

## **Konrad Patkowski**

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## **EDUCATION**

- 10/1999–10/2003: Graduate study, Department of Chemistry, University of Warsaw, Poland. Ph.D. in Chemistry (with honors), 05/2004. Thesis title: *Regularization of the Coulomb Potential and the Convergence of Perturbation Theory for Intermolecular Forces*, advisor: Prof. Bogumil Jeziorski.
- 10/1994–09/1999: Undergraduate study, University of Warsaw, Poland. M.Sc. in Chemistry (with honors), 09/1999. Thesis title: *On the Applicability of the Symmetry-Adapted Perturbation Approach to Interactions of Open-Shell Systems*, advisor: Prof. Bogumil Jeziorski.

## **PROFESSIONAL EXPERIENCE**

- 08/2016–present: Associate Professor of Physical Chemistry, Department of Chemistry and Biochemistry, Auburn University.
- 08/2016–present: Associate Professor of Physics (courtesy appointment), Department of Physics, Auburn University.
- 01/2011–07/2016: Assistant Professor of Physical Chemistry, Department of Chemistry and Biochemistry, Auburn University.
- 11/2003–12/2010: Postdoctoral researcher with Prof. Krzysztof Szalewicz, Department of Physics and Astronomy, University of Delaware.
- 10/1999–10/2003: Graduate student and teaching assistant, Department of Chemistry, University of Warsaw, Poland.
- 06/2000–09/2000, 04/2002–07/2002: Short-term researcher with Prof. Krzysztof Szalewicz, Department of Physics and Astronomy, University of Delaware.
- 03/1999–06/1999: Exchange research student, Institute of Theoretical Chemistry, University of Nijmegen, The Netherlands. Supervisor: Prof. Ad van der Avoird.

## **PUBLICATIONS**

- coauthor of 43 published papers and 1 accepted paper
- presented 29 talks and posters at conferences
- 1464 citations as of August 15, 2018 (per Web of Science)
- h-index: 22

## **CURRENT FUNDING**

- K. Patkowski, *CAREER: Towards an accurate and illuminating theory of weak interactions between open-shell systems*, National Science Foundation, Mar 15, 2014 – Feb 28, 2019, \$459,273.

## PAST FUNDING

- K. Patkowski, Auburn University Provost's Office, Provost Funded Professional Improvement Leave, Jan 1, 2018 – May 15, 2018, \$11,518.
- C. Corminboeuf (PI), Swiss National Science Foundation, *Development of new perturbation theory for noncovalent interactions within molecules*, Mar 1, 2018 – Apr 30, 2018, CHF 6,200 (a Scientific Exchanges grant to fund K. Patkowski's sabbatical stay at Ecole Polytechnique Federale de Lausanne).
- K. Patkowski, *Adsorption on carbon nanotubes—understanding the intermolecular forces at all length scales*, Auburn University Intramural Grants Program, May 1, 2015 – Apr 30, 2017, \$10,000.
- K. Patkowski, *Accurate Ab Initio Studies of Hydrocarbon Physisorption on Carbon Nanotubes*, American Chemical Society Petroleum Research Fund, Jan 1, 2012 – Aug 31, 2015, \$100,000.
- J. Dong (PI), R. Hansen, S. Santos, K. Patkowski, E. Thomas Jr. (co-PIs), *SPIRIT: Storing Petabytes of Information for Research Into Tomorrow's science*, Auburn University Intramural Grants Program, Feb 1, 2012 – Jan 31, 2013, \$150,000.

## AWARDS

- 2015: European Union-funded one month visiting professorship, Faculty of Physics, Astronomy and Informatics, Nicolaus Copernicus University, Torun, Poland
- 2015: The OpenEye Outstanding Junior Faculty Award in Computational Chemistry, American Chemical Society
- 2014: NSF CAREER award
- 2002–2003: Competitive Grant to Pursue Ph.D. Research, State Committee for Scientific Research (KBN), Poland.
- 2000: Award of the Polish Chemical Society for the best M.Sc. thesis in chemistry.
- 1999: Erasmus fellowship, University of Nijmegen, The Netherlands.
- 1994–1999: Scholarship of the Polish Ministry of Education.
- 1994: Bronze Medal, 26<sup>th</sup> International Chemistry Olympiad, Oslo, Norway.
- 1994: Bronze Medal, 35<sup>th</sup> International Mathematical Olympiad, Hong Kong.

## SCIENTIFIC INTERESTS

Theory of intermolecular interactions, symmetry-adapted perturbation theory, high-level *ab initio* electronic structure methods, potentials of physical adsorption.

## TEACHING EXPERIENCE

- Courses taught: General Chemistry I, Survey of Physical Chemistry, Physical Chemistry I, Physical Chemistry II, Graduate Physical Chemistry, Quantum and Statistical Mechanics (Auburn), Introductory Physics (Delaware).
- Discussion sections taught (Warsaw): Quantum Chemistry (basic and advanced), Numerical Methods, Mathematics for Chemists.
- Taught various chemistry and math classes for scientifically gifted middle- and high-school students at Polish Children's Fund.

## OTHER SCIENTIFIC ACTIVITIES

- Coauthor of the SAPT computer code (<http://www.physics.udel.edu/~szalewic/SAPT/SAPT.html>), used by more than 400 scientific groups worldwide
- Proposal reviewer for the National Science Foundation, American Chemical Society Petroleum Research Fund, Research Corporation for Science Advancement, and National Science Centre of Poland
- Reviewer for *The Journal of Chemical Physics*, *Journal of Chemical Theory and Computation*, *Journal of Physical Chemistry*, *Physical Chemistry Chemical Physics*, *Angewandte Chemie International Edition*, *Chemical Physics Letters*, *Molecular Physics*, *ChemPhysChem*, *Journal of Physical Chemistry Letters*, *European Physical Journal D*, *Scientific Reports*, *Computational and Theoretical Chemistry*, *Physica E*, and *Bulletin of the Chemical Society of Japan*
- Secretary, Auburn Local Section of the American Chemical Society (2015–2017)
- Co-organizer of the 2013 Annual Meeting of the Southeast Theoretical Chemistry Association (SETCA), Auburn, AL, May 9-11, 2013.

### List of publications

44. Pimienta, I. S. O.; Patkowski, K. *Heats of Formation and Thermal Stability of Substituted 1,1'-Azobis(tetrazole) Compounds with an Extended Nitrogen Chain*, Int. J. Quantum Chem. (accepted).
43. Smith, D. G. A.; Burns, L. A.; Sirianni, D. A.; Nascimento, D. R.; Kumar, A.; James, A. M.; Schriber, J. B.; Zhang, T.; Zhang, B.; Abbott, A. S.; Berquist, E. J.; Lechner, M. H.; Cunha, L. A.; Heide, A. G.; Waldrop, J. M.; Takeshita, T. Y.; Alenaizan, A.; Neuhauser, D.; King, R. A.; Simonett, A. C.; Turney, J. M.; Schaefer, H. F.; Evangelista, F. A.; DePrince III, A. E.; Crawford, T. D.; Patkowski, K.; Sherrill, C. D. *Psi4NumPy: An Interactive Quantum Chemistry Programming Environment for Reference Implementations and Rapid Development*, J. Chem. Theory Comput. **2018**, *14*, 3504.
42. Dutta, N. N.; Patkowski, K. *Improving “silver-standard” benchmark interaction energies with bond functions*, J. Chem. Theory Comput. **2018**, *14*, 3053.
41. Patkowski, K.; Żuchowski, P. S.; Smith, D. G. A. *First-order symmetry-adapted perturbation theory for multiplet splittings*, J. Chem. Phys. **2018**, *148*, 164110.
40. Song, B.; Waldrop, J. M.; Wang, X. P.; Patkowski, K. *Accurate virial coefficients of gaseous krypton from state-of-the-art ab initio potential and polarizability of the krypton dimer*, J. Chem. Phys. **2018**, *148*, 024306.
39. Thibault, F.; Patkowski, K.; Żuchowski, P. S.; Jóźwiak, H.; Ciuryło, R.; Wcisło, P. *Rovibrational line-shape parameters for H<sub>2</sub> in He and new H<sub>2</sub>-He potential energy surface*, J. Quant. Spectrosc. Radiat. Transf. **2017**, *202*, 308.
38. Patkowski, K. *Benchmark Databases of Intermolecular Interaction Energies: Design, Construction, and Significance*, in *Annu. Rep. Comput. Chem.* (Dixon, D. A., Ed.) Vol. 13, Amsterdam: Elsevier, **2017**, pp. 3-91.
37. Parrish, R. M.; Burns, L. A.; Smith, D. G. A.; Simonett, A. C.; DePrince III, A. E.; Hohenstein, E. G.; Bozkaya, U.; Sokolov, A. Yu.; Di Remigio, R.; Richard, R. M.; Gonthier, J. F.; James, A. M.; McAlexander, H. R.; Kumar, A.; Saitow, M.; Wang, X.; Pritchard, B. P.; Verma, P.; Schaefer III, H. F.; Patkowski, K.; King, R. A.; Valeev, E. F.; Evangelista, F. A.; Turney, J. M.; Crawford, T. D.; Sherrill, C. D. *Psi4 1.1: An Open-Source Electronic Structure Program Emphasizing Automation, Advanced Libraries, and Interoperability*, J. Chem. Theory Comput. **2017**, *13*, 3185.
36. Smith, D. G. A.; Burns, L. A.; Patkowski, K.; Sherrill, C. D. *Revised Damping Parameters for the D3 Dispersion Correction to Density Functional Theory*, J. Phys. Chem. Lett. **2016**, *7*, 2197.
35. Li, S.; Smith, D. G. A.; Patkowski, K. *An Accurate Benchmark Description of the Interactions between Carbon Dioxide and Polyheterocyclic Aromatic Compounds Containing Nitrogen*, Phys. Chem. Chem. Phys. **2015**, *17*, 16560.
34. Waldrop, J. M.; Song, B.; Patkowski, K.; Wang, X. P. *Accurate ab initio potential for the krypton dimer and transport properties of the low-density krypton gas*, J. Chem. Phys. **2015**, *142*, 204307.
33. Smith, D. G. A.; Patkowski, K. *Benchmarking the CO<sub>2</sub> Adsorption Energy on Carbon Nanotubes*, J. Phys. Chem. C **2015**, *119*, 4934.
32. Garberoglio, G.; Patkowski, K.; Harvey, A. H. *Fully Quantum Cross Second Virial Coefficients for the Three-Dimensional He-H<sub>2</sub> Pair*, Int. J. Thermophys. **2014**, *35*, 1435.
31. Smith, D. G. A.; Jankowski, P.; Slawik, M.; Witek, H. A.; Patkowski, K. *Basis set convergence of the post-CCSD(T) contribution to noncovalent interaction energies*, J. Chem. Theory Comput. **2014**, *10*, 3140.
30. Smith, D. G. A.; Patkowski, K.; Trinh, D.; Balakrishnan, N.; Lee, T.-G.; Forrey, R. C.; Yang, B. H.; Stancil, P. C. *Highly correlated electronic structure calculations of the He-C<sub>3</sub> van der Waals complex and collision induced rotational transitions of C<sub>3</sub>*, J. Phys. Chem. A **2014**, *118*, 6351.
29. Smith, D. G. A.; Patkowski, K. *Toward an accurate description of methane physisorption on carbon nanotubes*, J. Phys. Chem. C **2014**, *118*, 544.
28. Bakr, B. W.; Smith, D. G. A.; Patkowski, K. *Highly accurate potential energy surface for the He-H<sub>2</sub> dimer*, J. Chem. Phys. **2013**, *139*, 144305.
27. Patkowski, K. *Basis set converged weak interaction energies from conventional and explicitly correlated coupled-cluster approach*, J. Chem. Phys. **2013**, *138*, 154101.
26. Smith, D. G. A.; Patkowski, K. *Interactions between methane and polycyclic aromatic hydrocarbons: a high accuracy benchmark study*, J. Chem. Theory Comput. **2013**, *9*, 370.
25. Patkowski, K. *On the accuracy of explicitly correlated coupled-cluster interaction energies – have orbital results been beaten yet?*, J. Chem. Phys. **2012**, *137*, 034103.
24. Patkowski, K.; Szalewicz, K. *Argon pair potential at basis set and excitation limits*, J. Chem. Phys. **2010**, *133*, 094304.

23. Patkowski, K.; Szalewicz, K.; Jeziorski, B. *Orbital relaxation and the third-order induction energy in symmetry-adapted perturbation theory*, *Theor. Chem. Acc.* **2010**, *127*, 211.
22. Podeszwa, R.; Patkowski, K.; Szalewicz, K. *Improved interaction energy benchmarks for dimers of biological relevance*, *Phys. Chem. Chem. Phys.* **2010**, *12*, 5974.
21. Podeszwa, R.; Pernal, K.; Patkowski, K.; Szalewicz, K. *Extension of the Hartree-Fock plus dispersion method by first-order correlation effects*, *J. Phys. Chem. Lett.* **2010**, *1*, 550.
20. Pernal, K.; Podeszwa, R.; Patkowski, K.; Szalewicz, K. *Dispersionless density functional theory*, *Phys. Rev. Lett.* **2009**, *103*, 263201.
19. Patkowski, K.; Spirko, V.; Szalewicz, K. *On the Elusive Twelfth Vibrational State of Beryllium Dimer*, *Science* **2009**, *326*, 1382.
18. Cencek, W.; Patkowski, K.; Szalewicz, K. *Full-configuration-interaction calculation of three-body nonadditive contribution to helium interaction potential*, *J. Chem. Phys.* **2009**, *131*, 064105.
17. Patkowski, K.; Cencek, W.; Jankowski, P.; Szalewicz, K.; Mehl, J. B.; Garberoglio, G.; Harvey, A. H. *Potential energy surface for interactions between two hydrogen molecules*, *J. Chem. Phys.* **2008**, *129*, 094304.
16. Jeziorska, M.; Cencek, W.; Patkowski, K.; Jeziorski, B.; Szalewicz, K. *Complete basis set extrapolations of dispersion, exchange, and coupled-clusters contributions to the interaction energy: a helium dimer study*, *Int. J. Quantum Chem.* **2008**, *108*, 2053.
15. Patkowski, K.; Podeszwa, R.; Szalewicz, K. *Interactions in diatomic dimers involving closed-shell metals*, *J. Phys. Chem. A* **2007**, *111*, 12822.
14. Patkowski, K.; Szalewicz, K. *Frozen core and effective core potentials in symmetry-adapted perturbation theory*, *J. Chem. Phys.* **2007**, *127*, 164103.
13. Jeziorska, M.; Cencek, W.; Patkowski, K.; Jeziorski, B.; Szalewicz, K. *Pair potential for helium from symmetry-adapted perturbation theory calculations and from supermolecular data*, *J. Chem. Phys.* **2007**, *127*, 124303.
12. Patkowski, K.; Cencek, W.; Jeziorska, M.; Jeziorski, B.; Szalewicz, K. *Accurate pair interaction energies for helium from supermolecular Gaussian geminal calculations*, *J. Phys. Chem. A* **2007**, *111*, 7611.
11. Patkowski, K.; Szalewicz, K.; Jeziorski, B. *Third-order interactions in symmetry-adapted perturbation theory*, *J. Chem. Phys.* **2006**, *125*, 154107.
10. Bukowski, R.; Cencek, W.; Patkowski, K.; Jankowski, P.; Jeziorska, M.; Kolaski, M.; Szalewicz, K. *Portable parallel implementation of symmetry-adapted perturbation theory code*, *Mol. Phys.* **2006**, *104*, 2241.
9. Szalewicz, K.; Patkowski, K.; Jeziorski, B. *Intermolecular interactions via perturbation theory: from diatoms to biomolecules*, *Struct. Bonding (Berlin)* **2005**, *116*, 43.
8. Patkowski, K.; Murdachaew, G.; Fou, C.-M.; Szalewicz, K. *Accurate ab initio potential for argon dimer including highly repulsive region*, *Mol. Phys.* **2005**, *103*, 2031.
7. Patkowski, K.; Jeziorski, B.; Szalewicz, K. *Unified treatment of chemical and van der Waals forces via symmetry-adapted perturbation expansion*, *J. Chem. Phys.* **2004**, *120*, 6849.
6. Przybytek, M.; Patkowski, K.; Jeziorski, B. *Convergence behavior of symmetry-adapted perturbation expansions for excited states. A model study of interactions involving a triplet helium atom*, *Collect. Czech Chem. Commun.* **2004**, *69*, 141.
5. Brudermann, J.; Steinbach, C.; Buck, U.; Patkowski, K.; Moszynski, R. *Elastic and rotationally inelastic differential cross sections for He + H<sub>2</sub>O collisions*, *J. Chem. Phys.* **2002**, *117*, 11166.
4. Patkowski, K.; Jeziorski, B.; Korona, T.; Szalewicz, K. *Symmetry-forcing procedure and convergence behavior of perturbation expansions for molecular interaction energies*, *J. Chem. Phys.* **2002**, *117*, 5124.
3. Patkowski, K.; Korona, T.; Moszynski, R.; Jeziorski, B.; Szalewicz, K. *Ab initio potential energy surface and second virial coefficient for He-H<sub>2</sub>O complex*, *J. Mol. Struct. (Theochem)* **2002**, *591*, 231.
2. Patkowski, K.; Korona, T.; Jeziorski, B. *Convergence behavior of the symmetry-adapted perturbation theory for states submerged in Pauli forbidden continuum*, *J. Chem. Phys.* **2001**, *115*, 1137.
1. Patkowski, K.; Jeziorski, B.; Szalewicz, K. *Symmetry-adapted perturbation theory with regularized Coulomb potential*, *J. Mol. Struct. (Theochem)* **2001**, *547*, 293.

### List of conference presentations

29. K. Patkowski, J. M. Waldrop, D. G. A. Smith, and P. S. Źuchowski, *Multiplet Splittings from Symmetry-Adapted Perturbation Theory*, poster presented at the 16th International Congress of Quantum Chemistry, Menton, France, June 18-23, 2018.
28. K. Patkowski, *Benchmark noncovalent interaction energies: Balancing databases and improving dispersion damping functions*, talk given at the Southeastern Regional Meeting of the American Chemical Society, Charlotte, NC, November 9, 2017.
27. K. Patkowski, *New developments in symmetry-adapted perturbation theory*, talk given at the 15th Central European Symposium on Theoretical Chemistry (CESTC 2017), Wisła, Poland, September 4, 2017.
26. K. Patkowski, M. Kodrycka, D. G. A. Smith, L. A. Burns, and C. D. Sherrill, *Benchmark noncovalent interaction energies: balancing databases and improving dispersion damping functions*, poster presented at the 11th Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC), Munich, Germany, August 27–September 1, 2017.
25. K. Patkowski, *Benchmark noncovalent interaction energies: balancing databases and improving dispersion damping functions*, talk given at the TSRC Workshop on Intermolecular Interactions: New Challenges for Ab Initio Theory, Arenas de Cabrales, Spain, July 13, 2017.
24. K. Patkowski, *Advances and challenges in the calculation of intermolecular potentials with spectroscopic accuracy*, talk given at the 8th International Meeting on Atomic and Molecular Physics and Chemistry (IMAMPC), Toruń, Poland, June 20, 2017.
23. K. Patkowski, *New developments in symmetry-adapted perturbation theory*, talk given at the Southeastern Regional Meeting of the American Chemical Society, Columbia, SC, October 26, 2016.
22. K. Patkowski, *Calculating potential energy surfaces with dispersion-corrected density functional theory*, talk given at the Summer School of Computational Chemistry and Materials Science (SSCC&MS), Jackson, MS, July 28, 2016.
21. K. Patkowski, D. G. A. Smith, P. S. Źuchowski, N. N. Dutta, and M. Kodrycka, *New developments in symmetry-adapted perturbation theory*, poster presented at the 2016 meeting of the International Society of Theoretical Chemical Physics (ISTCP), Grand Forks, ND, July 17-22, 2016.
20. K. Patkowski, *New developments in symmetry-adapted perturbation theory*, talk given at the 2016 Southeast Theoretical Chemistry Association (SETCA) Annual Meeting, Tallahassee, FL, May 12-14, 2016.
19. K. Patkowski, *Advances and challenges in the calculation of intermolecular potentials with spectroscopic accuracy*, talk given at the Joint Southwestern/Southeastern Regional Meeting of the American Chemical Society, Memphis, TN, November 4-7, 2015.
18. K. Patkowski, *Accurate modeling of the CH<sub>4</sub> and CO<sub>2</sub> adsorption on carbon nanotubes*, talk given at the 2015 Telluride Workshop Intermolecular Interactions: New Challenges for ab initio Theory, Telluride, CO, July 7-11, 2015.
17. D. G. A. Smith and K. Patkowski, *Benchmarking the adsorption energies on carbon nanotubes*, poster presented at the American Chemical Society Spring 2015 National Meeting, Denver, CO, March 22-26, 2015 (the OpenEye Outstanding Junior Faculty Award in Computational Chemistry award poster).
16. K. Patkowski, *Basis set convergence of the post-CCSD(T) contribution to noncovalent interaction energies*, talk given at the World Association of Theoretical and Computational Chemists (WATOC) Congress, Santiago, Chile, October 5-10, 2014.
15. K. Patkowski, *Interactions of atoms, molecules, and surfaces — pushing the limits of accuracy*, talk given at the 2014 Central European Symposium on Theoretical Chemistry (CESTC), Nagybörzsöny, Hungary, September 21-25, 2014.
14. K. Patkowski, *Accurate modeling of the CH<sub>4</sub> and CO<sub>2</sub> adsorption on carbon nanotubes*, talk given at the 2014 Southeast Theoretical Chemistry Association (SETCA) Annual Meeting, Atlanta, GA, May 15-17, 2014.
13. K. Patkowski, *Basis set converged weak interaction energies from conventional and explicitly correlated coupled-cluster approach*, talk given at the Spring 2013 National Meeting of the American Chemical Society, New Orleans, LA, April 7-11, 2013.
12. K. Patkowski, *Weak interaction energies from approximate CCSD(T)-F12: better than large-basis CCSD(T)?*, poster presented at the 21st Conference on Current Trends in Computational Chemistry, Jackson, MS, November 9-10, 2012.
11. D. G. A. Smith and K. Patkowski, *Interactions Between Methane and Polycyclic Aromatic Hydrocarbons: A High Accuracy Benchmark Study*, poster presented at the 14th International Congress of Quantum Chemistry, Boulder, CO, June 25-30, 2012.

10. K. Patkowski, *On the accuracy of explicitly correlated CCSD(T) interaction energies – have orbital results been beaten yet?*, talk given at the 2012 Southeast Theoretical Chemistry Association (SETCA) Annual Meeting, Athens, GA, May 17-19, 2012.
9. K. Patkowski, K. Szalewicz, and B. Jeziorski, *Induction and exchange-induction energy with a regularized Coulomb potential*, poster presented at the 20th Conference on Current Trends in Computational Chemistry, Jackson, MS, October 27-29, 2011.
8. K. Patkowski, *Limits of accuracy in interatomic and intermolecular potentials*, talk given at the 2011 Southeast Theoretical Chemistry Association (SETCA) Annual Meeting, Mississippi State, MS, May 13-14, 2011.
7. K. Patkowski, *Limits of accuracy in interatomic and intermolecular potentials*, talk given at the workshop “Intermolecular Interactions: New Challenges for ab initio Theory”, Silverton, CO, August 9-13, 2010.
6. K. Patkowski, *Ultra-SAPT: recent extensions of symmetry-adapted perturbation theory*, talk given at the workshop “Intermolecular Interactions: New Challenges for ab initio Theory”, Telluride, CO, June 26-30, 2006.
5. K. Patkowski, K. Szalewicz, and B. Jeziorski, *Third-order polarization and exchange interactions in symmetry-adapted perturbation theory*, poster presented at the 2005 Sanibel Symposium, St. Simons Island, GA, March 5-11, 2005.
4. K. Patkowski, K. Szalewicz, and B. Jeziorski, *Symmetry-adapted perturbation theory with regularized induction interaction*, poster presented at the 228th National Meeting of the American Chemical Society, Philadelphia, PA, August 22-26, 2004.
3. K. Patkowski, *Unified treatment of chemical and van der Waals forces via symmetry-adapted perturbation theory*, contributed talk given at 2nd Central European Symposium on Theoretical Chemistry, Nove Hrady, Czech Republic, September 25-28, 2003.
2. K. Patkowski, B. Jeziorski, and K. Szalewicz, *Convergence of the regularized symmetry-adapted perturbation theory for states submerged in Pauli-forbidden continuum*, poster presented at 1st Central European Symposium on Theoretical Chemistry, Zwettl, Austria, October 28-30, 2002.
1. K. Patkowski, B. Jeziorski, and K. Szalewicz, *Symmetry-adapted perturbation theory with regularized Coulomb potential*, poster presented at the Austrian – Czech – Polish – Slovak Symposium on Quantum Chemistry, Ustron-Jaszowiec, Poland, September 27-30, 2001.

#### Invited talks at academic institutions

23. K. Patkowski, *New developments in symmetry-adapted perturbation theory*, Theoretical Chemistry Group, Institute of Physical Chemistry, Karlsruhe Institute of Technology, Karlsruhe, Germany, June 28, 2018.
22. K. Patkowski, *New developments in symmetry-adapted perturbation theory*, Computational Chemistry Group, Department of Physical Chemistry, University of Geneva, Geneva, Switzerland, February 15, 2018.
21. K. Patkowski, *New developments in symmetry-adapted perturbation theory*, Laboratory for Computational Molecular Design, Swiss Federal Institute of Technology (EPFL), Lausanne, Switzerland, February 8, 2018.
20. K. Patkowski, *Noncovalent interactions – towards better accuracy and more insight*, Department of Chemistry, University of Memphis, Memphis, TN, September 29, 2017.
19. K. Patkowski, *Noncovalent interactions – towards better accuracy and more insight*, Department of Chemistry, University of North Texas, Denton, TX, January 20, 2017.
18. K. Patkowski, *Interactions of atoms, molecules, and surfaces – pushing the limits of accuracy*, Department of Chemistry, Mississippi State University, Starkville, MS, February 26, 2016.
17. K. Patkowski, *Interactions of atoms, molecules, and surfaces – pushing the limits of accuracy*, Department of Chemistry, University of Mississippi, Oxford, MS, February 25, 2016.
16. K. Patkowski, *Interactions of atoms, molecules, and surfaces – pushing the limits of accuracy*, Department of Chemistry, Oakland University, Rochester, MI, October 14, 2015.
15. K. Patkowski, *Interactions of atoms, molecules, and surfaces – pushing the limits of accuracy*, Department of Chemistry, Michigan State University, East Lansing, MI, October 13, 2015.
14. K. Patkowski, *Four stories on computing noncovalent interactions*, Department of Chemistry, Columbus State University, Columbus, GA, October 6, 2015.
13. K. Patkowski, *Interactions of atoms, molecules, and surfaces – pushing the limits of accuracy*, Department of Chemical Engineering, Auburn University, Auburn, AL, September 2, 2015.
12. K. Patkowski, *Intermolecular interactions – how to improve the accuracy of interaction energies*, Quantum Chemistry Laboratory, Faculty of Chemistry, University of Warsaw, Poland, May 14, 2015.

11. K. Patkowski, *Intermolecular interactions – how to improve the accuracy of interaction energies*, Department of Quantum Physics, Faculty of Physics, Astronomy, and Informatics, Nicolaus Copernicus University, Torun, Poland, May 5, 2015.
10. K. Patkowski, *Accurate modeling of the CH<sub>4</sub> and CO<sub>2</sub> adsorption on carbon nanotubes*, Department of Thermo-Fluid Science and Engineering, Xi'an Jiaotong University, Xi'an, China, April 13, 2015.
9. K. Patkowski, *Weak interactions between atoms and molecules – pushing the limits of accuracy*, Department of Thermo-Fluid Science and Engineering, Xi'an Jiaotong University, Xi'an, China, April 9, 2015.
8. K. Patkowski, *Interactions of atoms, molecules, and surfaces – pushing the limits of accuracy*, Department of Chemistry, Emory University, Atlanta, GA, March 9, 2015.
7. K. Patkowski, *Interactions of atoms, molecules, and surfaces – pushing the limits of accuracy*, School of Chemistry and Biochemistry, Georgia Tech, Atlanta, GA, September 9, 2014.
6. K. Patkowski, *Interactions of atoms, molecules, and surfaces – pushing the limits of accuracy*, Department of Chemistry, University of Alabama at Birmingham, Birmingham, AL, January 16, 2014.
5. K. Patkowski, *Interactions of atoms, molecules, and surfaces – pushing the limits of accuracy*, Center for Simulational Physics, University of Georgia, Athens, GA, November 5, 2013.
4. K. Patkowski, *Interactions of atoms, molecules, and surfaces – pushing the limits of accuracy*, Department of Physics, Auburn University, Auburn, AL, October 25, 2013.
3. K. Patkowski, *Interactions of atoms, molecules, and surfaces – pushing the limits of accuracy*, Laboratory for Computational Molecular Design, Swiss Federal Institute of Technology (EPFL), Lausanne, Switzerland, October 15, 2013.
2. K. Patkowski, *Interactions of atoms, molecules, and surfaces – pushing the limits of accuracy*, National Chiao Tung University, Hsinchu, Taiwan, December 12, 2012.
1. K. Patkowski, *Van der Waals interactions as seen by quantum chemistry*, University of North Alabama, Florence, AL, March 8, 2012.