Molecular Spectroscopy," Lądek-Zdrój, Poland, September 26-30, 1999 [invited talk].

55.* P. Piecuch and K. Kowalski, "Method of Moments of Coupled Cluster Equations: A New Approach to the Many-Electron Correlation Problem," 40th Sanibel Symposium on Atomic, Molecular, Biophysical, and Condensed Matter Theory, St. Augustine, Florida, U.S.A., February 26-March 3, 2000 [poster presentation].

56.* K. Kowalski and P. Piecuch, "The Complete Sets of Solutions of the Bloch and State-Universal Multi-Reference Coupled-Cluster Equations," 40th Sanibel Symposium on Atomic, Molecular, Biophysical, and Condensed Matter Theory, St. Augustine, Florida, U.S.A., February 26-March 3, 2000 [poster presentation].

57.* R. Burcl, P. Piecuch, V. Špirko, and O. Bludský, "Bound and Quasi-Bound States of the $Li\cdots FH$ van der Waals Molecule," 40th Sanibel Symposium on Atomic, Molecular, Biophysical, and Condensed Matter Theory, St. Augustine, Florida, U.S.A., February 26-March 3, 2000 [poster presentation].

58.* J.B. Giorgi, T.G. Lee, A.J. Hudson, F. Naumkin, H.-B. Oh, P. Piecuch, and J.C. Polanyi, "Harpooning Studied by Transition-State Spectroscopy: $M\cdot\cdot XR + h\nu \rightarrow [M^*\cdot\cdot XR]^\ddagger \rightarrow [M^+\cdots XR^-]^\ddagger \rightarrow$ products: Results for M = Li, X = F, R = H, CH_3," The symposium "Computers in Chemistry Award Symposium Honoring Don Truhlar," 219th American Chemical Society National Meeting, San Francisco, California, U.S.A., March 26-30, 2000 [invited talk given by J.C. Polanyi].

59.* P. Piecuch and K. Kowalski, "Method of Moments of Coupled-Cluster Equations: A New Approach to the Many-Electron Correlation Problem," The 2000 Florida Award Symposium (honoring Dr. Rodney J. Bartlett's work), FAME 2000 (Florida Annual Meeting and Exposition, organized by the Florida Section of the American Chemical Society), Orlando, Florida, U.S.A., May 12, 2000 [invited talk given by P. Piecuch].

60.* P. Piecuch, "Dynamics of Photo-Induced Charge Transfer in van der Waals Molecules," Joint Polish-German Conference on Modern Optics: Fundamental Aspects of Spectroscopy and Environmental Applications, Jurata near Gdańsk, Poland, September 17-22, 2000 [invited talk].

61.* R. Burcl, P. Piecuch, V. Špirko, and O. Bludsky, "Bound and Quasi-Bound States of the $Li\cdots FH$ van der Waals Molecule," The 16th Annual Symposium on Chemical Physics at the University of Waterloo, Waterloo, Ontario, Canada, November 3-5, 2000 [contributed talk, given by R. Burcl].

62.* E. Kratz, R. Burcl, P. Piecuch, and V. Špirko, "*Ab Initio* Studies of the $Li\cdots FCH_3$ van der Waals Complex," The 16th Annual Symposium on Chemical Physics at the University of Waterloo, Waterloo, Ontario, Canada, November 3-5, 2000 [poster presented by R. Burcl].

63.* P. Piecuch, "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces," the 41st Sanibel Symposium on Atomic, Molecular, Biophysical, and Condensed Matter Theory, St. Augustine, Florida, U.S.A., February 24-March 2, 2001 [invited talk].

64.* K. Kowalski and P. Piecuch, "New Equation-of-Motion Coupled-Cluster Methods," the 41st Sanibel Symposium on Atomic, Molecular, Biophysical, and Condensed Matter Theory, St. Augustine, Florida, U.S.A., February 24-March 2, 2001 [poster, presented by K. Kowalski].

65.* P. Piecuch, "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces," First Southern School on Computational Chemistry, Orange Beach, Alabama, March 24, 2001 [invited talk].

66.* P. Piecuch and K. Kowalski, "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces," 14th Canadian Symposium on Theoretical Chemistry, Carleton University, Ottawa, Canada, August 4–9, 2001 [contributed talk given by P. Piecuch; one of the three posters selected for oral presentations].

67.* P. Piecuch, V. Špirko, R. Burcl, K. Kowalski, S.A. Kucharski, F. Mrugała, and O. Bludsky, "Effect of the Potential Energy Surface on the Dynamics of Weakly Bound Precursor Complexes and New "Black-Blox" Coupled-Cluster Methods for Entire Potential Energy Surfaces of Reactive Molecular Systems," The symposium "First Principles Chemical Reaction Dynamics," 222nd American Chemical Society National Meeting, Chicago, Illinois, U.S.A., August 26–30, 2001 [invited talk given by P. Piecuch].

68.* P. Piecuch, "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited States," 34th Midwest Theoretical Chemistry Conference, University of Minnesota, Minneapolis, Minnesota, U.S.A., October 5–6, 2001 [invited talk].

69.* K. Kowalski and P. Piecuch, "New Equation-of-Motion Coupled-Cluster Methods," 34th Midwest Theoretical Chemistry Conference, University of Minnesota, Minneapolis, Minnesota, U.S.A., October 5–6, 2001 [poster presented by K. Kowalski].

70.* A.W. Jasper, M.D. Hack A. Chakraborty, P. Piecuch, and D.G. Truhlar, "Photodissociation of LiFH and NaFH van der Waals Complexes: A Semiclassical Trajectory Study," 34th Midwest Theoretical Chemistry Conference, University of Minnesota, Minneapolis, Minnesota, U.S.A., October 5–6, 2001 [poster presented by A.W. Jasper].

71.* P. Piecuch, K. Kowalski, and I.S.O. Pimienta, "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces," the 262nd WE-Heraeus-Seminar entitled "Modern Aspects of Many-Electron Theory," Bad Honnef, Germany, October 21–24, 2001 [invited poster, presented by P. Piecuch].

72.** K. Kowalski and P. Piecuch, "New Coupled-Cluster Methods for Excited States," 10th Conference on Current Trends in Computational Chemistry, Jackson, Missisipi, U.S.A., November 1–3, 2001 [poster presented by K. Kowalski].

73.** P. Piecuch, "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces: I. Ground-State Approaches," SciDAC Kick-Off Meeting, Reston, Virginia, U.S.A., January 15-16, 2002 [poster].

74.** P. Piecuch, "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces: II. Excited-State Approaches," SciDAC Kick-Off Meeting, Reston, Virginia, U.S.A., January 15-16, 2002 [poster].

75.** P. Piecuch, "Advances in Electronic Structure Theory: New Coupled-Cluster Methods for Quasi-Degenerate Ground States, Molecular Potential Energy Surfaces, and Excited States," Institute for Nuclear Theory workshop on "Advanced Computational Methods for Solving the Nuclear Many-Body Problem," Seattle, Washington, U.S.A., March 12–15, 2002 [invited talk].

76.** P. Piecuch, K. Kowalski, and I.S.O. Pimienta, "New Single- and Multi-Reference Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited States," The

symposium "Recent Advances in Electron Correlation Methodology," 223rd American Chemical Society National Meeting, Orlando, Florida, U.S.A., April 7–11, 2002 [invited talk given by P. Piecuch].

77.** P. Piecuch, "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces: Recent Progress and Milestones," BES SciDAC PI Workshop, Argonne National Laboratory, Argonne, Illinois, U.S.A., June 13-14, 2002 [poster].

78.** I.S.O. Pimienta, K. Kowalski, and P. Piecuch, "Method of Moments of Coupled-Cluster Equations: Inclusion of All Generalized Moments of the Coupled-Cluster Singles and Doubles Equations," The 2002 American Conference on Theoretical Chemistry, Seven Springs Mountain Resort, Champion, Pennsylvania, U.S.A., July 13-18, 2002 [poster presented by I.S.O. Pimienta].

79.** K. Kowalski and P. Piecuch, "New Equation-of-Motion Coupled-Cluster Methods," The 2002 American Conference on Theoretical Chemistry, Seven Springs Mountain Resort, Champion, Pennsylvania, U.S.A., July 13-18, 2002 [poster presented by K. Kowalski].

80.** M.J. McGuire, E. Kratz, R. Burcl, and P. Piecuch, "The Unusual Effect of the Basis Set Superposition Error on the Geometries and Bending Potentials of the $Li \cdots FCH_3$ and $Na \cdots FCH_3$ Complexes," The 2002 American Conference on Theoretical Chemistry, Seven Springs Mountain Resort, Champion, Pennsylvania, U.S.A., July 13-18, 2002 [poster presented by M.J. McGuire].

81.** M.J. McGuire, K. Kowalski, and P. Piecuch, "Renormalized Coupled-Cluster Calculations of Reactive Potential Energy Surfaces: The Collinear BeFH System," The 2002 American Conference on Theoretical Chemistry, Seven Springs Mountain Resort, Champion, Pennsylvania, U.S.A., July 13-18, 2002 [poster presented by M.J. McGuire].

82.** P.-D. Fan, K. Jedziniak, K. Kowalski, and P. Piecuch, "On the Exactness of Two-Body Cluster Expansions in Many-Body Quantum Theory," The 2002 American Conference on Theoretical Chemistry, Seven Springs Mountain Resort, Champion, Pennsylvania, U.S.A., July 13-18, 2002 [poster presented by P.-D. Fan].

83.** P. Piecuch, K. Kowalski, I.S.O. Pimienta, and M.J. McGuire, "Method of Moments of Coupled-Cluster Equations: A New Framework for Designing Accurate Electronic Structure Methods," Fourth International Congress of the International Society for Theoretical Chemical Physics (ICTCP-IV), Marly-le-Roi near Paris, France, July 9-16, 2002 [invited plenary talk given by P. Piecuch].

84.** P. Piecuch, "Method of Moments of Coupled-Cluster Equations: A New Theoretical Framework for Designing Highly Accurate Electronic Structure Methods," International Symposium on Frontiers in Molecular Science 2002, Qingdao, China, July 15-18, 2002 [invited talk].

85.** P. Piecuch, K. Kowalski, and I.S.O. Pimienta, "Advances in Electronic Structure Theory: New Coupled-Cluster Methods for Molecular Potential Energy Surfaces and Excited States," 6th World Congress of Theoretically Oriented Chemists (WATOC02), Lugano, Switzerland, August 4-9, 2002 [contributed talk; paper selected by the Organizers for the oral presentation].

86.** P. Piecuch, K. Kowalski, I.S.O. Pimienta, M.J. McGuire, and P.-D. Fan, "Method of Moments of Coupled-Cluster Equations: A New Theoretical Framework for Designing Highly Accurate (Virtually Exact) and Inexpensive Electronic Structure Methods," 11th Conference on Current Trends in Computational Chemistry, Jackson, Missisipi, U.S.A., November 1-2, 2002 [invited talk given by P. Piecuch].

87.** I.S.O. Pimienta, P. Piecuch, and K. Kowalski, "Method of Moments of Coupled-Cluster Equations: Inclusion of All Generalized Moments of the Coupled-Cluster Singles and Doubles Equations," the 43rd Sanibel Symposium on Atomic, Molecular, Biophysical, and Condensed Matter Theory, St. Augustine, Florida, U.S.A., February 22-March 1, 2003 [poster, presented by I.S.O. Pimienta].

88.** P.-D. Fan, K. Kowalski, and P. Piecuch, "New Alternatives for Electronic Structure Theory: The Applications of Two-Body Cluster Expansions in Accurate *Ab Initio* Calculations," the 43rd Sanibel Symposium on Atomic, Molecular, Biophysical, and Condensed Matter Theory, St. Augustine, Florida, U.S.A., February 22-March 1, 2003 [poster, presented by P.-D. Fan].

89.** P. Piecuch, "New Coupled-Cluster Methods for Molecular Potential Energy Surfaces," 2003 DOE SciDAC PI Meeting, Napa, California, U.S.A., March 10-11, 2003 [poster].

90.** P. Piecuch, K. Kowalski, I.S.O. Pimienta, and P.-D. Fan, "New Alternatives for Accurate Electronic Structure Calculations of Molecular Potential Energy Surfaces," The symposium "New Electronic Structure Methods: From Molecules to Materials," 225th American Chemical Society National Meeting, New Orleans, Louisiana, U.S.A., March 23-27, 2003 [invited talk given by P. Piecuch].

91.** P. Piecuch, K. Kowalski, P.-D. Fan, and K. Jedziniak, "On the Exactness of Two-Body Cluster Expansions in Many-Body Quantum Theory," 35th Midwest Theoretical Chemistry Conference, Iowa State University, Ames, Iowa, U.S.A., June 12–14, 2003 [talk given by P. Piecuch].

92.** K. Kowalski and P. Piecuch, "A New Class of Noniterative Energy Corrections to Coupled-Cluster Energies for Excited Electronic States," 35th Midwest Theoretical Chemistry Conference, Iowa State University, Ames, Iowa, U.S.A., June 12–14, 2003 [talk given by K. Kowalski].

93.** M.J. McGuire, P. Piecuch, K. Kowalski, S.A. Kucharski, and M. Musiał, "Renormalized Coupled-Cluster Calculations of Reactive Potential Energy Surfaces: A Comparison of the CCSD(T), Renormalized CCSD(T), and Multi-Reference Configuration Interaction Results for the BeFH System," 35th Midwest Theoretical Chemistry Conference, Iowa State University, Ames, Iowa, U.S.A., June 12–14, 2003 [poster presented by M.J. McGuire].

94.** M.J. McGuire, E. Kratz, R. Burcl, and P. Piecuch, "The Unusual Effect of the Basis Set Superposition Error on the Geometries and Bending Potentials of the Li$\cdots$FCH$_3$ and Na$\cdots$FC H$_3$ Complexes," 35th Midwest Theoretical Chemistry Conference, Iowa State University, Ames, Iowa, U.S.A., June 12–14, 2003 [talk given by M.J. McGuire].

95.** I.S.O. Pimienta, Piotr Piecuch, and K. Kowalski, "Method of Moments of Coupled-Cluster Equations: Inclusion of All Generalized Moments of the Coupled-Cluster Singles and Doubles Equations," 35th Midwest Theoretical Chemistry Conference, Iowa State University, Ames, Iowa, U.S.A., June 12–14, 2003 [talk given by I.S.O. Pimienta].

96.** P.-D. Fan, K. Kowalski, and P. Piecuch, "The Application of the Extended Coupled-Cluster Method with Singles and Doubles in Studies of Bond Breaking," 35th Midwest Theoretical Chemistry Conference, Iowa State University, Ames, Iowa, U.S.A., June 12–14, 2003 [talk given by P.-D. Fan].

97.** M. Lodriguito, P.-D. Fan, K. Kowalski, and P. Piecuch, " Method of Moments of Coupled-Cluster Equations Employing the Extended Coupled-Cluster Theory: Dissociation of the N_2 Triple Bond," 35th Midwest Theoretical Chemistry Conference, Iowa State University, Ames, Iowa, U.S.A., June 12–14, 2003 [poster presented by M. Lodriguito].

98.** R.C. Lafuente, P. Piecuch, and K.L.C. Hunt, "Towards the Development and Implementation of Computer Programs for Calculating the Charge-Density Susceptibility," 35th Midwest Theoretical Chemistry Conference, Iowa State University, Ames, Iowa, U.S.A., June 12–14, 2003 [poster presented by R.C. Lafuente].

99.** R.M. Olson, S.A. Varganov, M.S. Gordon, G. Mill, H. Metiu, and P. Piecuch, "2D/3D Transition of Small Gold Clusters ($Au_n|n = 4, 6, 8, \ldots$)," 35th Midwest Theoretical Chemistry Conference, Iowa State University, Ames, Iowa, U.S.A., June 12–14, 2003 [poster presented by R.M. Olson].

100.** P. Piecuch, K. Kowalski, I.S.O. Pimienta, P.-D. Fan, and M.J. McGuire, "Single- and Multi-reference Coupled-Cluster Methods for Quasidegenerate Electronic States and Bond Breaking," The symposium "Bond-Breaking Methods in Gas and Condensed Phases," 226th American Chemical Society National Meeting, New York, New York, U.S.A., September 7-11, 2003 [invited talk given by P. Piecuch].

101.** K. Kowalski and P. Piecuch, "A New Class of Noniterative Energy Corrections to Coupled-Cluster Energies for Excited Electronic States," The symposium "Bond-Breaking Methods in Gas and Condensed Phases," 226th American Chemical Society National Meeting, New York, New York, U.S.A., September 7-11, 2003 [talk given by K. Kowalski].

102.** T. Kuś, S.A. Kucharski, M.J. McGuire, K. Kowalski, and P. Piecuch, "Potential Energy Curves of Open-Shell Systems Obtained with Coupled-Cluster Methods with the T_3 Operator," The 46th Meeting of the Polish Chemical Society, Lublin, Poland, September 15-19, 2003 [poster presented by T. Kuś].

103.** P.-D. Fan, K. Kowalski, M. Lodriguito, and P. Piecuch, "New Alternatives for Accurate *Ab Initio* Calculations," 12th Conference on Current Trends in Computational Chemistry, Jackson, Missisipi, U.S.A., October 31-November 1, 2003 [poster presented by P.-D. Fan].

104.** P. Piecuch, "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States," 2004 DOE SciDAC PI Meeting, Charleston, South Carolina, U.S.A., March 22-24, 2004 [poster].

105.** P. Piecuch and K. Kowalski, "Noniterative Coupled-Cluster Methods for Accurate Calculations of Excited Electronic States," The symposium "The Systematic Treatment of Electron Correlation. A Celebration of the Science of Rodney J. Bartlett," St. Simons Island, Georgia, U.S.A., April 23-25, 2004 [invited talk given by P. Piecuch].

106.** D.J. Dean, M. Hjorth-Jensen, K. Kowalski, T. Papenbrock, and P. Piecuch, "Coupled-Cluster Approaches to Nuclei, Ground States and Excited States," 8th International Spring Seminar on Nuclear Physics, Key Topics in Nuclear Structure, Paestum, Italy, May 23–27, 2004 [invited talk given by M. Hjorth-Jensen].

107.** P.-D. Fan, K. Kowalski, and P. Piecuch, "Intriguing Accuracy of Two-Body Cluster Expansions of Ground and Excited States," 36th Midwest Theoretical Chemistry Conference, Michigan State University, East Lansing, Michigan, U.S.A., June 17–19, 2004 [poster presented by P.-D. Fan].

108.** K. Kowalski and P. Piecuch, "New Classes of Noniterative Energy Corrections to Multireference Coupled-Cluster Energies," 36th Midwest Theoretical Chemistry Conference, Michigan State University, East Lansing, Michigan, U.S.A., June 17–19, 2004 [poster presented by K. Kowalski].

109.** R.C. Lafuente, K.L.C. Hunt, and P. Piecuch, "Preliminary Development and Implementation of Computer Programs for Calculating the Charge-Density Susceptibility," 36th Midwest Theoretical Chemistry Conference, Michigan State University, East Lansing, Michigan, U.S.A., June 17–19, 2004 [poster presented by R.C. Lafuente].

110.** M. Lodriguito, K. Kowalski, and P. Piecuch, "Method of Moments of Coupled-Cluster Equations Employing the Multireference Perturbation Theory," 36th Midwest Theoretical Chemistry Conference, Michigan State University, East Lansing, Michigan, U.S.A., June 17–19, 2004 [poster presented by M. Lodriguito].

111.** M.J. McGuire and P. Piecuch, "Application of Renormalized Coupled-Cluster Methods to Reactions Involving Diradicals," 36th Midwest Theoretical Chemistry Conference, Michigan State University, East Lansing, Michigan, U.S.A., June 17–19, 2004 [poster presented by M.J. McGuire].

112.** K. Kowalski, M. Włoch, and P. Piecuch, "Efficient Implementation of the Standard and Renormalized Equation-of-Motion Coupled-Cluster Methods in GAMESS," 36th Midwest Theoretical Chemistry Conference, Michigan State University, East Lansing, Michigan, U.S.A., June 17–19, 2004 [poster presented by M. Włoch].

113.** D.J. Dean, M. Hjorth-Jensen, K. Kowalski, T. Papenbrock, and P. Piecuch, "Coupled-Cluster Approaches to Nuclei, Ground States and Excited States," International Nuclear Physics Conference, INPC 2004, Göteborg, Sweden, June 27-July 2, 2004 [invited talk given by M. Hjorth-Jensen].

114.** P. Piecuch, "Coupled-Cluster Method: An Accurate Ab Initio Theory of Atoms, Molecules, Nuclei, and Other Many-Fermion Systems," International Workshop on Microscopic Approaches to Nuclear Structure Calculations," UMIST, Manchester, U.K., July 4–8, 2004 [invited talk given by P. Piecuch].

115.** P. Piecuch, "Coupled-Cluster Approaches to Atoms, Molecules, and Nuclei," Workshop "New Perspectives on p-Shell Nuclei," Michigan State University, East Lansing, Michigan, U.S.A., July 22-24, 2004 [invited talk given by P. Piecuch].

116.** P. Piecuch, K. Kowalski, I.S.O. Pimienta, M. J. McGuire, P.-D. Fan, and M. Lodriguito, "Noniterative Coupled-Cluster Methods for Bond Breaking, Diradicals, and Excited Electronic States," International conference "Molecular Quantum Mechanics: the No Nonsense Path to Progress" honoring Professor Nicholas Handy's work, St. John's College, Cambridge University, Cambridge, U.K., July 24-29, 2004 [invited talk given by P. Piecuch].

117.** P. Piecuch, P.-D. Fan, S. Hirata, and K. Kowalski, "Renormalized Coupled-Cluster Methods and their Automated Parallel Computer Implementation with Tensor Contraction Engine," The symposium "Symbolic Calculation in Chemistry," 228th American Chemical Society National Meeting, Philadelphia, Pennsylvania, U.S.A., August 22-26, 2004 [invited talk given by P. Piecuch].

118.** P. Piecuch, K. Kowalski, D.J. Dean, M. Hjorth-Jensen, T. Papenbrock, and M. Włoch, "Coupled Cluster Calculations of Ground and Excited States of Nuclei," International Conference on Exotic Nuclei and Atomic Masses, ENAM-04, Pine Mountain, Georgia, U.S.A., September 12-16, 2004 [invited contributed talk given by P. Piecuch].

119.** P. Piecuch, K. Kowalski, M. Włoch, and M. Lodriguito, "Non-Iterative Coupled-Cluster Methods For Accurate Calculations of Excited Electronic States," Ninth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-IX, Les Houches, Grenoble, France, September 25-30, 2004 [invited talk given by P. Piecuch].

120.** P. Piecuch, M. Włoch, D.J. Dean, J.R. Gour, M. Hjorth-Jensen, K. Kowalski, and T. Papenbrock, "Coupled Cluster Calculations of Ground and Excited States of Nuclei," Ninth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-IX, Les Houches, Grenoble, France, September 25-30, 2004 [invited talk given by P. Piecuch].

121.** P. Piecuch, "Coupled-Cluster Approaches to Atoms, Molecules, and Nuclei," Institute for Nuclear Theory workshop "Microscopic Nuclear Structure Theory," "Nuclear Forces and the Quantum Many-Body Problem," Seattle, Washington, U.S.A., October 4-8, 2004 [invited talk given by P. Piecuch].

122.** M.D. Lodriguito, K. Kowalski, and P. Piecuch, "Method of Moments of Coupled-Cluster Equations Employing the Multireference Perturbation Theory," The symposium "Computational Chemical Dynamics from Gas-Phase to Condensed-Phase Systems," Minnesota Supercomputing Institute, University of Minnesota, Minneapolis, U.S.A., October 7-9, 2004 [poster presented by M. Lodriguito].

123.** P. Piecuch, "Coupled-Cluster Method: Highly Accurate Microscopic Approach to Molecular Systems and Nuclei," Workshop "Nuclei and Mesoscopic Physics," Michigan State University, East Lansing, Michigan, U.S.A., October 23-26, 2004 [invited talk given by P. Piecuch].

124.** P. Piecuch, K. Kowalski, M. Włoch, J.R. Gour, M.J. McGuire, P.-D. Fan, A. Kinal, and M. Lodriguito, "Noniterative Coupled-Cluster Methods for Bond Breaking, Diradicals,

and Excited Electronic States," 7th World Congress of Theoretically Oriented Chemists (WATOC05), Cape Town, South Africa, January 16-21, 2005. [invited talk given by P. Piecuch].

125.** D.J. Dean, J.R. Gour, G. Hagen, M. Hjorth-Jensen, K. Kowalski, T. Papenbrock, P. Piecuch, and M. Włoch, "Challenges for Nuclear Structure: From Stable to Weakly Bound Nuclei," International Symposium on Correlation Dynamics in Nuclei – on the Occasion of the 50th Anniversary of the Configuration Mixing Theory of Arima and Horie, CDN05, Tokyo, Japan, January 31-February 4, 2005 [invited talk given by M. Hjorth-Jensen].

126.** M.J. McGuire and P. Piecuch, "Renormalized Coupled-Cluster Studies of Reactions Involving Diradicals," the 45th Sanibel Symposium on Forefront Theory and Computation in Quantum Chemistry, Condensed Matter and Chemical Physics, Nanoscience, Quantum Biochemistry and Biophysics," St. Simons Island, Georgia, U.S.A., March 5-11, 2005 [poster presented by M.J. McGuire].

127.** A. Kinal and P. Piecuch, "Is the Mechanism of Cycloaddition of Ethylene to Cyclopentyne Concerted or Biradical? A Completely Renormalized Coupled Cluster Study," the 45th Sanibel Symposium on Forefront Theory and Computation in Quantum Chemistry, Condensed Matter and Chemical Physics, Nanoscience, Quantum Biochemistry and Biophysics," St. Simons Island, Georgia, U.S.A., March 5-11, 2005 [poster presented by A. Kinal].

128.** M.D. Lodriguito, K. Kowalski, M. Włoch, and P. Piecuch, "Method of Moments of Coupled-Cluster Equations Employing the Multireference Perturbation Theory," the 45th Sanibel Symposium on Forefront Theory and Computation in Quantum Chemistry, Condensed Matter and Chemical Physics, Nanoscience, Quantum Biochemistry and Biophysics," St. Simons Island, Georgia, U.S.A., March 5-11, 2005 [poster presented by M. Lodriguito].

129.** M. Włoch, J.R. Gour, K. Kowalski, and P. Piecuch, "The Open-Shell Extension of the Renormalized Equation of Motion Coupled-Cluster Method and its Applications to Many-Electron and Other Many-Fermion Systems," the 45th Sanibel Symposium on Forefront Theory and Computation in Quantum Chemistry, Condensed Matter and Chemical Physics, Nanoscience, Quantum Biochemistry and Biophysics," St. Simons Island, Georgia, U.S.A., March 5-11, 2005 [poster presented by M. Włoch].

130.** K. Kowalski and P. Piecuch, "Extensive Generalization of Renormalized Coupled-Cluster Methods," the 45th Sanibel Symposium on Forefront Theory and Computation in Quantum Chemistry, Condensed Matter and Chemical Physics, Nanoscience, Quantum Biochemistry and Biophysics," St. Simons Island, Georgia, U.S.A., March 5-11, 2005 [invited talk given by K. Kowalski].

131.** D.G. Truhlar, A.W. Jasper, S. Nangia, C. Zhu, P. Piecuch, and M.J. McGuire, "Quantum Photochemistry," John Pople Memorial Symposium, 229th American Chemical Society National Meeting, San Diego, California, U.S.A., March 13-17, 2005 [invited talk given by D.G. Truhlar].

132.** P. Piecuch, M. Włoch, J.R. Gour, and K. Kowalski, "Renormalized and Active-Space Coupled-Cluster Methods: Two Approaches to Electronic Quasi-Degeneracies and Open-Shell Problems," Fifth Congress of the International Society for Theoretical Chemical Physics (ICTCP-V), New Orleans, Louisiana, U.S.A., July 20-26, 2005 [invited plenary talk given by P. Piecuch].

133.** M. Włoch, J.R. Gour, and P. Piecuch, "The Completely Renormalized Coupled-Cluster Approximations Exploiting the Right and Left Eigenstates of the Similarity-Transformed Hamiltonian," Fifth Congress of the International Society for Theoretical Chemical Physics (ICTCP-V), New Orleans, Louisiana, U.S.A., July 20-26, 2005 [poster presented by M. Włoch].

134.** J.R. Gour, M. Włoch, and P. Piecuch, "The Active-Space Equation-of-Motion Coupled-Cluster Method for Electron-Attached and Ionized States," Fifth Congress of the International Society for Theoretical Chemical Physics (ICTCP-V), New Orleans, Louisiana, U.S.A., July 20-26, 2005 [poster presented by J.R. Gour].

135.** S. Coussan, A. Trivella, C. Manca, Y. Ferro, M. Rajzmann, R. Wieczorek, P. Piecuch, K. Kowalski, M. Włoch, S.A. Kucharski, M. Musiał, and P. Roubin, "Acetylacetone Trapped in Inert Matrices: UV and IR Photo-Induced Isomerization and Theoretical Reactional Pathways," The conference "MATRIX-2005, The Physics and Chemistry of Matrix Isolated Species," Funchal, Portugal, July 24–29, 2005 [contributed talk given by S. Coussan].

136.** P. Piecuch, M. Włoch, J.R. Gour, K. Kowalski, A. Kinal, M. Lodriguito, and M.J. McGuire, "Noniterative Coupled-Cluster Methods for Bond Breaking, Diradicals, and Excited Electronic States," The symposium "Theoretical Determination of Energy Landscapes: Methodology and Applications," 230th American Chemical Society National Meeting, Washington, DC, U.S.A., August 28-September 1, 2005. [invited talk given by P. Piecuch].

137.** P. Piecuch, M. Włoch, and J.R. Gour, "Renormalized and Active-Space Coupled-Cluster Methods: Two Approaches to Quasi-Degeneracies and Open-Shell Problems," Conference on Microscopic Approaches to Many-Body Theory, in honor of Professor Raymond Bishop, The University of Manchester, Manchester, U.K., August 31–September 3, 2005 [invited talk given by P. Piecuch].

138.** P. Piecuch, J.R. Gour, M. Włoch, and K. Kowalski, "Active-Space Coupled-Cluster Method: An Inexpensive and Highly Accurate Approach to Electronic Quasi-Degeneracies and Open-Shell Problems," Tenth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-X, Carthage, Tunisia, September 1-7, 2005 [invited talk given by P. Piecuch].

139.** P. Piecuch, M. Włoch, and J.R. Gour, "Method of Moments of Coupled-Cluster Equations and Renormalized Coupled-Cluster Approaches to Bond Breaking: A Biorthogonal Size Extensive Formulation," Tenth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-X, Carthage, Tunisia, September 1-7, 2005 [poster presented by P. Piecuch].

140.** P. Piecuch, M. Włoch, J.R. Gour, and A. Kinal, "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," 12th International Congress of Quantum Chemistry, Kyoto, Japan, May 21-26, 2006 [invited talk given by P. Piecuch].

141.** P. Piecuch and P.-D. Fan, "Intriguing Accuracies of the Exponential Wave Function Expansions Exploiting Finite Two-Body Correlation Operators in Calculations for Many-Electron Systems," 12th International Congress of Quantum Chemistry, Kyoto, Japan, May 21-26, 2006 [poster presented by P. Piecuch].

142.** P. Piecuch, M. Włoch, J.R. Gour, D.J. Dean, T. Papenbrock, and M. Hjorth-Jensen, "Bridging Quantum Chemistry and Nuclear Structure Theory: Coupled-Cluster Calculations for Closed- and Open-Shell Nuclei," 12th International Congress of Quantum Chemistry, Kyoto, Japan, May 21-26, 2006 [poster presented by P. Piecuch].

143.** J.R. Gour, P. Piecuch. and M. Włoch, "Active-Space Equation-of-Motion Coupled-Cluster Methods for Ground and Excited States of Radicals," 12th International Congress of Quantum Chemistry, Kyoto, Japan, May 21-26, 2006 [poster presented by J.R. Gour].

144.** Y. Ohtsuka, P. Piecuch, J.R. Gour, M. Ehara, and H. Nakatsuji, "Extension of the Active-Space Coupled-Cluster Methodology to the Symmetry-Adapted-Cluster Configuration-Interaction Approach," 12th International Congress of Quantum Chemistry, Kyoto, Japan, May 21-26, 2006 [poster presented by J.R. Gour].

145.** M. Włoch, A. Kinal, J.R. Gour, and P. Piecuch, "Single-Reference, Size-Extensive, Non-Iterative Coupled-Cluster Approaches to Bond Breaking and Biradicals," 12th International Congress of Quantum Chemistry, Kyoto, Japan, May 21-26, 2006 [poster presented by M. Włoch].

146.** M. Włoch and P. Piecuch, "Extension of Renormalized Coupled-Cluster Methods Including Triple Excitations to Ground and Excited Electronic States of Open-Shell Molecules," 12th International Congress of Quantum Chemistry, Kyoto, Japan, May 21-26, 2006 [poster presented by M. Włoch].

147.** M.D. Lodriguito, M. Włoch, and P. Piecuch, "Non-iterative Coupled-Cluster Methods Employing Multi-reference Peturbation Theory Wave Functions," 38th Midwest Theoretical Chemistry Conference, Columbus, Ohio June 15-17, 2006 [poster presented by M.D. Lodriguito].

148.** A. Kinal, M.J. McGuire, M. Włoch, and P. Piecuch, "Completely Renormalized Coupled-Cluster and Multi-Reference Configuration Interaction Studies of the Thermal Stereomutations of Cyclopropane," 38th Midwest Theoretical Chemistry Conference, Columbus, Ohio June 15-17, 2006 [contributed talk given by A. Kinal].

149.** P. Piecuch, "Accurate Quantum Calculations for Many-Electron and Other Many-Fermion Systems: From Bond Breaking and Electronic Excitations in Molecules to Properties of Atomic Nuclei," The Centro Internacional de Matemática Workshop "Mathematics in Chemistry," Lisbon, Portugal, July 19-21, 2006 [invited talk given by P. Piecuch].

150.** P. Piecuch, M. Włoch, J.R. Gour, and A. Kinal, "Advances in Electronic Structure Theory: Single-Reference Coupled-Cluster Methods for Multi-Reference Problems," Sixth Canadian Computational Chemistry Conference (CCCC6), Vancouver, British Columbia, Canada, July 26-30, 2006 [invited plenary talk given by P. Piecuch].

151.** M.D. Lodriguito, M. Włoch, and P. Piecuch, "Non-iterative Coupled-Cluster Methods Employing Multi-reference Peturbation Theory Wave Functions," Sixth Canadian Computational Chemistry Conference (CCCC6), Vancouver, British Columbia, Canada, July 26-30, 2006 [poster presented by M.D. Lodriguito].

152.** P. Piecuch, M. Włoch, A. Kinal, and J.R. Gour, "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," Eleventh European Workshop on Quantum Systems in Chemistry and Physics, QSCP-XI, St. Petersburg, Russia, August 20-25, 2006 [invited talk given by P. Piecuch].

153.** P. Piecuch, M. Włoch, J.R. Gour, D.J. Dean, T. Papenbrock, and M. Hjorth-Jensen, "Bridging Quantum Chemistry and Nuclear Structure Theory: Coupled-Cluster Calculations for Closed- and Open-Shell Nuclei," Eleventh European Workshop on Quantum Systems in Chemistry and Physics, QSCP-XI, St. Petersburg, Russia, August 20-25, 2006 [poster presented by P. Piecuch].

154.** P. Piecuch, J.R. Gour, and M. Włoch, "Active-Space Equation-of-Motion Coupled-Cluster Methods for Ground and Excited States of Radicals," Eleventh European Workshop on Quantum Systems in Chemistry and Physics, QSCP-XI, St. Petersburg, Russia, August 20-25, 2006 [poster presented by P. Piecuch].

155.** C. Sanz, O. Roncero, M.J. McGuire, and P. Piecuch, "Comparative study of the reactive collisions in CaHCl and BeHF systems," MOLEC XVI, European Conference on Dynamics of Molecular Systems, Levico Terme (Trento), Italy, September 11-15, 2006 [poster presented by C. Sanz].

156.** P. Piecuch, "Accurate Quantum Calculations for Many-Body Systems: From Reaction Mechanisms in Organic and Bioinorganic Chemistries to Properties of Atomic Nuclei," Michigan State University High Performance Computing Center 2006 Symposium, East Lansing, Michigan, U.S.A., October 7, 2006 [invited talk].

157.** P. Piecuch, M. Włoch, and J.R. Gour, "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," International Conference "Recent Trends in Many-Body Methods for Electronic Structure and Properties of Atoms and Molecules," Bhubaneswar and Puri, Orissa, India, January 11-13, 2007 [invited talk given by P. Piecuch].

158.** P. Piecuch, J.R. Gour, and M. Włoch, "Active-Space Coupled-Cluster Methods for Bond Breaking, Excited Electronic States, and Open-Shell Systems," International Conference "Practicing Chemistry with Theoretical Tools, on the Occasion of Professor Mark S. Gordon's 65th Birthday," Kihei, Hawaii, U.S.A., January 15-18, 2007 [invited talk given by P. Piecuch].

159.** M.D. Lodriguito and P. Piecuch, "Externally Corrected Coupled-Cluster Methods Employing Method of Moments of Coupled-Cluster Equations and Multi-Reference Perturbation Theory," 233rd American Chemical Society National Meeting, Chicago, Illinois,

March 25-29 (2007) [poster presented by M.D. Lodriguito; Chemical Computing Group Graduate Student Excellence Award].

160.** M. Horoi, J.R. Gour, M. Włoch, M.D. Lodriguito, P. Piecuch, and B.A. Brown, "Coupled-Cluster and Configuration-Interaction Calculations for Heavy Nuclei," Session X16, "Nuclear Theory II," 2007 Americal Physical Society April Meeting, Jacksonville, Florida, U.S.A., April 14-17, 2007 [talk given by M. Horoi].

161.** P. Piecuch, M. Włoch, J.R. Gour, and A. Kinal "Advances in Electronic Structure Theory: Single-Reference Methods for Multi-Reference Problems," 39th Midwest Theoretical Chemistry Conference, Indiana University, Bloomington, Indiana, U.S.A., June 28-30, 2007 [invited talk given by P. Piecuch].

162.** J.R. Gour and P. Piecuch, "Active-Space Equation-of-Motion Coupled-Cluster Methods for Ground and Excited States of Radicals," 39th Midwest Theoretical Chemistry Conference, Indiana University, Bloomington, Indiana, U.S.A., June 28-30, 2007 [contributed talk given by J.R. Gour].

163.** Y. Ohtsuka, P. Piecuch, J.R. Gour, M. Ehara, and H. Nakatsuji, "Extension of the Active-Space Coupled-Cluster Methodology to the Symmetry-Adapted-Cluster Configuration-Interaction Approach," 39th Midwest Theoretical Chemistry Conference, Indiana University, Bloomington, Indiana, U.S.A., June 28-30, 2007 [poster presented by J.R. Gour].

164.** J.J. Lutz, P. Piecuch, and A. Kinal, "Extrapolating Potential Energy Surfaces for the Isomerization of Bicyclo[1.1.0]butane to Buta-1,3-diene," 39th Midwest Theoretical Chemistry Conference, Indiana University, Bloomington, Indiana, U.S.A., June 28-30, 2007 [poster presented by J.J. Lutz].

165.** P. Piecuch, "Coupled-Cluster Theory: An Overview of the Basic Formalism and Applications to Molecular and Nuclear Structure Problems," Workshop on Advanced Many-body Methods for Nuclear Structure European Centre for Theoretical Studies in Nuclear Physics and Related Areas, Trento, Italy, July 2-6, 2007 [invited talk given by P. Piecuch].

166.** P. Piecuch, M. Włoch, J.R. Gour, J.J. Lutz, and A. Kinal, "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Applications to Radicals, Biradicals, and Bond Breaking," Twelfth European Workshop on Quantum Systems in Chemistry and Physics, QSCP-XII, London, U.K., August 30 - September 5, 2007 [invited talk given by P. Piecuch].

167.** P. Piecuch, M. Włoch, J.R. Gour, J.J. Lutz, and A. Kinal, "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Applications to Radicals, Biradicals, Reaction Pathways, and Photochemistry," "IXth International Conference on Molecular Spectroscopy: From Molecules to Molecular Biological Systems and Molecular Materials, Role of Molecular Interactions and Recognition," Wrocław – Lądek-Zdrój, Poland, September 13-18, 2007 [invited talk given by P. Piecuch].

168.** J.R. Gour, M. Włoch, and P. Piecuch, in collaboration with B.A. Brown, D.J. Dean, M. Hjorth-Jensen, M. Horoi, T. Papenbrock, and R. Roth, "Bridging Quantum Chemistry

and Nuclear Structure Theory: Coupled-Cluster Calculations for Closed- and Open-Shell Nuclei," 2nd Workshop on Nuclei and Mesoscopic Physics, WNMP07, Michigan State University, East Lansing, Michigan, U.S.A., October 20-22, 2007 [poster presented by J.R. Gour].

169.** J.R. Gour, P. Piecuch, and M. Włoch, "Active-Space Equation-of-Motion Coupled-Cluster Methods for Ground and Excited States of Radicals," 2nd Workshop on Nuclei and Mesoscopic Physics, WNMP07, Michigan State University, East Lansing, Michigan, U.S.A., October 20-22, 2007 [poster presented by J.R. Gour].

170.** M. Włoch, J.R. Gour, A. Kinal, and P. Piecuch, "Single-Reference, Size-Extensive, Non-Iterative Coupled-Cluster Approaches to Bond Breaking and Biradicals," 2nd Workshop on Nuclei and Mesoscopic Physics, WNMP07, Michigan State University, East Lansing, Michigan, U.S.A., October 20-22, 2007 [poster presented by J.R. Gour].

171.** J.J. Lutz, P. Piecuch, and A. Kinal, "Extrapolating Potential Energy Surfaces for the Isomerization of Bicyclo[1.1.0]butane to Buta-1,3-diene," 2nd Workshop on Nuclei and Mesoscopic Physics, WNMP07, Michigan State University, East Lansing, Michigan, U.S.A., October 20-22, 2007 [poster presented by J.J. Lutz].

172.** K. Park, P. Piecuch, S.M. Bachrach, T. Nagata, K. Song, and W.L. Hase, "Direct Dynamics Study of the Atomic-Level Mechanism for the Reaction of Cyclopentyne with Ethylene," 63rd Southwest Regional Meeting of the American Chemical Society, Lubbock, Texas, U.S.A., November 3-7, 2007 [poster contribution].

173.** Y. Ge, M.S. Gordon, P. Piecuch, Marta Włoch, and J.R. Gour, "Breaking Bonds of Open-Shell Species with the Restricted Open-Shell Size Extensive Left Eigenstate Completely Renormalized Coupled-Cluster Method," The symposium "Electronic Structure and Reaction Dynamics of Open-shell Species," 235th American Chemical Society National Meeting, New Orleans, Louisiana, U.S.A., April 6-10, 2008 [contributed talk given by Y. Ge].

174.** P. Piecuch, M. Włoch, and J.R. Gour, "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Extension to Open-Shell Systems," The symposium "Electronic Structure and Reaction Dynamics of Open-shell Species," 235th American Chemical Society National Meeting, New Orleans, Louisiana, U.S.A., April 6-10, 2008 [invited talk given by P. Piecuch].

175.** J.R. Gour and P. Piecuch, "Active-Space Equation-of-Motion Coupled-Cluster Methods for Ground and Excited States of Radicals and Other Open-Shell Species," The symposium "Electronic Structure and Reaction Dynamics of Open-shell Species," 235th American Chemical Society National Meeting, New Orleans, Louisiana, U.S.A., April 6-10, 2008 [poster given by J.R. Gour].

176.** J.R. Gour, M. Horoi, P. Piecuch, and B.A. Brown, "Coupled-Cluster and Configuration-Interaction Calculations for Odd-A Heavy Nuclei," The international conference "Nuclear Structure 2008" (NS2008), East Lansing, Michigan, U.S.A., June 3-6, 2008 [poster given by J.R. Gour].

177.** J.J. Lutz, and P. Piecuch, "Extrapolating Potential Energy Surfaces by Sclaing Electron Correlation: Isomerization of Bicyclobutane to Butadiene," 40th Midwest Theoretical Chemistry Conference, University of Michigan, Ann Arbor, Michigan, U.S.A., June 26-28, 2008 [poster presented by J.J. Lutz].

178.** W. Li, J.R. Gour, and P. Piecuch, "Local Correlation Calculations Using Cluster-In-Molecule Standard and Renormalized Coupled-Cluster Methods," 40th Midwest Theoretical Chemistry Conference, University of Michigan, Ann Arbor, Michigan, U.S.A., June 26-28, 2008 [poster presented by W. Li].

179.** J.J. Lutz, and P. Piecuch, "Extrapolating Potential Energy Surfaces by Sclaing Electron Correlation: Isomerization of Bicyclobutane to Butadiene," Thirteenth International Workshop on Quantum Systems in Chemistry and Physics, Michigan State University, East Lansing, Michigan, U.S.A., July 6-12, 2008 [poster presented by J.J. Lutz].

180.** W. Li, J.R. Gour, and P. Piecuch, "Local Correlation Calculations Using Cluster-In-Molecule Standard and Renormalized Coupled-Cluster Methods," Thirteenth International Workshop on Quantum Systems in Chemistry and Physics, Michigan State University, East Lansing, Michigan, U.S.A., July 6-12, 2008 [poster presented by W. Li].

181.** J.R. Gour, P. Piecuch, and M. Ehara "Active-Space Equation-of-Motion Coupled-Cluster Methods for Ground and Excited States of Radicals and Other Open-Shell Species," Thirteenth International Workshop on Quantum Systems in Chemistry and Physics, Michigan State University, East Lansing, Michigan, U.S.A., July 6-12, 2008 [poster presented by J.R. Gour].

182.** J.R. Gour, M. Włoch, and P. Piecuch, "Bridging Quantum Chemistry and Nuclear Structure Theory: Coupled-Cluster Calculations for Closed- and Open-Shell Nuclei," Thirteenth International Workshop on Quantum Systems in Chemistry and Physics, Michigan State University, East Lansing, Michigan, U.S.A., July 6-12, 2008 [poster presented by J.R. Gour].

183.** M. Włoch, P. Piecuch, and J.R. Gour, "Recent Developments and Applications of the Renormalized Coupled-Cluster Methods," Thirteenth International Workshop on Quantum Systems in Chemistry and Physics, Michigan State University, East Lansing, Michigan, U.S.A., July 6-12, 2008 [invited talk given by M. Włoch].

184.** W. Li, J.R. Gour, and P. Piecuch, "Local Correlation Calculations Using Cluster-In-Molecule Standard and Renormalized Coupled-Cluster Methods," The 2008 American Conference on Theoretical Chemistry, Northwestern University, Evanston, Illinois, U.S.A., July 19-24, 2008 [poster presented by W. Li].

185.** P. Piecuch, M. Włoch, J.R. Gour,and W. Li, "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Extension to Open-Shell and Large Systems," Sixth Congress of the International Society for Theoretical Chemical Physics (ICTCP-VI), Vancouver, British Columbia, Canada, July 19-24, 2008. [invited plenary talk given by P. Piecuch].

186.** P. Piecuch, "Coupled-Cluster Theory: A Brief Overview of Modern Methods and Applications to Nuclear Structure," the WE-Heraeus-Seminar "Ab-Initio Nuclear Structure -

Where do we stand?", Bad Honnef, Germany, July 28-30, 2008 [invited talk given by P. Piecuch].

187.** J.R. Gour, P. Piecuch, and M. Ehara, "Active-Space Equation-of-Motion Coupled-Cluster Methods for Ground and Excited States of Radicals and Other Open-Shell Systems," Eighth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2008), Sydney, Australia, September 14-19, 2008 [poster presented by J.R. Gour].

188.** J.J. Lutz and P. Piecuch, "Extrapolating Potential Energy Surfaces by Scaling Electron Correlation: Isomerization of Bicyclobutane to Butadiene," Eighth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2008), Sydney, Australia, September 14-19, 2008 [poster presented by J.J. Lutz].

189.** P. Piecuch, M. Włoch, J.R. Gour, and W. Li, "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Extension to Open-Shell and Large Systems," 8th World Congress of Theoretically Oriented Chemists (WATOC08), Eighth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2008), Sydney, Australia, September 14-19, 2008 [invited lecture given by P. Piecuch].

190.** W. Li, P. Piecuch, and J.R. Gour, "Local Correlation Calculations Using Cluster-In-Molecule Standard and Renormalized Coupled-Cluster Methods," 8th World Congress of Theoretically Oriented Chemists (WATOC08), Eighth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2008), Sydney, Australia, September 14-19, 2008 [poster presented by P. Piecuch].

191.** P. Piecuch, W. Li, J.R. Gour, and M. Włoch, "Renormalized Coupled-Cluster Methods: Theoretical Foundations and Extension to Open-Shell and Large Systems," The International Conference "Theory and Applications of Computational Chemistry 2008 (TACC 2008)," Shanghai, China, September 23-27, 2008 [invited plenary lecture given by P. Piecuch].

192.** J.J. Lutz and P. Piecuch, "Extrapolating Potential Energy Surfaces by Scaling Electron Correlation: Isomerization of Bicyclobutane to Butadiene," Symposium to Honor Professor Peter Wagner in Celebration of his Career and 70th Birthday, Michigan State University, East Lansing, Michigan, U.S.A., October 10-11, 2008 [poster presented by J.J. Lutz].

193.** W. Li, P. Piecuch, and J.R. Gour, "Local Correlation Calculations Using Cluster-In-Molecule Standard and Renormalized Coupled-Cluster Methods," Symposium to Honor Professor Peter Wagner in Celebration of his Career and 70th Birthday, Michigan State University, East Lansing, Michigan, U.S.A., October 10-11, 2008 [poster presented by W. Li].

194.** P. Piecuch, W. Li, and J.R. Gour, "Local Correlation Calculations Using Standard and Renormalized Coupled-Cluster Methods," Focus Session "The Chemical Physics of Biological and Biologically-Inspired Solar Energy Harvesting III," the 2009 American Physical Society March Meeting, Pittsburgh, Pennsylvania, U.S.A., March 16-20, 2009 [associated with the award of Fellowship of APS; contributed talk given by P. Piecuch].

195.** P. Piecuch, W. Li, J.J. Lutz, and J.R. Gour, "Extending Electronic Structure Theory to Complex Molecular Problems: Local Correlation Coupled-Cluster and Correlation Energy Scaling Methodologies," The symposium "Advances in Electronic Structure Theory and First Principles Dynamics," 237th American Chemical Society National Meeting, Salt Lake City, Utah, U.S.A., March 22-26, 2009 [invited talk given by P. Piecuch].

196.** P. Piecuch, "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States," 30th Annual Combustion Research Meeting, Airlie Conference Center, Warrenton, Virginia, U.S.A., May 26-29, 2009 [invited talk given by P. Piecuch].

197.** M. Włoch, P. Piecuch, and J.R. Gour, "Recent Developments and Applications of the Renormalized Coupled-Cluster Methods," 92nd Canadian Chemistry Conference and Exhibition, Hamilton, Ontario, Canada, May 30 - June 3, 2009 [invited talk given by M. Włoch].

198.** P. Piecuch, "Coupled-Cluster Theory: From Quantum Chemistry to Applications in Nuclear Physics," International Workshop "Linking Nuclei, Molecules, and Condensed Matter: Computational Quantum Many-Body Approaches," European Centre for Theoretical Studies in Nuclear Physics and Related Areas, Trento, Italy, July 6-10, 2009 [invited talk given by P. Piecuch].

199.** P. Piecuch, J.R. Gour, W. Li, M. Włoch, and K. Kowalski, "Dealing with Strong Electron Correlations in Quantum Chemistry via Renormalized, Active-Space, and Multi-Reference Coupled-Cluster Methods," The symposium "New Developments in Strongly Correlated Electrons," 238th American Chemical Society National Meeting, Washington, DC, U.S.A., August 16-20, 2009 [invited talk given by P. Piecuch].

200.** P. Piecuch, W. Li, J.J. Lutz, and J.R. Gour, "Extending Electronic Structure Theory to Complex Molecular Problems: Local Correlation Coupled-Cluster and Correlation Energy Scaling Methodologies," Fourteenth International Workshop on Quantum Systems in Chemistry and Physics, QSCP-XIV, San Lorenzo de El Escorial, Madrid, Spain, September 13-19, 2009 [invited talk given by P. Piecuch].

201.** J.R. Gour and P. Piecuch, "Active-Space Electron-Attached and Ionized Equation-of-Motion Coupled-Cluster Methods," Fourteenth International Workshop on Quantum Systems in Chemistry and Physics, QSCP-XIV, San Lorenzo de El Escorial, Madrid, Spain, September 13-19, 2009 [invited talk given by J.R. Gour].

202.** P. Piecuch, J.R. Gour, W. Li, M. Włoch, and K. Kowalski, "Dealing with Strong Electron Correlations in Quantum Chemistry via Renormalized, Active Space, and Multireference Coupled-Cluster Methods," An International Symposium "Recent Advances in Many Electron Theories," Shankarpur, West Bengal, India, January 5-7, 2010 [invited talk given by P. Piecuch].

203.** P. Piecuch and W. Li, "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," the 50th Sanibel Symposium, St. Simons Island, Georgia, U.S.A., February 24-March 2, 2010 [invited talk given by P. Piecuch].

204.** P. Piecuch and W. Li, "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," International conference "Molecular Quantum Mechanics: From Methylene to DNA and Beyond" honoring Professor Henry F. Schaefer's work, University of California at Berkeley, Berkeley, California, U.S.A., May 24-29, 2010 [invited talk given by P. Piecuch].

205.** P. Piecuch and W. Li, "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," 17th Canadian Symposium on Theoretical Chemistry, Edmonton, Alberta, Canada, July 25-30, 2010 [invited talk given by P. Piecuch].

206.** P. Piecuch and W. Li, "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," Fifteenth International Workshop on Quantum Systems in Chemistry and Physics, QSCP-XV, Magdalene College, Cambridge University, Cambridge, U.K., August 31 - September 5, 2010 [invited talk given by P. Piecuch].

207.** P. Piecuch, J. R. Gour, M. Włoch, J. J. Lutz, and W. Li, "Dealing with Chemical Reaction Pathways and Electronic Excitations in Molecular Systems via Renormalized and Active-Space Coupled-Cluster Methods," 18th European Conference on Dynamics of Molecular Systems, MOLEC XVIII, Curia, Portugal, September 5-10, 2010 [invited talk given by P. Piecuch].

208.** P. Piecuch and W. Li, "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," 9th Central European Symposium on Theoretical Chemistry, CESTC 2010, Nový Smokovec, Slovakia, September 12-15, 2010 [invited talk given by P. Piecuch].

209.** P. Piecuch, M. Włoch, J.R. Gour, and W. Li, "Dealing with Chemical Reaction Pathways and Electronic Excitations in Molecular Systems via Renormalized and Active-Space Coupled-Cluster Methods," 8th International Conference of Computational Methods in Sciences and Engineering (ICCMSE 2010), symposium "Methods in Quantum Chemistry" in honor of Jiri Čížek and Josef Paldus, Kos, Greece, October 3-8, 2010 [invited featured lecture, given by P. Piecuch].

210.** P. Piecuch and W. Li, "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," The symposium "Fragment and Local Orbital Methods in Electronic Structure Theory," 241st American Chemical Society National Meeting, Anaheim, California, U.S.A., March 27-31, 2011 [invited talk given by P. Piecuch].

211.** J.A. Hansen, P. Piecuch, J.J. Lutz, and J.R. Gour, "Geometries and Adiabatic Excitation Energies of the Low-Lying States of CNC, C_2N, N_3, and NCO Studied with the Electron-Attached and Ionized Equation-of-Motion Coupled-Cluster Methodologies," Poster session associated with the 2011 Max T. Rogers lectureship, Department of Chemistry, Michigan State University, East Lansing, Michigan, U.S.A., April 6-7, 2011 [poster presented by J.A. Hansen].

212.** J.J. Lutz, G. Fradelos, T.A. Wesołowski, P. Piecuch, and M. Włoch, "Embedding vs Supermolecular Strategies in Evaluating the Hydrogen-Bonding-Induced Shifts of Excitation Energies," Poster session associated with the 2011 Max T. Rogers lectureship, Department of Chemistry, Michigan State University, East Lansing, Michigan, U.S.A., April 6-7, 2011 [poster presented by J.J. Lutz].

213.** W. Li, P. Piecuch, and S. Li, "The Electronic Correlation Method for Large Molecules and its Application in Chemical Reactions," the 11th National Conference of Quantum Chemistry of China, Hefei, China, May 27-30, 2011 [oral contribution presented by W. Li].

214.** P. Piecuch and W. Li, "Local Correlation Coupled-Cluster Methods Exploiting Cluster-In-Molecule Ansatz and their Multi-Level Generalizations," 11th Annual CERMM Symposium, Centre for Research in Molecular Modeling, Concordia University, Montreal, Canada, June 4-5, 2011 [invited keynote lecture given by P. Piecuch].

215.** P. Piecuch, W. Li, J. Shen, J.J. Lutz, and M. Włoch, "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," 94th Canadian Chemistry Conference and Exhibition, General Physical, Theoretical, and Computational Chemistry Session, Montreal, Canada, June 5-9, 2011 [invited lecture given by P. Piecuch].

216.** J.A. Hansen, P. Piecuch, J.J. Lutz, and J.R. Gour, "Geometries and Adiabatic Excitation Energies of the Low-Lying States of CNC, C_2N, N_3, and NCO Studied with the Electron-Attached and Ionized Equation-of-Motion Coupled-Cluster Methodologies," 43rd Midwest Theoretical Chemistry Conference, University of Notre Dame, Indiana, U.S.A., June 9-11, 2011 [poster presented by J.A. Hansen].

217.** J.J. Lutz, G. Fradelos, T.A. Wesołowski, P. Piecuch, and M. Włoch, "Embedding vs Supermolecular Strategies in Evaluating the Hydrogen-Bonding-Induced Shifts of Excitation Energies," 43rd Midwest Theoretical Chemistry Conference, University of Notre Dame, Indiana, U.S.A., June 9-11, 2011 [oral contribution presented by J.J. Lutz].

218.** J. Shen and P. Piecuch, "Merging Active-Space and Renormalized Coupled-Cluster Methods," 43rd Midwest Theoretical Chemistry Conference, University of Notre Dame, Indiana, U.S.A., June 9-11, 2011 [poster presented by J. Shen].

219.** G.R. Magoon, J. Aguilera-Iparraguirre, B. Ruiz-Yi, W.H. Green, O.O. Oluwole, D.K. Lewis, H.-W. Wong, S.E. Albo, J.J. Lutz, and P. Piecuch, "Advanced Development of a Highly Detailed Elementary Combustion Reaction Mechanism for JP-10 (Exotetrahydrodicyclopentadiene)," The 7th International Conference on Chemical Kinetics, Massachusetts Institute of Technology, Cambridge, Massachusetts, U.S.A., July 10-14, 2011 [oral contribution presented by G.R. Magoon].

220.** P. Piecuch and W. Li, "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems and their Multi-Level Generalizations," Ninth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2011), Santiago de Compostela, Spain, July 17-22, 2011 [invited talk given by P. Piecuch].

221.** J.J. Lutz and P. Piecuch, "Performance of Completely Renormalized Equation-Of-Motion Coupled-Cluster Methods on Excited-State Potential Energy Curves for the Dissociation of Water," Ninth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2011), Santiago de Compostela, Spain, July 17-22, 2011 [oral contribution presented by J.J. Lutz].

222.** P. Piecuch, W. Li, J. Shen, J.R. Gour, J.J. Lutz, and M. Włoch, "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," WATOC 2011 Satellite Conference "Strongly Correlated Systems, Cooperativity, and Valence-Bond Theory," A Coruña, Spain, July 23-24, 2011 [invited talk given by P. Piecuch].

223.** J.A. Hansen, P. Piecuch, J.J. Lutz, and J.R. Gour, "Geometries and Adiabatic Excitation Energies of the Low-Lying States of CNC, C_2N, N_3, and NCO Studied with the Electron-Attached and Ionized Equation-of-Motion Coupled-Cluster Methodologies," WATOC 2011 Satellite Conference "Strongly Correlated Systems, Cooperativity, and Valence-Bond Theory," A Coruña, Spain, July 23-24, 2011 [poster presented by J.J. Lutz].

224.** P. Piecuch, W. Li, J. Shen, J.J. Lutz, J.R. Gour, J.A. Hansen, and M. Włoch, "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," The symposium "Reduced Density Matrices in Quantum Chemistry," 242nd American Chemical Society National Meeting, Denver, Colorado, U.S.A., August 28 - September 1, 2011 [invited talk given by P. Piecuch].

225.** P. Piecuch and W. Li, "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems and their Multi-Level Generalizations," The symposium "Quantum Chemistry: Methodology," 242nd American Chemical Society National Meeting, Denver, Colorado, U.S.A., August 28 - September 1, 2011 [talk given by P. Piecuch].

226.** P. Piecuch, G. Fradelos, J.J. Lutz, T.A. Wesołowski, and M. Włoch, "Shifts in Excitation Energies Induced by Hydrogen Bonding: A Comparison of the Embedding and Supermolecular Time-Dependent Density Functional Theory Calculations with the Equation-of-Motion Coupled-Cluster Results," The symposium "Quantum Chemistry: DFT," 242nd American Chemical Society National Meeting, Denver, Colorado, U.S.A., August 28 - September 1, 2011 [talk given by P. Piecuch].

227.** P. Piecuch and W. Li, "Local Coupled-Cluster Methods for Chemical Reaction Pathways Involving Large Molecular Systems and their Multi-Level Generalizations," Seventh Congress of the International Society for Theoretical Chemical Physics (ICTCP-VII), Tokyo, Japan, September 2-8, 2011 [invited talk given by P. Piecuch].

228.** W. Li, P. Piecuch, and S. Li, "Multi-level Extension of the Cluster-In-Molecule Method for the Chemical Reactions of Large Molecules," Seventh Congress of the International Society for Theoretical Chemical Physics (ICTCP-VII), Tokyo, Japan, September 2-8, 2011 [poster presented by W. Li].

229.** G. Fradelos, J.J. Lutz, T.A. Wesołowski, P. Piecuch, and M. Włoch, "Embedding vs Supermolecular Strategies in Evaluating the Hydrogen-Bonding-Induced Shifts of Excitation Energies," Fall 2011 Meeting and General Assembly of the Swiss Chemical Society, Lausanne, Switzerland, September 9, 2011 [poster presented by G. Fradelos].

230.** P. Piecuch, J. Shen, M. Włoch, J.J. Lutz, J.R. Gour, and W. Li, "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," XVI-th International Workshop on Quantum Systems in Chemistry and Physics, QSCP-XVI, Kanazawa, Japan, September 11-17, 2011 [invited talk given by P. Piecuch].

231.** J.A. Hansen, P. Piecuch, J.J. Lutz, and J.R. Gour, "Geometries and Adiabatic Excitation Energies of the Low-Lying States of CNC, C_2N, N_3, and NCO Studied with the Electron-Attached and Ionized Equation-of-Motion Coupled-Cluster Methodologies," Midwestern Symposium on Undergraduate Research in Chemistry, Department of Chemistry, Michigan State University, East Lansing, Michigan, U.S.A., October 7-8, 2011 [poster presented by J.A. Hansen].

232.** N.P. Bauman, P. Piecuch, P.M. Kozłowski, M. Kumar, W. Li, and J.A. Hansen, "Effect of Basis Set on the Cobalt-Methyl Bond Dissociation in Molecular Models of Methyl-Cob(III)alamin Studied with Completely Renormalized Coupled-Cluster Approaches," Midwestern Symposium on Undergraduate Research in Chemistry, Department of Chemistry, Michigan State University, East Lansing, Michigan, U.S.A., October 7-8, 2011 [poster presented by N.P. Bauman].

233.** P. Piecuch, J. Shen, W. Li, J.J. Lutz, M. Włoch, N.P. Bauman, J.A. Hansen, and J.R. Gour, "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," An International Symposium "Recent Advances in Many Electron Theories II, 2011," Puri, Orissa, India, December 1-4, 2011 [invited talk given by P. Piecuch].

234.** P. Piecuch, J. Shen, and W. Li, "Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods," The Fifth Asian Pacific Conference of Theoretical and Computational Chemistry (APCTCC 2011), Rotorua, New Zealand, December 9-13, 2011 [invited talk given by P. Piecuch].

235.** P. Piecuch, "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States (Recent Advances in Renormalized and Active-Space Coupled-Cluster Methods)," 33rd Annual Combustion Research Meeting, Bolger Center, Potomac, Maryland, U.S.A., May 29 - June 1, 2012 [invited talk given by P. Piecuch].

236.** W. Li, P. Piecuch, Y. Guo, and S. Li, "Cluster-in-Molecule Local Correlation Approach for Chemical Reactions and the Relative Energies of Large Systems," "Low-Scaling and Unconventional Electronic Structure Techniques (LUEST)" Conference, A Satellite Symposium to the 14th International Congress of Quantum Chemistry, Telluride, Colorado, U.S.A., June 18-22, 2012 [poster presented by W. Li].

237.** J. Shen and P. Piecuch, "Combining Active-Space Coupled-Cluster Methods with Moment Energy Corrections via the CC($P;Q$) Methodology, with Benchmark Calculations for Bond Breaking, Transition States, and Singlet-Triplet Gaps in Biradical Systems," 14th International Congress of Quantum Chemistry, Boulder, Colorado, U.S.A., June 25-30, 2012 [poster presented by J. Shen].

238.** J.A. Hansen, N.P. Bauman, J. Shen, W.T. Borden, and P. Piecuch, "Low-Lying Electronic States of 1,2,3,4-Cyclobutanetetraone," 14th International Congress of Quantum Chemistry, Boulder, Colorado, U.S.A., June 25-30, 2012 [poster presented by J.A. Hansen].

239.** P.M. Kozlowski, M. Kumar, P. Piecuch, W. Li, N.P. Bauman, J.A. Hansen, P. Lodowski, and M. Jaworska, "The Cobalt-Methyl Bond Dissociation in Methylcobalamin: New Benchmark Analysis Based on Density Functional Theory and Completely Renormalized Coupled-Cluster Calculations," 14th International Congress of Quantum Chemistry, Boulder, Colorado, U.S.A., June 25-30, 2012 [poster presented by P. Piecuch].

240.** N.P. Bauman, P. Piecuch, P.M. Kozlowski, M. Kumar, and J.A. Hansen, "Effect of Basis Set on the Cobalt-Methyl Bond Dissociation in Molecular Models of Methylcobalamin Studied with Completely Renormalized Coupled-Cluster Calculations," 14th International Congress of Quantum Chemistry, Boulder, Colorado, U.S.A., June 25-30, 2012 [poster presented by N.P. Bauman].

241.** P. Piecuch, J. Shen, W. Li, J.R. Gour, J.J. Lutz, M. Włoch, J.A. Hansen, and N.P. Bauman, "Recent Progress in Renormalized and Active-Space Coupled-Cluster Methods," The symposium "Coupled-Cluster Theory and Related Methods," A Satellite Symposium to the 14th International Congress of Quantum Chemistry, Boulder, Colorado, U.S.A., July 1-3, 2012 [invited talk given by P. Piecuch].

242.** P. Piecuch and W. Li, "Multi-level Extensions of the Cluster-in-Molecule Local Correlation Methodology Aimed at Chemical Reaction Pathways Involving Large Molecular Systems," The symposium "Bridging the Gap between *Ab Initio* and Classical Simulations," 244th American Chemical Society National Meeting, Philadelphia, Pennsylvania, U.S.A., August 19-23, 2012 [invited talk given by P. Piecuch].

243.** P. Piecuch and J. Shen, "Combining Active-Space Coupled-Cluster Methods with Moment Energy Corrections via the CC($P;Q$) Methodology, with Benchmark Calculations for Bond Breaking and Biradical Transition States," The symposium "Exploring Potential Energy Surfaces in Quantum Chemistry: A Tribute to H. Bernhard Schlegel," 244th American Chemical Society National Meeting, Philadelphia, Pennsylvania, U.S.A., August 19-23, 2012 [invited talk given by P. Piecuch].

244.** J. Shen and P. Piecuch, "Combining Active-Space Coupled-Cluster Methods with Moment Energy Corrections via the CC($P;Q$) Methodology, with Benchmark Calculations for Bond Breaking, Transition States, and Singlet-Triplet Gaps in Biradical Systems," Midwestern Symposium on Undergraduate Research in Chemistry, Department of Chemistry, Michigan State University, East Lansing, Michigan, U.S.A., October 5-6, 2012 [poster presented by J. Shen].

245.** J.A. Hansen, N.P. Bauman, J. Shen, W.T. Borden, and P. Piecuch, "Low-Lying Electronic States of 1,2,3,4-Cyclobutanetetraone," Midwestern Symposium on Undergraduate Research in Chemistry, Department of Chemistry, Michigan State University, East Lansing, Michigan, U.S.A., October 5-6, 2012 [poster presented by J.A. Hansen].

246.** P.M. Kozlowski, M. Kumar, P. Piecuch, W. Li, N.P. Bauman, J.A. Hansen, P. Lodowski, and M. Jaworska, "The Cobalt-Methyl Bond Dissociation in Methylcobalamin: New Benchmark Analysis Based on Density Functional Theory and Completely Renormalized Coupled-Cluster Calculations," Midwestern Symposium on Undergraduate Research in Chemistry, Department of Chemistry, Michigan State University, East Lansing, Michigan, U.S.A., October 5-6, 2012 [poster presented by N.P. Bauman].

247.** P. Piecuch, "Accurate Characterization of Reaction Pathways Relevant to Combustion and Electronic Excitations in Radicals and Biradicals via Renormalized and Active-Space Coupled-Cluster Theories, their Merger, and Open-Shell Extensions," The symposium on Combustion Chemistry, 245th American Chemical Society National Meeting, New Orleans, Lousiana, U.S.A., April 7-11, 2013 [invited talk given by P. Piecuch].

248.** P. Piecuch and J. Shen, "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," The symposium "Quantum Chemistry: Methodology," 245th American Chemical Society National Meeting, New Orleans, Lousiana, U.S.A., April 7-11, 2013 [talk given by P. Piecuch].

249.** P. Piecuch, P.M. Kozłowski, P. Lodowski, M. Jaworska, W. Li, N. Kumar, K. Kornobis, and N.P. Bauman, "The Cobalt-Methyl Dissociation and Electronic Transitions in Methylcobalamin: Insights from the Coupled-cluster, Multireference Perturbation Theory, and Density Functional Theory Calculations," The symposium "Bioinorganic Chemistry: Proteins and Enzymes and Model Systems," 245th American Chemical Society National Meeting, New Orleans, Lousiana, U.S.A., April 7-11, 2013 [talk given by P. Piecuch].

250.** P. Piecuch, W. Li, N.P. Bauman, J.A. Hansen, P.M. Kozłowski, M. Kumar, P. Lodowski, and M. Jaworska, "The Cobalt–Methyl Bond Dissociation in Methylcobalamin: New Benchmark Analysis Based on Density Functional Theory and Completely Renormalized Coupled-Cluster Calculations," 45th Midwest Theoretical Chemistry Conference, University of Illinois at Urbana-Champaign, Illinois, U.S.A., May 29-31, 2013 [poster presented by N.P. Bauman].

251.** J.A. Hansen, P. Piecuch, D. Staedter, S. Faure, and V. Blanchet, "Existence of the Doubly Excited State that Mediates the Photoionization of Azulene," 45th Midwest Theoretical Chemistry Conference, University of Illinois at Urbana-Champaign, Illinois, U.S.A., May 29-31, 2013 [contributed talk presented by J.A. Hansen].

252.** P. Piecuch and J. Shen, "Recent Progress in the Active-Space Electron-Attached and Ionized Equation-of-Motion Coupled-Cluster Methodologies," 7th International Conference "Molecular Quantum Mechanics" entitled "Electron Correlation: The Many-Body Problem at the Heart of Chemistry," in honor of Professor Rodney J. Bartlett, Lugano, Switzerland, June 2-7, 2013 [invited talk given by P. Piecuch].

253.** P. Piecuch and J. Shen, "Recent Progress in the Active-Space Electron-Attached and Ionized Equation-of-Motion Coupled-Cluster Methodologies," Eighth Congress of the International Society for Theoretical Chemical Physics (ISTCP-VIII), Budapest, Hungary, August 25-31, 2013 [invited talk given by P. Piecuch].

254.** P. Piecuch, J. Shen, N.P. Bauman, and J.A. Hansen, "Single-Reference Coupled-Cluster Methods for Multi-Reference Molecular Problems," 6th Conference "Current Trends in Theoretical Chemistry" (CTTC VI), Cracow, Poland, September 1-5, 2013 [invited talk given by P. Piecuch].

255.** J.A. Hansen, M. Ehara, and P. Piecuch, "Aerobic Oxidation of Methanol on Au_8^- Cluster by the CR-CC(2,3) and DFT Calculations," The 7th Annual Meeting of Japan Society for Molecular Science, Kyoto, Japan, September 24-27, 2013 [talk given by M. Ehara].

256.** J.A. Hansen, N.P. Bauman, J. Shen, W.T. Borden, and P. Piecuch, "Low-Lying Electronic States of 1,2,3,4-Cyclobutanetetraone," Midwestern Symposium on Undergraduate Research in Chemistry, Department of Chemistry, Michigan State University, East Lansing, Michigan, U.S.A., October 4-5, 2013 [poster presented by J.A. Hansen].

257.** P.M. Kozłowski, M. Kumar, P. Piecuch, W. Li, N.P. Bauman, J.A. Hansen, P. Lodowski, and M. Jaworska, "The Cobalt-Methyl Bond Dissociation in Methylcobalamin: New Benchmark Analysis Based on Density Functional Theory and Completely Renormalized Coupled-Cluster Calculations," Midwestern Symposium on Undergraduate Research in Chemistry, Department of Chemistry, Michigan State University, East Lansing, Michigan, U.S.A., October 4-5, 2013 [poster presented by N.P. Bauman].

258.** P. Piecuch, J.A. Hansen, V. Blanchet, P.M. Kozłowski, and N. Kumar, "Understanding Photochemistry and Photo-ionization Dynamics with Highly Correlated Electronic Structure Methods: Two Examples that Highlight the Transformative Role of Theory in the Interpretation of Experimental Observations," XVIII-th International Workshop on Quantum Systems in Chemistry, Physics, and Biology (QSCP-XVIII), Paraty (Rio de Janeiro), Brazil, December 1-7, 2013 [invited talk given by P. Piecuch].

259.** P. Piecuch, J.A. Hansen, V. Blanchet, P.M. Kozłowski, and N. Kumar, "Understanding Photochemistry and Photo-ionization Dynamics with Highly Correlated Electronic Structure Methods: Two Examples that Highlight the Transformative Role of Theory in the Interpretation of Experimental Observations," The symposium "A Little Insight Goes a Long Way," 247th American Chemical Society National Meeting, Dallas, Texas, U.S.A., March 16-20, 2014 [invited talk given by P. Piecuch].

260.** P. Piecuch, J. Shen, and N.P. Bauman, "Combining Active-Space Coupled-Cluster Approaches with Moment Energy Corrections via the CC(P;Q) Methodology: Connected Triple and Quadruple Excitations," The symposium "Quantum Chemistry: Methodology," 247th American Chemical Society National Meeting, Dallas, Texas, U.S.A., March 16-20, 2014 [talk given by P. Piecuch].

261.** P. Piecuch, J.A. Hansen, M. Ehara, and B.G. Levine, "Utility of New Generations of Coupled-Cluster Methods and Algorithms in Catalytic and Structural Properties of Gold Nanoparticles," The symposium "Quantum Chemistry: Applications," 247th American Chemical Society National Meeting, Dallas, Texas, U.S.A., March 16-20, 2014 [talk given by P. Piecuch].

262.** P. Piecuch, W. Li, N.P. Bauman, J.A. Hansen, P.M. Kozłowski, P. Lodowski, M. Jaworska, M. Kumar, K. Kornobis, and N. Kumar, "The Cobalt-Methyl Dissociation and Electronic Transitions in Methylcobalamin: Insights from Coupled-Cluster, Multireference Perturbation Theory, and Density Functional Theory Calculations," A Symposium on Chemistry and Applications of Advanced Materials in Recognition of Thomas J. Pinnavaia's 47-year MSU Career, Michigan State University, East Lansing, Michigan, U.S.A., May 10, 2014 [poster presented by N.P. Bauman].

263.** J. Shen, N.P. Bauman, and P. Piecuch, "Combining Active-Space Coupled-Cluster Methods with Moment Energy Corrections via the CC(P;Q) Methodology, with Benchmark Calculations for Bond Breaking, Transition States, and Singlet-Triplet Gaps in Biradical Systems," A Symposium on Chemistry and Applications of Advanced Materials in

Recognition of Thomas J. Pinnavaia's 47-year MSU Career, Michigan State University, East Lansing, Michigan, U.S.A., May 10, 2014 [poster presented by N.P. Bauman].

264.** J. Shen and P. Piecuch, "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," A Symposium on Chemistry and Applications of Advanced Materials in Recognition of Thomas J. Pinnavaia's 47-year MSU Career, Michigan State University, East Lansing, Michigan, U.S.A., May 10, 2014 [poster presented by J. Shen and P. Piecuch].

265.** N.P. Bauman, J. Shen, and P. Piecuch, "Combining Active-Space Coupled-Cluster Approaches with Moment Energy Corrections via the CC(P;Q) Methodology: Connected Triple and Quadruple Excitations," The 2014 American Conference on Theoretical Chemistry (ACTC 2014), Telluride, Colorado, U.S.A., July 20-25, 2014 [poster presented by N.P. Bauman].

266.** J. Shen and P. Piecuch, "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," The 2014 American Conference on Theoretical Chemistry (ACTC 2014), Telluride, Colorado, U.S.A., July 20-25, 2014 [poster presented by J. Shen].

267.** P. Piecuch, J. Shen, N.P. Bauman, and J.A. Hansen, "Single-Reference Coupled-Cluster Methods for Multi-Reference Molecular Problems," Nordita program on "Computational Challenges in Nuclear and Many-Body Physics," Stockholm, Sweden, September 15 - October 10, 2014 [invited talk given by P. Piecuch].

268.** P. Piecuch, J. Shen, and N.P. Bauman, "Combining Active-Space Coupled-Cluster Approaches with Moment Energy Corrections via the CC(P;Q) Methodology," Tenth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2014), Santiago, Chile, October 5-10, 2014 [invited talk given by P. Piecuch].

269.** P. Piecuch and J. Shen, "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," Tenth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2014), Santiago, Chile, October 5-10, 2014 [poster presented by P. Piecuch].

270.** P. Piecuch, J. Shen, and N.P. Bauman, "Combining Active-Space Coupled-Cluster Approaches with Moment Energy Corrections via the CC(P;Q) Methodology," The Fourteenth Theoretical Chemistry Symposium (TCS 2014), Pune, India, December 18-21, 2014 [invited keynote lecture given by P. Piecuch].

271.** P. Piecuch, J.A. Hansen, and N.P. Bauman, "Understanding Photochemistry and Photoelectron Spectra with Highly Correlated Electronic Structure Methods Based on Coupled-Cluster Theory," The symposium "Modeling Excited States of Complex Systems," 249th American Chemical Society National Meeting, Denver, Colorado, U.S.A., March 22-26, 2015 [invited talk given by P. Piecuch].

272.** P. Piecuch, J.A. Hansen, and M. Ehara, "Aerobic Oxidation of Methanol to Formic Acid on Au_8^-: Benchmark Analysis Based on Completely Renormalized Coupled-Cluster and Density Functional Theory Calculations," The symposium "Computational Chemical Dynamics: Advancing Our Understanding of Chemical Processes in Gas-Phase,

Biomolecular and Condensed-Phase Systems," 249th American Chemical Society National Meeting, Denver, Colorado, U.S.A., March 22-26, 2015 [talk given by P. Piecuch].

273.** P. Piecuch, J. Shen, and N.P. Bauman, "Combining Active-Space Coupled-Cluster Approaches with Moment Energy Corrections via the CC(P;Q) Methodology: Ground and Excited States," The symposium "Quantum Chemistry: Methodology," 249th American Chemical Society National Meeting, Denver, Colorado, U.S.A., March 22-26, 2015 [talk given by P. Piecuch].

274.** P. Piecuch, "Molecular Systems from the Equation-of-Motion Coupled-Cluster Theory" or "Understanding Electronic Excitation, Multi-Photon Ionization, and Photo-Electron Spectra with the Equation-of-Motion Coupled-Cluster Theory," Workshop of the Espace de Structure Nucléaire Théorique on "Near-Degenerate Systems in Nuclear Structure and Quantum Chemistry from Ab-Initio Many-Body Methods," CEA Saclay, France, March 30 - April 2, 2015 [invited talk given by P. Piecuch].

275.** J. Shen, N.P. Bauman, and P. Piecuch, "Combining Active-Space Coupled-Cluster Methods with Moment Energy Corrections via the CC(P;Q) Methodology, with Benchmark Calculations for Bond Breaking, Transition States, and Singlet-Triplet Gaps in Biradical Systems," Graduate Students Symposium Co-Sponsored by the Dow Chemical Company and the MSU ACS Local Section, Michigan State University, East Lansing, Michigan, U.S.A., April 24, 2015 [poster presented by N.P. Bauman].

276.** P. Piecuch, J. Shen, N.P. Bauman, and J.A. Hansen, "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems," The symposium "Recent Advances in Electronic Structure Theory (RAEST2015)," A Satellite Symposium to the 15th International Congress of Quantum Chemistry, Nanjing, China, June 1-6, 2015 [invited talk given by P. Piecuch].

277.** A.O. Ajala, J.A. Hansen, and P. Piecuch, "Benchmarking the Renormalized Equation-of-Motion Coupled-Cluster Approaches for Vertical Excitation Energies," 47th Midwest Theoretical Chemistry Conference, University of Michigan, Ann Arbor, Michigan, U.S.A., June 26–28, 2015 [poster presented by A.O. Ajala].

278.** N.P. Bauman, J.A. Hansen, P. Piecuch, and M. Ehara, "Coupled-Cluster Interpretation of the Photoelectron Spectra of Ag_3^- and Au_3^-," 47th Midwest Theoretical Chemistry Conference, University of Michigan, Ann Arbor, Michigan, U.S.A., June 26–28, 2015 [contributed talk given by N.P. Bauman].

279.** J.A. Hansen, P. Piecuch, and J. Shen, "Completely Renormalized Coupled-Cluster Calculations for Bond Breaking Using Unrestricted Hartree-Fock References," 47th Midwest Theoretical Chemistry Conference, University of Michigan, Ann Arbor, Michigan, U.S.A., June 26–28, 2015 [contributed talk given by J.A. Hansen].

280.** J. Shen, N.P. Bauman, and P. Piecuch, "Combining Active-Space Coupled-Cluster Approaches with Moment Energy Corrections via the CC(P;Q) Methodology: Ground and Excited States," 47th Midwest Theoretical Chemistry Conference, University of Michigan, Ann Arbor, Michigan, U.S.A., June 26–28, 2015 [poster presented by J. Shen].

281.** P. Piecuch, J. Shen, and N.P. Bauman, "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Theories for High-Accuracy *Ab Initio* Computations of Chemical Reaction Profiles Involving Biradical Transition States and Electronic Spectra of Radical and Polyradical Species," The symposium "From Diradicals and Polyradicals to Functionalized Materials: Theory Meets Experiment," 250th American Chemical Society National Meeting, Boston, Massachusetts, U.S.A., August 16-20, 2015 [invited talk given by P. Piecuch].

282.** P. Piecuch, J.A. Hansen, N.P. Bauman, and M. Ehara, "Utility of New Generations of Coupled-Cluster Methods and Algorithms in Catalytic, Structural, and Optical Properties of Gold Nanoparticles," The symposium "Interplay between Theory and Experiment in Catalytic Research," the 2015 International Chemical Congress of Pacific Basin Societies (Pacifichem 2015), Honolulu, Hawaii, U.S.A., December 15-20, 2015 [invited talk given by P. Piecuch].

283.** P. Piecuch, N.P. Bauman, and J.A. Hansen, "Coupled-Cluster Interpretation of the Photoelectron Spectra of Ag_3^- and Au_3^-," 26th Austin Symposium on Molecular Structure and Dynamics, Dallas, Texas, U.S.A., March 5-7, 2016 [invited talk given by P. Piecuch].

284.** P. Piecuch, "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States (Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems: CC(P;Q) Formalism)," 2nd Computational and Theoretical Chemistry Research PI Meeting, Gaithersburg, Maryland, U.S.A., May 15-18, 2016 [invited talk given by P. Piecuch].

285.** P. Piecuch, J. Shen, N.P. Bauman, and I. Magoulas, "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems," TSRC Workshop "Low-Scaling and Unconventional Electronic Structure Techniques" (LUEST 2016), 3rd edition, Telluride, Colorado, U.S.A., June 1-5, 2016 [invited talk given by P. Piecuch].

286.** P. Piecuch, J. Shen, N.P. Bauman, and I. Magoulas, "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems: CC(P;Q) Formalism," Ninth Congress of the International Society for Theoretical Chemical Physics (ISTCP-IX), Grand Forks, North Dakota, U.S.A., July 17-22, 2016 [invited talk given by P. Piecuch].

287.** W. Li, S. Li, J. Ma, and P. Piecuch, "Cluster-in-Molecule and Generalized Energy-Based Fragmentation Coupled Cluster for Large Systems," Ninth Congress of the International Society for Theoretical Chemical Physics (ISTCP-IX), Grand Forks, North Dakota, U.S.A., July 17-22, 2016 [invited talk given by W. Li].

288.** N.P. Bauman, J.A. Hansen, P. Piecuch, and M. Ehara, "Coupled-Cluster Interpretation of the Photoelectron Spectra of Ag_3^- and Au_3^-," Ninth Congress of the International Society for Theoretical Chemical Physics (ISTCP-IX), Grand Forks, North Dakota, U.S.A., July 17-22, 2016 [poster presented by N.P. Bauman].

289.** I. Magoulas, N.P. Bauman, J. Shen, and P. Piecuch, "Application of the CC(P;Q) Hierarchy of Coupled-Cluster Methods to the Challenging Problem of Be_2," Ninth Congress

of the International Society for Theoretical Chemical Physics (ISTCP-IX), Grand Forks, North Dakota, U.S.A., July 17-22, 2016 [poster presented by I. Magoulas].

290.** A.O. Ajala, J. Shen, and P. Piecuch, "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," Ninth Congress of the International Society for Theoretical Chemical Physics (ISTCP-IX), Grand Forks, North Dakota, U.S.A., July 17-22, 2016 [poster presented by A.O. Ajala].

291.** J.E. Deustua, A.O. Ajala, J.A. Hansen, J. Shen, and P. Piecuch, "Benchmarking the Active-Space and Completely Renormalized Equation-of-Motion Coupled-Cluster Approaches for Vertical Excitation Energies," Ninth Congress of the International Society for Theoretical Chemical Physics (ISTCP-IX), Grand Forks, North Dakota, U.S.A., July 17-22, 2016 [poster presented by J.E. Deustua].

292.** P. Piecuch, J. Shen, N.P. Bauman, and I. Magoulas, "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems: CC(P;Q) Formalism," The International Conference "Theory and Applications of Computational Chemistry 2016 (TACC 2016)," Seattle, Washington, August 28 - September 2, 2016 [invited talk given by P. Piecuch].

293.** P. Piecuch, N.P. Bauman, and J.A. Hansen, "Understanding Photochemistry and Photoelectron Spectra with Highly Correlated Electronic Structure Methods based on Coupled-Cluster Theory," 7th Conference "Current Trends in Theoretical Chemistry" (CTTC VII), Cracow, Poland, September 4-8, 2016 [invited talk given by P. Piecuch].

294.** P. Piecuch, J. Shen, and A.O. Ajala, "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," EMN Meeting on Computation and Theory (Energy, Materials, and Nanotechnology), workshop "Novel Electron Correlation Methods for Complex Systems," Las Vegas, Nevada, U.S.A., October 10-14, 2016. [invited talk given by P. Piecuch].

295.** P. Piecuch, N.P. Bauman, and J.A. Hansen, "Coupled-Cluster Interpretation of the Photoelectron Spectra of Ag_3^- and Au_3^-," GAMESS*7557*SSEMAG Palindromic Birthday Theory Symposium, on the Occasion of Professor Mark S. Gordon's 75th and Professor Kim K. Baldridge 57th Birthdays," Lihue, Hawaii, U.S.A., January 16-18, 2017 [invited talk given by P. Piecuch].

296.** P. Piecuch, J. Shen, and A.O. Ajala, "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," An International Conference "Recent Advances in Many-Electron Theory (RAMET-2017)," Goa, India, February 9-12, 2017 [invited talk given by P. Piecuch].

297.** P. Piecuch, "The 1966 *Journal of Chemical Physics* Article by Jiří Čížek: What Is in It and Why Is It so Important," the 57th Sanibel Symposium, a special symposium recognizing the 50th Anniversary of Jiří Čížek's 1966 Paper on Coupled-Cluster Theory, St. Simons Island, Georgia, U.S.A., February 19-24, 2017 [invited talk given by P. Piecuch].

298.** A.O. Ajala, J. Shen, and P. Piecuch, "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," 49th Midwest

Theoretical Chemistry Conference, Michigan State University, East Lansing, Michigan, U.S.A., June 1-3, 2017 [contributed talk given by A.O. Ajala].

299.** J.E. Deustua, J. Shen, and P. Piecuch, "Benchmarking Completely Renormalized Equation-of-Motion Coupled-Cluster Approaches for Vertical Excitation Energies against Active-Space EOMCCSDt and Full EOMCCSDT Data," 49th Midwest Theoretical Chemistry Conference, Michigan State University, East Lansing, Michigan, U.S.A., June 1-3, 2017 [poster presented by J.E. Deustua].

300.** J. Liu, I. Magoulas, Y. Qi, and P. Piecuch, "Cluster Approach for Predicting the Open Circuit Voltage in Energy Storage Materials Using High-Accuracy Quantum Chemistry Calculations," 49th Midwest Theoretical Chemistry Conference, Michigan State University, East Lansing, Michigan, U.S.A., June 1-3, 2017 [poster presented by J. Liu and I. Magoulas].

301.** J. Shen, N.P. Bauman, I. Magoulas, and P. Piecuch, "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems: CC(P;Q) Formalism," 49th Midwest Theoretical Chemistry Conference, Michigan State University, East Lansing, Michigan, U.S.A., June 1-3, 2017 [poster presented by J. Shen].

302.** A.O. Ajala, J. Shen, and P. Piecuch, "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," The 2017 American Conference on Theoretical Chemistry (ACTC 2017), Boston, Massachusetts, U.S.A., July 16-21, 2017 [poster presented by A.O. Ajala].

303.** P. Piecuch, J. Shen, N.P. Bauman, and I. Magoulas, "Single-Reference Coupled-Cluster and Equation-of-Motion Coupled-Cluster Methods for Multi-Reference Problems: CC(P;Q) Formalism," The symposium "Electronic Structure of Complex Chemical Systems," 254th American Chemical Society National Meeting, Washington, DC, U.S.A., August 20-24, 2017 [invited talk given by P. Piecuch].

304.** P. Piecuch, J. Shen, and A.O. Ajala, "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," PHYS Awards Symposium, 254th American Chemical Society National Meeting, Washington, DC, U.S.A., August 20-24, 2017 [invited talk given by P. Piecuch].

305.** P. Piecuch, J.E. Deustua, and J. Shen, "Stochastic CC(P;Q) Theory: Converging High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," Eleventh Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2017), Munich, Germany, August 27 - September 1, 2017 [invited talk given by P. Piecuch].

306.** P. Piecuch, J.E. Deustua, and J. Shen, "High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," 15th Central European Symposium on Theoretical Chemistry, CESTC 2017, Wisła, Poland, September 3-6, 2017 [invited talk given by P. Piecuch].

307.** E. Pastorczak, J. Shen, M. Hapka, P. Piecuch, and K. Pernal, "Intriguing van der Waals Interactions Revealed by Electron-Groups Embedding Approach," Wisła, Poland, September 3-6, 2017 [contributed talk given by K. Pernal].

308.** P. Piecuch, J.E. Deustua, and J. Shen, "High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," 27th Austin Symposium on Molecular Structure and Dynamics, Dallas, Texas, U.S.A., March 3-5, 2018 [invited talk given by P. Piecuch].

309.** P. Piecuch, "Introduction to Single-Reference Many-Body Perturbation Theory and its Diagrammatic Representation," Workshop of the Espace de Structure Nucléaire Théorique on "Many-Body Perturbation Theories in Modern Quantum Chemistry and Nuclear Physics," CEA Saclay, France, March 26-30, 2018 [invited introductory lecture given by P. Piecuch].

310.** P. Piecuch, "Perturbative Corrections to Non-perturbative Methods" or "High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," Workshop of the Espace de Structure Nucléaire Théorique on "Many-Body Perturbation Theories in Modern Quantum Chemistry and Nuclear Physics," CEA Saclay, France, March 26-30, 2018 [invited talk given by P. Piecuch].

311.** P. Piecuch, "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," 4th Computational and Theoretical Chemistry Research PI Meeting, Gaithersburg, Maryland, U.S.A., May 21-24, 2018. [invited talk given by P. Piecuch].

312.** P. Piecuch, J.E. Deustua, and J. Shen, "High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," TSRC Workshop "Low-Scaling and Unconventional Electronic Structure Techniques" (LUEST 2018), 4th edition, Telluride, Colorado, U.S.A., June 4-8, 2018 [invited talk given by P. Piecuch].

313.** P. Piecuch, J.E. Deustua, and J. Shen, "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," The joint Annual Workshop on Recent Developments in Electronic Structure Methods (ES18) and Penn Conference in Theoretical Chemistry (PCTC18), Philadelphia, Pennsylvania, U.S.A., June 10-14, 2018 [invited talk given by P. Piecuch].

314.** J.E. Deustua, J. Shen, and P. Piecuch, "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," 50th Midwest Theoretical Chemistry Conference, University of Chicago, Chicago, Illinois, U.S.A., June 21-23, 2018 [poster presented by J.E. Deustua].

315.** I. Magoulas, J. Shen, and P. Piecuch, "Coupled-Cluster Approaches for Strongly Correlated Systems," 50th Midwest Theoretical Chemistry Conference, University of Chicago, Chicago, Illinois, U.S.A., June 21-23, 2018 [poster presented by I. Magoulas].

316.** J. Shen, A.O. Ajala, and P. Piecuch, "Recent Progress in the Electron-Attached, Ionized, and Active-Space Equation-of-Motion Coupled-Cluster Methodologies," 50th Midwest Theoretical Chemistry Conference, University of Chicago, Chicago, Illinois, U.S.A., June 21-23, 2018 [poster presented by J. Shen].

317.** S.H. Yuwono, I. Magoulas, N.P. Bauman, J. Shen, and P. Piecuch, "Application of the CC(P;Q) Hierarchy of Coupled-Cluster Methods to the Challenging Beryllium and Magnesium Dimers," 50th Midwest Theoretical Chemistry Conference, University of Chicago, Chicago, Illinois, U.S.A., June 21-23, 2018 [poster presented by S.H. Yuwono].

318.** P. Piecuch, J.E. Deustua, and J. Shen, "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," The symposium "Strong Correlation in Electronic Structure Theory," A Satellite Symposium to the 16th International Congress of Quantum Chemistry, Strasbourg, France, June 24-27, 2018 [invited talk given by P. Piecuch].

319.** P. Piecuch, J.E. Deustua, and J. Shen, "Toward Exact Quantum Chemistry: High-Level Coupled-Cluster Energetics by Monte Carlo Sampling and Moment Expansions," 28th Canadian Symposium on Theoretical and Computational Chemistry (CSTCC 2018), Windsor, Ontario, Canada, July 15-19, 2018 [invited talk given by P. Piecuch].

320.** P. Piecuch, J.E. Deustua, and J. Shen, and I. Magoulas, "Toward Exact Quantum Chemistry: Accurate Electronic Energies by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," The international conference "Quantum International Frontiers 2018," Changsha, Hunan Province, China, October 17-21, 2018 [invited Frontier Lecture given by P. Piecuch].

321.** P. Piecuch, "Toward Exact Quantum Chemistry by Combining Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Mainz-Kobe Joint Workshop on "Solving the Full Configuration Interaction Problem," RIKEN Center for Computational Science, Kobe, Japan, November 26-27, 2018 [invited talk given by P. Piecuch during teleconference session].

322.** P. Piecuch, J.E. Deustua, J. Shen, I. Magoulas, and S.H. Yuwono, "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," TSRC Workshop "New Frontiers in Electron Correlation," 2nd edition, Telluride, Colorado, U.S.A., June 10-14, 2019 [invited talk given by P. Piecuch].

323.** P. Piecuch, J.E. Deustua, J. Shen, I. Magoulas, and S.H. Yuwono, "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Tenth Congress of the International Society for Theoretical Chemical Physics (ISTCP-X), symposium entitled "Emergent Electronic Structure Methods," Tromsø, Norway, July 11-17, 2019 [invited talk given by P. Piecuch].

324.** J. Shen, A.O. Ajala, and P. Piecuch, "Efficient Implementation and Applications of the Doubly Electron-Attached and Doubly Ionized Equation-of-Motion Coupled-Cluster Methods," Tenth Congress of the International Society for Theoretical Chemical Physics (ISTCP-X), Tromsø, Norway, July 11-17, 2019 [poster presented by J. Shen].

325.** J.E. Deustua, I. Magoulas, S.H. Yuwono, J. Shen, and P. Piecuch "Accurate Electronic Energies by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster and Equation-of-Motion Coupled-Cluster Computations," Tenth Congress of the International Society for Theoretical Chemical Physics (ISTCP-X), Tromsø, Norway, July 11-17, 2019 [poster presented by J.E. Deustua].

326.** P. Piecuch, J.E. Deustua, J. Shen, I. Magoulas, and S.H. Yuwono, "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," 8th Conference "Current Trends in Theoretical

Chemistry" (CTTC VIII), Cracow, Poland, September 1-4, 2019 [invited talk given by P. Piecuch].

327.** P. Piecuch, J.E. Deustua, J. Shen, I. Magoulas, and S.H. Yuwono, "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," 20th International Conference on Recent Progress in Many-Body Theories, Toulouse, France, September 9-13, 2019 [invited talk given by P. Piecuch].

328.** P. Piecuch, J.E. Deustua, J. Shen, I. Magoulas, S.H. Yuwono, and A. Chakraborty, "Toward Exact Quantum Chemistry by a Combination of Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," The Utah Workshop on Quantum Methods in Molecular and Solid-State Theory, Park City, Utah, U.S.A., September 22-27, 2019 [invited talk given by P. Piecuch].

329.** P. Piecuch, J.E. Deustua, J. Shen, I. Magoulas, S.H. Yuwono, and A. Chakraborty, "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," Workshop on New Methods for Strongly Correlated Electrons, Qingdao, China, October 9-13, 2019 [invited talk given by P. Piecuch].

330.** P. Piecuch, J.E. Deustua, J. Shen, I. Magoulas, S.H. Yuwono, and A. Chakraborty, "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," The international conference "Quantum International Frontiers 2019," Shanghai, China, November 18-22, 2019 [invited Frontier Lecture given by P. Piecuch].

331.** P. Piecuch, J.E. Deustua, J. Shen, I. Magoulas, S.H. Yuwono, and A. Chakraborty, "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," the 60th Sanibel Symposium, St. Simons Island, Georgia, U.S.A., February 16-21, 2020 [invited talk given by P. Piecuch].

332.** P. Piecuch, J.E. Deustua, J. Shen, I. Magoulas, S.H. Yuwono, A. Chakraborty, and K. Gururangan, "High-Accuracy Electronic Energetics by Stochastic and Deterministic Wave Function Sampling and Coupled-Cluster Computations," TSRC Workshop "Low-Scaling and Unconventional Electronic Structure Techniques" (LUEST 2020), 5th edition, Telluride, Colorado, U.S.A., June 1-5, 2020.
DUE TO COVID-19, REPLACED BY VIRTUAL WORKSHOP, June 1-5 and June 8-9, 2020 [invited talk given by P. Piecuch via Zoom].

333.** P. Piecuch, "New Single- and Multi-Reference Coupled-Cluster Methods for High Accuracy Calculations of Ground and Excited States (Toward Exact Quantum Chemistry)," 2020 Computational and Theoretical Chemistry Virtual Conference Series (July 16, July 30, August 13, 2020), Germantown, Maryland, U.S.A., August 13, 2020 [invited talk given by P. Piecuch via Zoom].

334.** P. Piecuch, "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations," The Physical, Theoretical, and Computational Chemistry Virtual Seminar Series, Chemical Institute of Canada, December 1, 2020 [invited talk given by P. Piecuch via Zoom].

335.** P. Piecuch, J. Shen, J.E. Deustua, I. Magoulas, S.H. Yuwono, A. Chakraborty, and K. Gururangan, "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," TSRC Workshop "New Frontiers in Electron Correlation," 3rd edition, Telluride, Colorado, U.S.A., June 14-18, 2021 [virtual workshop; invited talk given by P. Piecuch via Zoom].

336.** P. Piecuch, J. Shen, J.E. Deustua, I. Magoulas, S.H. Yuwono, A. Chakraborty, and K. Gururangan, "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," TSRC Workshop "New Developments in Coupled-Cluster Theory," Telluride, Colorado, U.S.A., July 19-23, 2021 [hybrid format; invited talk given by P. Piecuch via Zoom].

337.** J. Lahiri, M. Moemeni, J. Kline, S.H. Yuwono, I. Magoulas, M. Laboe, J. Shen, B. Borhan, P. Piecuch, J.E. Jackson, and G.J. Blanchard, and M. Dantus, "Proton Abstraction Mechanism of the "Super" Photobase FR0-SB," 262nd American Chemical Society National Meeting, Atlanta, Georgia, U.S.A., August 22-26, 2021. [hybrid format; poster presented by J. Lahiri].

338.** P. Piecuch, "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations" (with contributions from J.E. Deustua, I. Magoulas, S.H. Yuwono, A. Chakraborty, K. Gururangan, and J. Shen), International Symposium on Correlated Electrons (SymCorrel21), Munich Center for Quantum Science and Technology, Munich, Germany, October 5-7, 2021 [virtual workshop; invited talk given by P. Piecuch via Zoom].

339.** P. Piecuch, S.H. Yuwono, I. Magoulas, and J. Shen, "Computational Studies of FR0-SB, a Novel Organic Compound that Deprotonates Alcohols Upon Photoexcitation," International conference in the series "New Horizons in Scientific Software (NHISS 2021)" entitled "Light-Matter Interaction: Theory Meets Experiment," Jeju Island, South Korea, November 22-25, 2021 [hybrid format; invited talk given jointly by P. Piecuch and S.H. Yuwono via Zoom].

340.** P. Piecuch, J.E. Deustua, I. Magoulas, S.H. Yuwono, A. Chakraborty, K. Gururangan, and J. Shen, "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," The Seventeenth Theoretical Chemistry Symposium (TCS 2021), Indian Institute of Science Education and Research Kolkata, Mohanpur, Nadia, West Bengal, India, December 11-14, 2021 [virtual symposium; invited plenary lecture given by P. Piecuch].

341.** M. Dantus, J. Lahiri, M. Moemeni, J. Kline, B. Borhan, I. Magoulas, S.H. Yuwono, P. Piecuch, J.E. Jackson, and G.J. Blanchard, "Design Dynamics and Quantum Theory of Reversible Super Photobases," The symposium "Frontiers in Ultrafast Spectroscopy of Photoexcited States," the 2020 International Chemical Congress of Pacific Basin Societies (Pacifichem 2020), Honolulu, Hawaii, U.S.A., December 15-20, 2020 [invited talk given by M. Dantus].
DUE TO COVID-19, RESCHEDULED TO December 16-21, 2021 as hybrid congress.

342.** P. Piecuch, I. Magoulas, K. Gururangan, J.E. Deustua, and J. Shen, "Externally Corrected Coupled-Cluster Methods Using Selected Configuration Interaction and FCIQMC,"

the 61st Sanibel Symposium, invited session on New Directions in CC Theory, St. Simons Island, Georgia, U.S.A., February 13-18, 2022 [in-person invited plenary lecture given by P. Piecuch].

343.** P. Piecuch, J.E. Deustua, I. Magoulas, S.H. Yuwono, A. Chakraborty, K. Gururangan, and J. Shen, "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," Chris Cramer 60th Birthday Symposium, 263rd American Chemical Society National Meeting, San Diego, California, U.S.A., March 20-24, 2022 [hybrid symposium; pre-recorded virtual presentation; invited talk given by P. Piecuch].

344.** S. Li, B.C. Jochim, J. Stamm, S.H. Yuwono, P. Piecuch, J.E. Jackson, and M. Dantus, "Strong-Field-Induced Bond Rearrangement in CH_3NCS Ions," 53rd Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, May 30 - June 3, 2022; Orlando, Florida, U.S.A. [contributed talk given by J. Stamm].

345.** A. Chakraborty, S.H. Yuwono, J.E. Deustua, J. Shen, and P. Piecuch, "Benchmarking the Semi-Stochastic CC(P;Q) Approach for Singlet–Triplet Gaps in Biradicals," 52nd Midwest Theoretical Chemistry Conference, Ohio State University, Columbus, Ohio, U.S.A., June 2-4, 2022 [contributed talk given by A. Chakraborty].

346.** A. Chakraborty, J. Shen, and P. Piecuch, "Quantum-Monte-Carlo-Driven Equation-of-Motion Coupled-Cluster Approaches for Electron Attachment and Ionization: Implementation and Applications," 52nd Midwest Theoretical Chemistry Conference, Ohio State University, Columbus, Ohio, U.S.A., June 2-4, 2022 [poster presented by A. Chakraborty].

347.** S. Basumallick, A. Chakraborty, J. Shen, and P. Piecuch, "Development and Implementation of Semi-Stochastic Double Electron Attachment and Double Ionization Potential Equation-of-Motion Coupled- Cluster Approaches," 52nd Midwest Theoretical Chemistry Conference, Ohio State University, Columbus, Ohio, U.S.A., June 2-4, 2022 [poster presented by S. Basumallick].

348.** P. Piecuch, I. Magoulas, K. Gururangan, J.E. Deustua, and J. Shen, "Recent Advances in Externally Corrected Coupled-Cluster Methods," 10th International Conference "Molecular Quantum Mechanics" entitled "Molecular Quantum Mechanics: Innovation, Impact, and Insight," in honor of Professors Gustavo Scuseria and Martin Head-Gordon, Blacksburg, Virginia, U.S.A., June 26 - July 1, 2022 [invited plenary lecture given by P. Piecuch].

349.** P. Piecuch, J.E. Deustua, I. Magoulas, S.H. Yuwono, A. Chakraborty, K. Gururangan, and J. Shen, "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," Twelfth Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC 2020), Vancouver, British Columbia, Canada, August 16-21, 2020 [invited talk given by P. Piecuch].
DUE TO COVID-19, RESCHEDULED TO July 3-8, 2022.

350.** P. Piecuch, J.E. Deustua, I. Magoulas, S.H. Yuwono, A. Chakraborty, K. Gururangan, and J. Shen, "Approaching Exact Quantum Chemistry by Semi-Stochastic and Selected-CI-Driven Coupled-Cluster Computations," The 2020 American Conference on

Theoretical Chemistry (ACTC 2020), Palisades Tahoe (formerly Squaw Valley), California, U.S.A., July 26-30, 2020 [invited talk given by P. Piecuch].
DUE TO COVID-19, RESCHEDULED TO July 24-28, 2022; renamed ACTC 2022.

351.** A. Chakraborty, S.H. Yuwono, J.E. Deustua, J. Shen, and P. Piecuch, "Application of the Semi-Stochastic CC(P;Q) Approach to Singlet–Triplet Gaps in Biradical Systems," The 2020 American Conference on Theoretical Chemistry (ACTC 2020), Palisades Tahoe (formerly Squaw Valley), California, U.S.A., July 26-30, 2020 [poster presented by A. Chakraborty].
DUE TO COVID-19, RESCHEDULED TO July 24-28, 2022; renamed ACTC 2022.

352.** P. Piecuch, I. Magoulas, K. Gururangan, J.E. Deustua, and J. Shen, "Recent Advances in Externally Corrected Coupled-Cluster Methods," The symposium "Quantum Chemistry: Current and Future Frontiers," 264th American Chemical Society National Meeting, Chicago, Illinois, U.S.A., August 21-25, 2022 [in-person and virtual meeting; in-person invited talk to be given by P. Piecuch].

353.** P. Piecuch, I. Magoulas, K. Gururangan, J.E. Deustua, and J. Shen, "Recent Advances in Externally Corrected Coupled-Cluster Methods," OPERA-2020 (Operators, Perturbations, Electrons, Relativity, and Multi-Scale Applications), an international symposium on theoretical chemistry in honour of Prof. Jürgen Gauss on the occasion of his 60th birthday, Ingelheim am Rhein, Germany, September 1-3, 2021 [invited talk to be given by P. Piecuch].
DUE TO COVID-19, RESCHEDULED TO August 31 - September 2, 2022.

354.** P. Piecuch et al. (TBD), "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations" (tentative), Modeling and Design of Molecular Materials 2020 (MDMM 2020) Conference, Gdańsk, Poland, September 21-24, 2020 [invited talk to be given by P. Piecuch].
DUE TO COVID-19, RESCHEDULED TO September 19-22, 2022; renamed MDMM 2022.

355.** TBD, The symposium "Strong Correlation in Molecules," A Satellite Symposium to the 17th International Congress of Quantum Chemistry, Znojmo, Czech Republic, **DUE TO COVID-19, RESCHEDULED TO June 20-23, 2023** [invited talk to be given by P. Piecuch].

356.** TBD, "Approaching Exact Quantum Chemistry by Stochastic Wave Function Sampling and Deterministic Coupled-Cluster Computations" (tentative), 17th International Congress of Quantum Chemistry, Bratislava, Slovakia, June 21-26, 2021 [invited talk to be given by P. Piecuch].
DUE TO COVID-19, RESCHEDULED TO June 26 - July 1, 2023.

357.** TBD, The 5th Conference on Theory and Applications of Computational Chemistry (TACC 2020), Sapporo, Japan, September 7-12, 2020 [invited talk to be given by P. Piecuch].
DUE TO COVID-19, RESCHEDULED TO September 2-10, 2023.

358.** TBD, International Symposium of Theoretical Chemistry, Kyoto, Japan, September 2-4, 2020 [invited talk to be given by P. Piecuch].
DUE TO COVID-19, RESCHEDULED (dates to be determined).

LIST OF COURSES

January 2022 - May 2022 (Spring 2022):

Advanced Topics in Quantum Chemistry: Algebraic and Diagrammatic Methods for Many-Fermion Systems (CEM 993)
Instructor
Graduate course for Chemistry (also Physics) students
Department of Chemistry, Michigan State University, East Lansing, Michigan
(3 scheduled 50-minute lectures plus 1 additional 60-minute lecture per week; in the initial 3 weeks of the semester replaced by watching prerecorded lecture videos (3 videos per week) and and weekly 3-hour Zoom meetings with the students designed to review the lecture material and discussions; 1 office hour; setting up and grading several advanced homework assignments, a midterm test, and a final exam)

September 2021 - December 2021 (Fall 2021):

Quantum Chemistry and Statistical Thermodynamics I (CEM 991)
Instructor
Graduate course for Chemistry students
Department of Chemistry, Michigan State University, East Lansing, Michigan
(3 scheduled lectures per week; 1 office hour; setting up and grading homework assignments, two midterm exams, and a final exam)

January 2021 - April 2021 (Spring 2021):

Advanced Topics in Quantum Chemistry: Algebraic and Diagrammatic Methods for Many-Fermion Systems (CEM 993)
Instructor
Graduate course for Chemistry (also Physics) students
Department of Chemistry, Michigan State University, East Lansing, Michigan
(3 scheduled 50-minute lectures plus 1 additional 60-minute lecture per week replaced by watching prerecorded lecture videos (typically, 3–4 videos per week) and weekly 3–4-hour Zoom meetings with the students designed to review the lecture material and discussions; 1 office hour; setting up and grading several advanced homework assignments, a midterm test, and a final exam)
DUE TO COVID-19, REPLACED BY VIRTUAL INSTRUCTION

September 2020 - December 2020 (Fall 2020):	*Quantum Chemistry and Statistical Thermodynamics I* (CEM 991) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled lectures per week replaced by 2 two-hour lectures plus a review session per week; 1 office hour; setting up and grading homework assignments, two midterm exams, and a final exam) **DUE TO COVID-19, REPLACED BY VIRTUAL INSTRUCTION**
January 2020 - May 2020 (Spring 2020):	*Advanced Topics in Quantum Chemistry: Algebraic and Diagrammatic Methods for Many-Fermion Systems* (CEM 993) **Instructor** Graduate course for Chemistry (also Chemical Physics, Physics, and Computational Mathematics, Science and Engineering) students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled 50-minute lectures plus 1 additional 60-minute lecture per week; 1 office hour; setting up and grading several advanced assignments, a midterm test, and a final exam) **DUE TO COVID-19, FROM MARCH 11, 2020 TO THE END OF THE SEMESTER REPLACED BY VIRTUAL INSTRUCTION**
January 2019 - May 2019 (Spring 2019):	*Advanced Topics in Quantum Chemistry: Algebraic and Diagrammatic Methods for Many-Fermion Systems* (CEM 993) **Instructor** Graduate course for Chemistry (also Chemical Physics and Physics) students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled 50-minute lectures plus 1 additional 60-minute lecture per week; 1 office hour; setting up and grading several advanced assignments, a midterm test, and a final exam)

August 2018 - December 2018 (Fall 2018):

Quantum Chemistry and Statistical Thermodynamics I (CEM 991)
Instructor
Graduate course for Chemistry students
Department of Chemistry, Michigan State University, East Lansing, Michigan
(3 scheduled lectures per week; 1 office hour; setting up and grading homework assignments, two midterm exams, and a final exam)

January 2018 - May 2018 (Spring 2018):

Advanced Topics in Quantum Chemistry: Algebraic and Diagrammatic Methods for Many-Fermion Systems (CEM 993)
Instructor
Graduate course for Chemistry (also Chemical Physics and Physics) students
Department of Chemistry, Michigan State University, East Lansing, Michigan
(3 scheduled 50-minute lectures plus 1 additional 60-minute lecture per week; 1 office hour; setting up and grading several advanced assignments, a midterm test, and a final exam)

August 2017 - December 2017 (Fall 2017):

Quantum Chemistry and Statistical Thermodynamics I (CEM 991)
Instructor
Graduate course for Chemistry students
Department of Chemistry, Michigan State University, East Lansing, Michigan
(3 scheduled lectures per week; 1 office hour; setting up and grading homework assignments, two midterm exams, and a final exam)

January 2017 - May 2017 (Spring 2017):

Advanced Topics in Quantum Chemistry: Algebraic and Diagrammatic Methods for Many-Fermion Systems (CEM 993)
Instructor
Graduate course for Chemistry (also Chemical Physics and Physics) students
Department of Chemistry, Michigan State University, East Lansing, Michigan
(3 scheduled 50-minute lectures plus 1 additional 60-minute lecture per week; 1 office hour; setting up and grading several advanced assignments, a midterm test, and a final exam)

January 2016 - May 2016 (Spring 2016):	*Special Topics in Physical Chemistry: Algebraic and Diagrammatic Methods for Many-Fermion Systems* (CHEM 580 and PHYSICS 580; offered at Washington University in St. Louis during one-term research leave) and *Advanced Topics in Quantum Chemistry: Algebraic and Diagrammatic Methods for Many-Fermion Systems* (CEM 993; offered to students at Michigan State University via video-recorded lectures and other online materials produced at Washington University in St. Louis) **Instructor** Graduate course for Chemistry and Physics students Department of Chemistry and Department of Physics, Washington University in St. Louis, St. Louis, Missouri; Department of Chemistry, Michigan State University, East Lansing, Michigan (three 90-minute video-recorded lectures per week; one office hour; setting up and grading several advanced assignments, a midterm test, and a final exam)
September 2015 - December 2015 (Fall 2015):	*Quantum Chemistry and Statistical Thermodynamics I* (CEM 991) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled lectures per week; 1 office hour; setting up and grading homework assignments, two midterm exams, and a final exam)
January 2015 - May 2015 (Spring 2015):	*Advanced Topics in Quantum Chemistry: Algebraic and Diagrammatic Methods for Many-Fermion Systems* (CEM 993) **Instructor** Graduate course for Chemistry (also Chemical Physics and Physics) students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled 50-minute lectures plus 1 additional 60-minute lecture per week; 1 office hour; setting up and grading several advanced assignments, a midterm test, and a final exam)

August 2014 - December 2014 (Fall 2014):	*Quantum Chemistry and Statistical Thermodynamics I* (CEM 991) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled lectures per week; 1 office hour; setting up and grading homework assignments, two midterm exams, and a final exam)
January 2014 - May 2014 (Spring 2014):	*Advanced Topics in Quantum Chemistry: Algebraic and Diagrammatic Methods for Many-Fermion Systems* (CEM 993) **Instructor** Graduate course for Chemistry (also Chemical Physics and Physics) students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled 50-minute lectures plus 1 additional 60-minute lecture per week; 1 office hour; setting up and grading several advanced assignments, a midterm test, and a final exam)
January 2012 - May 2012 (Spring 2012):	*Advanced Topics in Quantum Chemistry: Algebraic and Diagrammatic Methods for Many-Fermion Systems* (CEM 993) **Instructor** Graduate course for Chemistry (also Chemical Physics and Physics) students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled 50-minute lectures plus 1 additional 60-minute lecture per week; 1 office hour; setting up and grading several advanced assignments, a midterm test, and a final exam)
September 2011 - December 2011 (Fall 2011):	*Independent Research* (CEM 420) **Instructor** Undergraduate course; supervised independent research in quantum chemistry Department of Chemistry, Michigan State University, East Lansing, Michigan (taken by J. Clapham)

January 2011 - May 2011 (Spring 2011):	*Advanced Topics in Quantum Chemistry: Algebraic and Diagrammatic Methods for Many-Fermion Systems* (CEM 993) **Instructor** Graduate course for Chemistry (also Chemical Physics and Physics) students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled 50-minute lectures plus 1 additional 60-minute lecture per week; 1 office hour; setting up and grading several advanced assignments, a midterm test, and a final exam)
January 2010 - April 2010 (Spring 2010):	*Physical Chemistry Seminar* (CEM 998) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (organizing and overseeing the Physical and Biological Chemistry weekly seminars, grading graduate student seminars)
January 2010 - April 2010 (Spring 2010):	*Computational Chemistry* (CEM 888) (with Professors J.F. Harrison, J. Jackson, R.I. Cukier, and M. Feig) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 lectures per week; 1 office hour; setting up and grading assignments, laboratory projects, and a final project)
September 2009 - December 2009 (Fall 2009):	*Physical Chemistry Seminar* (CEM 998) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (organizing and overseeing the Physical and Biological Chemistry weekly seminars, grading graduate student seminars)

September 2009 - December 2009 (Fall 2009):	*Quantum Chemistry and Statistical Thermodynamics I* (CEM 991) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled lectures per week; 1 office hour; setting up and grading homework assignments, two midterm exams, and a final exam)
January 2009 - May 2009 (Spring 2009):	*Advanced Topics in Quantum Chemistry: Algebraic and Diagrammatic Methods for Many-Fermion Systems* (CEM 993) **Instructor** Graduate course for Chemistry (also Chemical Physics and Physics) students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled 50-minute lectures plus 1 additional 60-minute lecture per week; 1 office hour; setting up and grading several advanced assignments, a midterm test, and a final exam)
January 2008 - May 2008 (Spring 2008):	*Chemical Physics Seminar* (CEM 499) **Instructor** Undergraduate course; lectures/seminars on selected topics and journal articles in chemical physics Department of Chemistry, Michigan State University, East Lansing, Michigan (1 lecture/seminar per week; taken by 3 students)
December 1, 2007 (Fall 2007):	*Frontiers in Science Weekend Workshop series for Secondary Science Teachers* **Instructor** Program date: Saturday, December 1, 2007; topic: "Exploring Molecules and Atomic Nuclei with Quantum Mechanics."

August 2007 - December 2007 (Fall 2007):	*Quantum Chemistry and Statistical Thermodynamics I* (CEM 991) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled lectures plus one unscheduled lecture per week; 1 office hour; setting up and grading homework assignments, two midterm exams, and a final exam)
January 2007 - May 2007 (Spring 2007):	*Advanced Topics in Quantum Chemistry: Algebraic and Diagrammatic Methods for Many-Fermion Systems* (CEM 993) **Instructor** Graduate course for Chemistry (also Chemical Physics and Physics) students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled 50-minute lectures plus 1 additional 60-minute lecture per week; 1 office hour; setting up and grading several advanced assignments, a midterm test, and a final exam)
August 2006 - December 2006 (Fall 2006):	*Independent Research* (CEM 420) **Instructor** Undergraduate course; supervised independent research in quantum chemistry Department of Chemistry, Michigan State University, East Lansing, Michigan (taken by B.S. Elkus)
August 2006 - December 2006 (Fall 2006):	*Quantum Chemistry and Statistical Thermodynamics I* (CEM 991) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled lectures plus one unscheduled lecture per week; 2 office hours; setting up and grading homework assignments, two midterm exams, and a final exam)
January 2005 - May 2005 (Spring 2005):	*Independent Research* (CEM 420) **Instructor** Undergraduate course; supervised independent research in quantum chemistry Department of Chemistry, Michigan State University, East Lansing, Michigan (taken by J.R. Gour)

January 2005 - May 2005 (Spring 2005):	*Quantum Chemistry* (CEM 392) **Instructor** Undergraduate course for chemistry majors Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled lectures per week; three 2-hour long review sessions; designing all homework problems and problems for two midterm exams and a final exam and the solution sets; grading two midterm exams and a final exam)
January 2005 - May 2005 (Spring 2005):	*Computational Chemistry* (CEM 888) (with Professors J.F. Harrison, J. Jackson, R.I. Cukier, and R. Hollingsworth) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 lectures per week; 2 office hours; setting up and grading assignments, laboratory projects, and a final project)
January 2004 - May 2004 (Spring 2004):	*Advanced Topics in Statistical Mechanics (Algebraic and Diagrammatic Methods for Many-Fermion Systems)* (CEM 994) **Instructor** Graduate course for Chemistry (also Chemical Physics and Physics) students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled 50-minute lectures plus 1 unscheduled 60-minute lecture per week; 2 office hours; 6 very advanced assignments, a midterm test, and a final exam)
January 2003 - May 2003 (Spring 2003):	*Computational Chemistry* (CEM 888) (with Professors J.F. Harrison, J. Jackson, R.I. Cukier, and R. Hollingsworth) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 lectures per week; 2 office hours; setting up and grading assignments, laboratory projects, and a final project)

January 2003 - May 2003 (Spring 2003):	*Introduction to Physical Chemistry II* (CEM 384) **Instructor** Undergraduate course for non-chemistry majors Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled lectures per week; three 2-hour long review sessions; designing all homework problems and problems for two midterm exams and a final exam and the solution sets; grading two midterm exams and a final exam)
August 2002 - December 2002 (Fall 2002):	*General Chemistry* (CEM 141) (Sections 53-65) **Instructor** Freshmen chemistry course for non-chemistry majors Department of Chemistry, Michigan State University, East Lansing, Michigan (2 scheduled, 1 hour 20 minute long, evening lectures per week; 2 official office hours; three 2-hour long review sessions; contributions to midterm tests and a final exam)
January 2002 - May 2002 (Spring 2002):	*Advanced Topics in Statistical Mechanics (Algebraic and Diagrammatic Methods for Many-Fermion Systems)* (CEM 994) **Instructor** Graduate course for Chemistry (also Chemical Physics and Physics) students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 scheduled 50-minute lectures plus 1 unscheduled 90 minute lecture per week; 2 office hours; 6 very advanced assignments, a midterm test, and a final exam)
January 2001 - May 2001 (Spring 2001):	*Special Topics in Physical Chemistry* (CEM 988) (with Professors J.F. Harrison, J. Jackson, R.I. Cukier, and R. Hollingsworth) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 lectures per week; 2 office hours; setting up and grading assignments, laboratory projects, and a final project)

August 2000 - December 2000 (Fall 2000):	*Quantum Chemistry and Statistical Thermodynamics I* (CEM 991) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 lectures per week; 2 office hours; setting up assignments and supervising their grading, setting up and grading two midterm exams, and a final exam)
January 2000 - May 2000 (Spring 2000):	*Special Topics in Physical Chemistry* (CEM 988) (with Professors J.F. Harrison, J. Jackson, R.I. Cukier, and R. Hollingsworth) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 lectures per week; 2 office hours; setting up and grading assignments, laboratory projects, and a final project)
August 1999 - December 1999 (Fall 1999):	*Independent Research* (CEM 420) **Instructor** Undergraduate course; supervised independent research in quantum chemistry Department of Chemistry, Michigan State University, East Lansing, Michigan (taken by Mr. J.A. Heist)
August 1999 - December 1999 (Fall 1999):	*Quantum Chemistry and Statistical Thermodynamics I* (CEM 991) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 lectures per week; 2 office hours; setting up assignments and supervising their grading, setting up and grading two midterm exams, and a final exam)
January 1999 - May 1999 (Spring 1999):	*Chemical Physics Seminar* (CEM 499) **Instructor** Undergraduate course; supervised undergraduate research in the area of quantum chemistry and reporting research results in the area of chemical physics Department of Chemistry, Michigan State University, East Lansing, Michigan (1 hour of research lab per week; taken by D.P. Hogan)

August 1998 - December 1998 (Fall 1998):	*Quantum Chemistry and Statistical Thermodynamics I* (CEM 991) **Instructor** Graduate course for Chemistry students Department of Chemistry, Michigan State University, East Lansing, Michigan (3 lectures per week; 2 office hours; setting up assignments and supervising their grading, setting up and grading two midterm exams, and a final exam)
January 1997 - April 1997 (Spring 1997):	*General Chemistry* (CHM 137Y) **Instructor** Undergraduate course for the first year Chemistry and Life or Health Sciences students (two sections, 78 lectures) Department of Chemistry, University of Toronto, Toronto, Ontario, Canada (gave six lectures and supervised two hours of Study Room per week, participated in setting up and grading a final exam)
January 1996 - April 1996 (Spring 1996):	*General Chemistry* (CHM 137Y) **Instructor** Undergraduate course for the first year Chemistry and Life or Health Sciences students (two sections, 78 lectures) Department of Chemistry, University of Toronto, Toronto, Ontario, Canada (gave six lectures and supervised two hours of Study Room per week, graded a final exam)
May 1995 - July 1995 (Spring 1995):	*Differential Equations for Chemical Engineers* (MATH 218) **Instructor** Undergraduate course for the second year chemical engineering students Faculty of Mathematics, University of Waterloo, Waterloo, Ontario, Canada (gave three lectures and one tutorial per week, set assignments and supervised their marking, set and graded a midterm test, set and graded a final exam)

October 1994:	*Advanced Calculus for Chemical Engineers* (MATH 210) **Instructor replacement** Calculus course for the second year chemical engineering students Faculty of Mathematics, University of Waterloo, Waterloo, Ontario, Canada (gave three lectures and one tutorial per week)
October 1994:	*Calculus 3 for Honours Physics* (MATH 227P) **Instructor replacement** Calculus course for the second year physics students Faculty of Mathematics, University of Waterloo, Waterloo, Ontario, Canada (gave three lectures and one tutorial per week)
February 1993 - March 1993:	*Quantum Chemistry II* (CHEM 680) **Instructor replacement** Advanced course for graduate chemistry students Department of Chemistry, University of Arizona, Tucson, Arizona, U.S.A. (supervised three student seminars per week)
February 1992 - June 1992 (one semester):	Lectures on *Advanced Approaches to Many-Electron Correlation Problem* **Instructor** Advanced course for graduate (M. Sc. and Ph. D.) chemistry students Institute of Chemistry, University of Wrocław, Poland (gave four lectures per week, set and graded a midterm test, set and graded a final exam)
October 1991 - February 1992 (one semester):	Lectures on *Diagrammatic Methods in Theory of Many-Electron Systems* **Instructor** Advanced course for graduate (M. Sc. and Ph. D.) chemistry students Institute of Chemistry, University of Wrocław, Poland (gave four lectures per week, set and graded a midterm test, set and graded a final exam)
October 1991 - February 1992 (one semester):	*Thermodynamics and Statistical Physics* for the fourth year undergraduate chemistry students **Tutorial Assistant** Institute of Chemistry, University of Wrocław, Poland (gave two tutorials per week, set and marked assignments, set and graded two midterm tests)

February 1992 - June 1992 (one semester):	*Quantum Chemistry, Group Theory, and Classical Mechanics* seminars and tutorials for the second year undergraduate chemistry students **Co-instructor** Institute of Chemistry, University of Wrocław, Poland (gave two lectures and two tutorials per week, set and marked assignments, set and graded two midterm tests, graded a final exam)
July 1990:	*Calculus 4* (MATH 213B) **Instructor replacement** Undergraduate course for the second year science students Faculty of Mathematics, University of Waterloo, Waterloo, Ontario, Canada (gave three lectures and one tutorial per week, set assignments)
February 1985 - June 1988 (one semester per year):	*Thermodynamics and Statistical Physics* for the second year undergraduate chemistry students **Tutorial Assistant** Institute of Chemistry, University of Wrocław, Poland (gave two tutorials per week, set and marked assignments, set and graded two midterm tests)
October 1983 - June 1988 (one semester per year):	*Quantum Chemistry, Group Theory, and Classical Mechanics* seminars and tutorials for the second year undergraduate chemistry students **Co-instructor** Institute of Chemistry, University of Wrocław, Poland (gave two lectures and two tutorials per week, set and marked assignments, set and graded two midterm tests, graded a final exam)