

Hendrik Heinz

Associate Professor

Department of Chemical and Biological Engineering

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Education

- Air Force Research Laboratory, Wright-Patterson Air Force Base, OH 08/2006
Postdoctoral
 - ETH Zurich, Switzerland 06/2003
Ph.D. in Materials Science and Engineering
M.Sc. (Diploma) in Chemistry 09/2000
 - University of Heidelberg, Germany 09/1997
B.Sc. (Prediploma) in Chemistry
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Honors

- NSF Special Creativity Award 2018
 - Fellow of the Royal Society of Chemistry 2016
 - Sandmeyer Award, Swiss Chemical Society 2016
 - Guest Professor at International Center for Materials Nanoarchitectonics (MANA), Tsukuba, Japan 2014
 - Max Hey Medal, Mineralogical Society of UK and Ireland 2013
 - George Brown Lectureship, Mineralogical Society (Euroclay 2011) 2011
 - Guest Professor at ETH Zurich 2011
 - National Science Foundation CAREER Award 2010
 - Giovanni Novelli Prize, Italian Clay Group (14th Int. Clay Conf.) 2009
 - HP Outstanding Junior Faculty Award, ACS COMP Division 2006
 - Member of “AFOSR Star Team” 2005
 - Graduate Scholarship of the German National Academic Foundation 2001–2003
 - Undergraduate Scholarship of the German National Academic Foundation 1995–2000
 - Silver medal at the 26. International Chemistry Olympiad, Oslo, Norway 1994
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Appointments

- Associate Professor 08/2015 – present
University of Colorado, Boulder · Department of Chemical
and Biological Engineering · Materials Science and Engineering Program
- Associate Editor and Member of the Editorial Board, New J. Chem. 10/2017 – present
- Associate Editor, RSC Advances 09/2015 – 12/2017

- Associate Professor (Assistant Professor 2012-2006) 09/2006 – 08/2015
University of Akron, Ohio · Department of Polymer Engineering
- Guest Professor 05/2014 – 07/2014
International Center for Materials Nanoarchitectonics (MANA) ·
Tsukuba, Japan
- Guest Professor 05/2011 – 08/2011
ETH Zurich, Switzerland · Department of Civil Engineering
- Consultant for Procter & Gamble, Ohio; Corning, NY; 2004 – 2015
Sika AG, Switzerland
- Post-Doc 02/2004 – 08/2006
Air Force Research Laboratory, WPAFB · Dayton · Ohio
- Research Associate 09/2003 – 01/2004
ETH Zurich · Sika AG · Zurich · Switzerland
- Visiting Scientist 05/2001 – 12/2003
University of Mainz · Germany (part-time)
- Research Assistant 02/2001 – 08/2003
ETH Zurich · Switzerland
- Graduate Researcher 05/2000 – 08/2000
University of Cyprus · Nicosia · Cyprus
- Project Assistant 04/1993 – 06/1994
Technical University of Chemnitz · Chemnitz · Germany

Publications in Peer-Reviewed Journals and Book Chapters (* Invited)

(H index 35, >3900 citations)

79. “Chemical Bonding in Alloys Is Polar: Understanding Formation Energies, Defects, and Interfacial Properties Using Atomic Charges”
Liu, J.; Tennessen, E.; Rondinelli, J.; Heinz, H.
(Submitted)
78. “3D Super-Resolution Coherent Diffractive Imaging of Core-Shell Nanoparticles”
Pryor, A., Jr.; Rana, A.; Xu, R.; Rodriguez, J. A.; Yang, Y.; Gallagher-Jones, M.; Jiang, H.; Kanhaiya, K.; Nathanson, M.; Park, J.; Kim, Sunam; Kim, Sangsoo; Nam, D.; Yue, Y.; Fan, J.; Sun, Z.; Zhang, B.; Garder, D. F.; Baraldi Dias, C. S.; Joti, Y.; Hatsui, T.; Kameshima, T.; Inubushi, Y.; Tono, K.; Lee, J. Y.; Yabashi, M.; Song, C.; Ishikawa, T.; Kapteyn, H. C.; Murnane, M. M.; Heinz, H.; Miao, J.
(Submitted)
77. “3D Quantitative Characterization of High Temperature Oxidation Using Electron Tomography and Electron Dispersive Spectroscopy”
Zhou, J.; Taylor, M.; Melinte, G. A.; Shahani, A. J.; Dharmawardhana, C. C.; Heinz, H.; Voorhees, P.; Perepezko, J.; Ercius, P.; Miao, J.

(Submitted)

76. "Nanoscale Structure-Property Relationships of Polyacrylonitrile/CNT Composites as a Function of Polymer Crystallinity and CNT Diameter"
Gissinger, J. R.; Pramanik, C.; Newcomb, B.; Kumar, S.; Heinz, H.
ACS Appl. Mater. Interfaces 2017, published online. [DOI: 10.1021/acsami.1027b09739](https://doi.org/10.1021/acsami.1027b09739) (IF 7.5)
75. "Instantaneous Insight into Induced Charges at Metal Surfaces, Aqueous, and Biological Interfaces Using a Polarizable Lennard-Jones Potential"
Lorenzo Geda, I.; Ramezani-Dakhel, H.; Heinz, H.; Sulpizi, M.
Nat. Comm. 2017 (accepted). (IF 12)
74. "Carbon Nanotube Dispersion in Solvents and Polymer Solutions: Mechanisms, Assembly, and Preferences"
Pramanik, C.; Gissinger, J. R.; Kumar, S.; Heinz, H.
ACS Nano 2017, published online. [DOI: 10.1021/acsnano.7b07684](https://doi.org/10.1021/acsnano.7b07684) (IF 13)
73. "CEMFF: A Force Field Database for Cementitious Materials Including Validations, Applications and Opportunities"
Mishra, R. K.; Mohamed, A. K.; Geissbuhler, D.; Manzano, H.; Jamil, T.; Shahsavari, R.; Kalinichev, A. G.; Galmarini, S.; Tao, L.; Heinz, H.; Pellenq, R.; van Duin, A. C. T.; Parker, S. C.; Flatt, R.; Bowen, P.
Cem. Concr. Res. 2017, 102, 68-89. [DOI: 10.1016/j.cemconres.2017.09.003](https://doi.org/10.1016/j.cemconres.2017.09.003) (IF 4.8)
- 72.* "Energy-effective Grinding of Inorganic Solids Using Organic Additives"
Mishra, R. K.; Weibel, M.; Muller, T.; Heinz, H.; Flatt, R. J.
Chimia 2017, 71, 451-460. [DOI: 10.2533/chimia.2017.451](https://doi.org/10.2533/chimia.2017.451). 2016 Sandmeyer Award Lecture (Swiss Chemical Society). (IF 1.0)
- 71.* "Reliable Computational Design of Biological-Inorganic Materials to the Large Nanometer Scale Using Interface-FF"
Dharmawardhana, C. C.; Kanhaiya, K.; Lin, T.-J.; Garley, A.; Knecht, M. R.; Zhou, J.; Miao, J.; Heinz, H.
Mol. Sim. 2017, 43, 1394-1405. [DOI: 10.1080/08927022.2017.1332414](https://doi.org/10.1080/08927022.2017.1332414) (IF 1.0)
70. "Influence of Aluminates on the Hydration Kinetics of Tricalcium Silicate"
Pustovgar, E.; Mishra, R. K.; Palacios, M.; d'Espinose de Lacaillerie, J. B.; Matschei, T.; Andreev, A.; Heinz, H.; Verel, R.; Flatt, R. J.
Cem. Concr. Res. 2017, 100, 245-262. [DOI: 10.1016/j.cemconres.2017.06.006](https://doi.org/10.1016/j.cemconres.2017.06.006) (IF 4.8)
69. "Nature of Peptide Wrapping onto Metal Nanoparticle Catalysts and Driving Forces for Size Control"
Ramezani-Dakhel, H.; Bedford, N. M.; Woehl, T. J.; Knecht, M. R.; Naik, R. R.; Heinz, H.
Nanoscale 2017, 9, 8401-8409. [DOI: 10.1039/C7NR02813J](https://doi.org/10.1039/C7NR02813J) (IF 7.8)
- 68.* "Nanoparticle Decoration with Surfactants: Molecular Interactions, Assembly, and Applications"

- Heinz, H.; Pramanik, C.; Heinz, O.; Ding, Y.; Mishra, R. K.; Marchon, D.; Flatt, R. J.; Estrela-Lopis, I.; Llop, J.; Moya, S.; Ziolo, R. F.
Surf. Sci. Rep. 2017, 72, 1-58. [DOI: 10.1016/j.surfrep.2017.02.001](https://doi.org/10.1016/j.surfrep.2017.02.001) (IF 13)
67. "A Study of the Impact of Polyanions on the Formation of Lipid Bilayers on Top of Polyelectrolyte Multilayers with Poly(allylamine hydrochloride) as Top Layer"
Diamanti, E.; Andrezzi, P.; Kirby, C.; Anguiano, R.; Yate, L.; Heinz, H.; Ziolo, R.; Donath, E.; Moya, S.
J. Phys. Chem. B 2017, 121, 1158-1167. [DOI: 10.1021/acs.jpcc.6b12237](https://doi.org/10.1021/acs.jpcc.6b12237) (IF 3.2)
66. "Accurate Force Field Parameters and pH Resolved Surface Models for Hydroxyapatite to Understand Structure, Mechanics, Hydration, and Biological Interfaces"
Lin, T. Z.; Heinz, H.
J. Phys. Chem. C 2016, 120, 4975-4992. [DOI: 10.1021/acs.jpcc.5b12504](https://doi.org/10.1021/acs.jpcc.5b12504)
65. "Correction to Force Field and a Surface Model Database for Silica to Simulate Interfacial Properties in Atomic Resolution"
Emami, F. S.; Puddu, V.; Berry, R. J.; Varshney, V.; Patwardhan, S. V.; Perry, C. C.; Heinz, H.
Chem. Mater. 2016, 28, 406-407. [DOI: 10.1021/acs.chemmater.5b04760](https://doi.org/10.1021/acs.chemmater.5b04760)
- 64.* "Adsorption of Biomolecules and Polymers on Silicates, Glasses, and Oxides: Mechanisms, Predictions, and Opportunities by Molecular Simulation"
Heinz, H.
Curr. Op. Chem. Eng. 2016, 11, 34-41. [DOI: 10.1016/j.coche.2015.12.003](https://doi.org/10.1016/j.coche.2015.12.003)
- 63.* "Simulations of Inorganic-Bioorganic Interfaces and Comparisons to Experiment to Discover New Materials: Progress, Challenges, and Opportunities"
Heinz, H.; Ramezani-Dakhel, H.
Chem. Soc. Rev. 2016, 45, 412-448. [DOI: 10.1039/C5CS00890E](https://doi.org/10.1039/C5CS00890E)
62. "Three-Dimensional Positions of Individual Atoms in Materials Revealed by Electron Tomography"
Xu, R.; Chen, C. C.; Wu, L.; Scott, M. C.; Theis, W.; Ophus, C.; Bartels, M.; Yang, Y.; Ramezani-Dakhel, H.; Sawaya, M. R.; Heinz, H.; Marks, L. D.; Ercius, P.; Miao, J.
Nat. Mater. 2015, 14, 1099-1103. [DOI: 10.1038/nmat4426](https://doi.org/10.1038/nmat4426)
61. "Atomic-Scale Identification of Pd Leaching in Nanoparticle Catalyzed CC Coupling: Effects of Particle Surface Disorder"
Briggs, B.; Bedford, N.; Seifert, S.; Koerner, H.; Ramezani-Dakhel, H.; Heinz, H.; Naik, R. R.; Frenkel, A.; Knecht, M. R.
Chem. Sci. 2015, 6, 6413-6419. DOI: [10.1039/C5SC01424G](https://doi.org/10.1039/C5SC01424G)
60. "En Route to a Multi-Model Scheme for Clinker Comminution with Chemical Grinding Aids"
Mishra, R. K.; Geissbuehler, D.; Carmona, H.; Wittel, F. K.; Sawley, M. L.; Weibel, M.; Gallucci, E.; Herrmann, H. J.; Heinz, H.; Flatt, R. J.
Adv. Appl. Ceram. 2015, 114, 393-401. [DOI: 10.1179/1743676115Y.0000000023](https://doi.org/10.1179/1743676115Y.0000000023)

59. “Elucidation of Peptide-Directed Palladium Surface Structure for Biologically-Tunable Nanocatalysts”
Bedford, N. M.; Ramezani-Dakhel, H.; Slocik, J. M.; Briggs, B. D.; Ren, Y.; Frenkel, A. I.; Petkov, V.; Heinz, H.; Naik, R. R.; Knecht, M. R.
ACS Nano 2015, 9, 5082-5092. [DOI: 10.1021/acs.nano.5b00168](https://doi.org/10.1021/acs.nano.5b00168). Cover Art (May).
58. “Molecular Mechanism of Specific Recognition of Cubic Pt Nanocrystals by Peptides and of the Concentration-Dependent Formation from Seed Crystals”
Ramezani-Dakhel, H.; Ruan, L.; Huang, Y.; Heinz, H.
Adv. Funct. Mater. 2015, 25, 1374-1384. [DOI: 10.1002/adfm.201404136](https://doi.org/10.1002/adfm.201404136)
57. “Prediction of Specific Biomolecule Adsorption on Silica Surfaces as a Function of pH and Particle Size”
Emami, F. S.; Puddu, V.; Berry, R. J.; Varshney, V.; Patwardhan, S. V.; Perry, C. C.; Heinz, H.
Chem. Mater. 2014, 26, 5725-5734. [DOI: 10.1021/cm5026987](https://doi.org/10.1021/cm5026987)
56. “A Rational Biomimetic Approach to Structure Defect Generation in Colloidal Nanocrystals”
Ruan, L.; Ramezani-Dakhel, H.; Lee, C.; Li, Y.; Duan, X.; Heinz, H.; Huang, Y.
ACS Nano 2014, 8, 6934-6944. [DOI: 10.1021/nm501704k](https://doi.org/10.1021/nm501704k)
- 55.* “The Role of Chemistry and pH of Solid Surfaces for Specific Adsorption of Biomolecules in Solution—Accurate Computational Models and Experiment”
Heinz, H.
J. Phys.: Condens. Matter 2014, 26, 244105. [DOI: 10.1088/0953-8984/26/24/244105](https://doi.org/10.1088/0953-8984/26/24/244105)
- 54.* “A Force Field for Tricalcium Aluminate to Characterize Surface Properties, Initial Hydration, and Organically Modified Interfaces in Atomic Resolution”
Mishra, R. K.; Fernandez-Carrasco, L.; Flatt, R. J.; Heinz, H.
Dalton Trans. 2014, 43, 10602-10616. [DOI: 10.1039/C4DT00438H](https://doi.org/10.1039/C4DT00438H)
53. “Interaction of Substituted Poly(phenyleneethynylene)s with Ligand-Stabilized CdS Nanoparticles”
Liu, H.; Espe, M. P.; Modarelli, D. A.; Arias, E.; Moggio, I.; Ziolo, R. F.; Heinz, H.
J. Mater. Chem. A 2014, 2, 8705-8711. [DOI: 10.1039/C4TA01280A](https://doi.org/10.1039/C4TA01280A)
- 52.* “Understanding Molecular Recognition on Metallic and Oxidic Nanostructures from a Perspective of Computer Simulation and Theory”
Heinz, H.
In “Bio-Inspired Nanotechnology”; Knecht, M. R., Walsh, T. R., Eds.; Springer, New York, 2014, p. 141-171. [DOI: 10.1007/978-1-4614-9446-1_6](https://doi.org/10.1007/978-1-4614-9446-1_6).
51. “Force Field and a Surface Model Database for Silica to Simulate Interfacial Properties in Atomic Resolution”
Emami, F. S.; Puddu, V.; Berry, R. J.; Varshney, V.; Patwardhan, S. V.; Perry, C. C.; Heinz, H.

- Chem. Mater. 2014, 26, 2647-2658. [DOI: 10.1021/cm500365c](https://doi.org/10.1021/cm500365c)
50. “Facet Recognition and Molecular Ordering of Ionic Liquids on Metal Surfaces”
Jha, K. C.; Liu, H.; Bockstaller, M. R.; Heinz, H.
J. Phys. Chem. C 2013, 117, 25969-25981. [DOI: 10.1021/jp4032404](https://doi.org/10.1021/jp4032404)
49. “Exploiting Localized Surface Binding Effects to Enhance the Catalytic Reactivity of Peptide-Capped Nanoparticles”
Coppage, R.; Slocik, J. M.; Ramezani-Dakhel, H.; Bedford, N. M.; Heinz, H.; Naik, R. R.; Knecht, M. R.
J. Am. Chem. Soc. 2013, 135, 11048-11054. [DOI: 10.1021/ja402215t](https://doi.org/10.1021/ja402215t)
48. “Force Field for Tricalcium Silicate and Insight into Nanoscale Properties: Cleavage, Initial Hydration, and Adsorption of Organic Molecules”
Mishra, R. K.; Flatt, R. J.; Heinz, H.
J. Phys. Chem. C 2013, 117, 10417-10432. Journal Cover (May 23).
[DOI: 10.1021/jp312815g](https://doi.org/10.1021/jp312815g)
47. “Stability, Surface Features, and Atom Leaching of Palladium Nanoparticles: Toward Prediction of Catalytic Functionality”
Ramezani-Dakhel, H.; Mirau, P. A.; Naik, R. R.; Knecht, M. R.; Heinz, H.
Phys. Chem. Chem. Phys. 2013, 15, 5488-5492. [DOI: 10.1039/C3CP00135K](https://doi.org/10.1039/C3CP00135K)
46. “Tailoring Molecular Specificity toward a Crystals Facet: A Lesson from Biorecognition Toward Pt{111}”
Ruan, L. Y.; Ramezani-Dakhel, H.; Chiu, C. Y.; Zhu, E. B.; Li, Y. J.; Heinz, H.; Huang, Y.
Nano Lett. 2013, 13, 840-846. [DOI: 10.1021/nl400022g](https://doi.org/10.1021/nl400022g)
- 45.* “Thermodynamically Consistent Force Fields and Molecular Models for the Assembly of Inorganic, Organic, and Biological Hybrid Nanostructures: The INTERFACE Force Field”
Heinz, H.; Lin, T. Z.; Mishra, R. K.; Emami, F. S.
Langmuir 2013, 29, 1754-1765. Invited Feature Article and Cover Art (Feb 12).
[DOI: 10.1021/la3038846](https://doi.org/10.1021/la3038846)
44. “Understanding the Effectiveness of Polycarboxylates as Grinding Aids”
Mishra, R. K.; Heinz, H.; Müller, T.; Zimmermann, J.; Flatt, R. J.
American Concrete Institute Symposium Series, Vol. 288, Malhotra, V., ed., 2012. Article No 288.16, p. 235-251. ISBN 9781622766406. [PDF](#)
- 43.* “Clay Minerals for Nanocomposites and Biotechnology: Surface Modification, Dynamics, and Responses to Stimuli”
Heinz, H.
Clay Miner. 2012, 47, 205-230. Invited script of George Brown Lecture.
[DOI: 10.1180/claymin.2012.047.2.05](https://doi.org/10.1180/claymin.2012.047.2.05)
42. “Chemistry of Aqueous Silica Nanoparticle Surfaces and the Mechanism of Selective Peptide Adsorption”
Patwardhan, S. V.; Emami, F. S.; Berry, R. J.; Jones, S. E.; Naik, R. R.; Deschaume, O.;

- Heinz, H.; Perry, C. C.
J. Am. Chem. Soc. 2012, 134, 6244-6256. [DOI: 10.1021/ja211307u](https://doi.org/10.1021/ja211307u)
41. "Influence of the Shape of Nanostructured Metal Surfaces on Adsorption of Single Peptides in Aqueous Solution"
Feng, J.; Slocik, J. M.; Sarikaya, M.; Naik, R. R.; Farmer, B. L.; Heinz, H.
Small 2012, 8, 1049-1059. [DOI: 10.1002/sml.201102066](https://doi.org/10.1002/sml.201102066)
- 40.* "Alkylammonium Chains on Layered Silicate Surfaces"
Heinz, H.
In "Rubber-Clay Nanocomposites: Science, Technology and Applications"; Galimberti, M., ed.; Wiley and Sons: Hoboken, NJ, 2011, p. 101-126. ISBN 978-0-470-56210-9.
39. "Control over Self-Assembly of Diblock Copolymers on Hexagonal and Square Templates for High Area Density Circuit Boards"
Feng, J.; Cavicchi, K. A.; Heinz, H.
ACS Nano 2011, 5, 9413-9420. [DOI: 10.1021/nn2035439](https://doi.org/10.1021/nn2035439)
38. "Bending of Layered Silicates on the Nanometer Scale: Mechanism, Stored Energy, and Curvature Limits"
Fu, Y. T.; Zartman, G. D.; Yoonessi, M.; Drummy, L. F.; Heinz, H.
J. Phys. Chem. C 2011, 115, 22292-22300. [DOI: 10.1021/jp208383f](https://doi.org/10.1021/jp208383f)
37. "Morphology of Sulfonated Polyarylenethioethersulfone Random Copolymer Series as Proton Exchange Fuel Cells Membranes by Small Angle Neutron Scattering"
Yoonessi, M.; Heinz, H.; Bai, Z. W.; Dang, T. D.
Polymer 2011, 5615-5621. [DOI: 10.1016/j.polymer.2011.09.047](https://doi.org/10.1016/j.polymer.2011.09.047)
36. "Crystallographic Recognition Controls Peptide Binding for Bio-Based Nanomaterials"
Coppage, R.; Slocik, J. M.; Briggs, B. D.; Frenkel, A. I.; Heinz, H.; Naik, R. R.; Knecht, M. R.
J. Am. Chem. Soc. 2011, 133, 12346-12349. [DOI: 10.1021/ja203726n](https://doi.org/10.1021/ja203726n)
35. "Adsorption Mechanism of Single Amino Acid and Surfactant Molecules to Au {111} Surfaces in Aqueous Solution: Design Rules for Metal-Binding Molecules"
Feng, J.; Pandey, R. B.; Berry, R. J.; Farmer, B. L.; Naik, R. R.; Heinz, H.
Soft Matter 2011, 7, 2113-2120. Featured as Hot Article. [DOI: 10.1039/C0SM01118E](https://doi.org/10.1039/C0SM01118E)
34. "Polarization at Metal-Biomolecular Interfaces in Solution"
Heinz, H.; Jha, K. C.; Luettmmer-Strathmann, J.; Farmer, B. L.; Naik, R. R.
J. R. Soc. Interface 2011, 8, 220-232. [DOI: 10.1098/rsif.2010.0318](https://doi.org/10.1098/rsif.2010.0318)
- 33.* "Modification of Inorganic Fillers and Interfacial Properties in Polyolefin Nanocomposites: Theory versus Experiment"
Feng, J.; Heinz, H.
In "Advances in Polyolefin Nanocomposites"; Mittal, V., ed.; CRC Press: Boca Raton, 2010, 205-223. ISBN 978-1-439814543.

- 32.* “Molecular Simulation of Polymer Melts and Blends: Methods, Phase Behavior, Interfaces, and Surfaces”
Virnau, P.; Binder, K.; Heinz, H.; Kreer, T.; Müller, M.
In “Encyclopedia of Polymer Blends”; Isayev, A. I., ed.; Volume 1 “Fundamentals”; Wiley-VCH: Weinheim, 2010, p. 1-44. ISBN: 978-3-527-31928-2.
- 31.* “Understanding Clay Surface Modification and Organic-Inorganic Interfaces”
Heinz, H.
In “Advances in Polymer Nanocomposite Technology”; Mittal, V., ed.; Nova Science: Hauppauge, NY, 2010, p. 271-291. ISBN 978-1-60741-970-9.
- 30.* “Simulation of Polymer Matrix Nanocomposites”
Patnaik, S. S.; Heinz, H.; Pandey, R. B.; Farmer, B. L.
In “Modeling and Simulation in Polymers”; Gujrati, P. D, Leonov, A. I., eds.; Wiley-VCH: Weinheim, 2010, p. 37-92. ISBN: 978-3-527-32415-6.
29. “Layer of Clay Platelets in a Peptide Matrix: Binding, Encapsulation and Morphology”
Pandey, R. B.; Heinz, H.; Farmer, B. L.; Drummy, L. F.; Jones, S. E.; Vaia, R. A.; Naik, R. R.
J. Polym. Sci. B 2010, 48, 2566-2574. [DOI: 10.1002/polb.22140](https://doi.org/10.1002/polb.22140)
28. “Bio-functionalization and Immobilization of a Membrane via Peptide Binding (CR31, S2) by a Monte Carlo Simulation”
Pandey, R. B.; Heinz, H.; Feng, J.; Farmer, B. L.
J. Chem. Phys. 2010, 133, 095102. [DOI: 10.1063/1.3484241](https://doi.org/10.1063/1.3484241)
27. „Nanostructure and Properties of Sulfonated Polyarylenethioethersulfone Copolymer by Small Angle Neutron Scattering”
Yoonessi, M.; Heinz, H.; Dang, T. D.; Wheeler, R.; Bai, Z. W.
Polymer 2010, 51, 1585-1592. [DOI: 10.1016/j.polymer.2010.02.011](https://doi.org/10.1016/j.polymer.2010.02.011)
26. “UV-Absorption and Silica/Titania Colloids Using a Core–Shell Approach”
Zhou, L.; Heinz, H.; Soucek, M. D.; Aleman, E. A.; Modarelli, D. A.
Silicon 2010, 2, 95-104. [DOI: 10.1007/s12633-009-9030-2](https://doi.org/10.1007/s12633-009-9030-2)
25. “Cleavage Energy of Alkylammonium-Modified Montmorillonite and the Relation to Exfoliation in Nanocomposites: Influence of Cation Density, Head Group Structure, and Chain Length”
Fu, Y. T.; Heinz, H.
Chem. Mater. 2010, 22, 1595-1605. [DOI: 10.1021/cm902784r](https://doi.org/10.1021/cm902784r)
- 24.* “Structure and Cleavage Energy of Surfactant-Modified Clay Minerals: Influence of CEC, Head Group, and Chain Length”
Fu, Y. T.; Heinz, H.
Philosophical Magazine 2010, 90, 2415-2424. Invited Paper.
[DOI:10.1080/14786430903559490](https://doi.org/10.1080/14786430903559490)
23. “Nanoscale Tensile, Shear, and Failure Properties of Layered Silicates as a Function of

- Cation Density and Stress”
Zartman, G. D.; Liu, H.; Akdim, B.; Pachter, R.; Heinz, H.
J. Phys. Chem. C 2010, 114, 1763-1772. [DOI: 10.1021/jp907012w](https://doi.org/10.1021/jp907012w)
22. “Computational Screening of Biomolecular Adsorption and Self-Assembly on Nanoscale Surfaces”
Heinz, H.
J. Comput. Chem. 2010, 31, 1564-1568. [DOI: 10.1002/jcc.21421](https://doi.org/10.1002/jcc.21421)
- 21.* "Synthesis, Structure, Characterization, and Properties of Organically Modified Layered Silicates"
Heinz, H.
In “Industry Guide to Polymer Nanocomposites “; Beyer, G., ed.; AMI: Bristol, 2009, p. 7-46. ISBN 978-1-906479046.
20. “Nature of Molecular Interactions of Peptides with Gold, Palladium, and Pd-Au Bimetal Surfaces in Aqueous Solution”
Heinz, H.; Farmer, B. L.; Pandey, R. B.; Slocik, J. M.; Patnaik, S. S.; Pachter, R.; Naik, R. R.
J. Am. Chem. Soc. 2009, 131, 9704-9714. [DOI: 10.1021/ja900531f](https://doi.org/10.1021/ja900531f)
- 19.* “Molecular Models and Simulations of Layered Materials”
Cygan, R. T.; Greathouse, J. A.; Heinz, H.; Kalinichev, A. G.
J. Mater. Chem. 2009, 19, 2470-2481. Invited article and journal cover (May 7).
[DOI: 10.1039/B819076C](https://doi.org/10.1039/B819076C)
18. “Adsorption of peptides (A3, Flg, Pd2, Pd4) on gold and palladium surfaces by a coarse-grained Monte Carlo simulation”
Pandey, R. B.; Heinz, H.; Feng, J.; Farmer, B. L.; Slocik, J. M.; Drummy, L. R.; Naik, R. R.
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- 13.* "Calculation of Local and Average Pressure Tensors in Molecular Simulation"
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6. "Analysis of the Phase Transitions in Alkyl-Mica by Density and Pressure Profiles"
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 1. "Normal and Defective Perylene Substitution Sites in Alkane Crystals"
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Patents

1. Heinz, H. "Methods and Systems for Accurate Simulation of Surfaces and Interfaces of FCC Metals" PCT Int. Appl. (2009), WO 2009036182 A2 20090319.
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Conference Proceedings

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9. Mishra, R. K.; Flatt, R. J.; Heinz, H. "Force Field Model of Alite Based on Stoichiometric Analysis" Proceedings of 35th Cement and Concrete Science Conference **2015**, University of Aberdeen, UK.
8. Mishra, R. K.; Flatt, R. J.; Heinz, H. "Molecular Understanding of Directional Surface and Interface Tensions of Gypsum and Plaster" Proc. 13th Int. Congr. On Chem. Cement **2011** (Madrid, Spain).
7. Mishra, R. K.; Flatt, R. J.; Heinz, H. "Cleavage Energy of Tricalcium Silicate and Interactions with Amine Additives" Proc. 13th Int. Congr. On Chem. Cement **2011** (Madrid, Spain).
6. Heinz, H.; Drummy, L. R.; Vaia, R. A.; Naik, R. R.; Farmer, B. L. „Peptide Binding to Sheet Silicate and Metal Nanoparticles: Insight from Atomistic Simulation“ Proc. ACS Div. Polym. Mater. Sci. Eng. **2008**, 98, 292-295.
5. Heinz, H.; Drummy, L. R.; Vaia, R. A.; Naik, R. R.; Farmer, B. L.

- “Modeling Peptides for Binding to Inorganic Surfaces and Thermal Transitions of Alkyl Chains on Flat Surfaces”
Smart Coatings Conference, Orlando, FL; ACS Symp. Ser. **2008**.
4. Heinz, H.; Jha, K. C.; Farmer, B. L.; Naik, R. R.
“Peptide Binding to Sheet Silicate and Metal Nanoparticles – Insight from Atomistic Simulation”
Proc. SAMPE Fall Technical Conference **2007**.
 3. Heinz, H.; Vaia, R. A.; Farmer, B. L.
“Free Energy of Exfoliation Between Layered Silicate Sheets”
Proc. ACS Div. Polym. Mater. Sci. Eng. **2005**, 93, 921-922.
 2. Heinz, H.; Anderson, K. L.; Koerner, H.; Vaia, R. A.; Farmer, B. L.
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 1. Heinz, H.; Vaia, R. A.; Farmer, B. L.
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Selected Press and Media Releases

7. 5+ Press releases, March 2017
For the NASA Institute for Ultrastrong Carbon Nanomaterials (incl. CU facebook)
6. The Times (London), October 20, 2016
Mentioned as newly elected Fellow of the Royal Society of Chemistry
5. 5+ Press releases, December 2015
About the 2016 Sandmeyer Award from the Swiss Chemical Society
4. 15+ News articles, September 2015
Science Daily, Nanowerk, Spiegel Online, Materials Today, Scinexx
"Physicists determine the three-dimensional positions of individual atoms for the first time",
"Unprecedented precise determination of three-dimensional atomic positions",
"Mikroskopie Forschern gelingt Blick in dreidimensionales Atomgitter"
3. Cleveland.com/business, 2011, May 7
"Cleveland choice awards announced" (KC's Biena Tech won Launchtown Award \$30k)
2. Columbus Dispatch, 2011, Jan 30, p. H3
"Mimicking Mollusks - With help of supercomputer, researcher hopes to unravel how nature forms shells, teeth and bone"

1. 30+ online press releases including USA Today, Ohio Supercomputer Center, NSF 2010, December, entitled “Simulations aim to unlock nature’s process of biomineralization”, “Heinz accesses Ohio Supercomputing Center to study organic-inorganic binding”

Undisclosed Proprietary Work

1. Heinz, H. (for Sika AG, Zürich), 2004
“Modeling of organic oligomers on mineral surfaces”

Invited Talks & Seminars (* Plenary)

149. „Discovery of New Materials by Simulation and Experiment: From Molecular Recognition to Catalysts, Composites, and Therapeutics“ · Nanyang Technological University, Materials Science and Engineering · Singapore · Nov 10, 2017
148. „Discovery of New Materials by Simulation and Experiment: From Molecular Recognition to Catalysts, Composites, and Therapeutics“ · Natl University of Singapore, Department of Chemistry · Singapore · Nov 9, 2017
147. „Discovery of New Materials by Simulation and Experiment: From Molecular Recognition to Catalysts, Composites, and Therapeutics“ · A*Star, Institute for High Performance Computing · Singapore · Nov 8, 2017
146. „Molecular Details of Photoreponses of Switchable Azobenzene Derivatives and Alkylammonium Surfactants in Clay Interlayer Spaces“ · 16th Int. Clay Conf. · Granada, Spain · July 18, 2017 (Keynote Talk)
145. „Molecular Modelling of Clays and Related Materials Using Empirical Interatomic Potentials / IFF“ · AIPEA School for Young Scientists · Granada, Spain · July 15/16, 2017 (Invited Lecture and Tutorial)
- 144.* „Discovery of New Materials by Simulation and Experiment: From Molecular Recognition to Catalysts, Composites, and Therapeutics“ · Int. Conf. on Emerging Areas in Materials Engineering · Amal Jyothi Coll. Engr, Kerala, India · July 13, 2017
143. „Reliable Computational Design of Biological-Inorganic Materials to the Large Nanometer Scale Using INTERFACE-FF“ · Fritz-Haber Inst of the Max-Planck Society · Berlin, Germany · June 22, 2017
142. „Molecular Principles of Green Nanomaterials Recognition and Assembly from Molecular Simulations“ · ACS Green Chemistry Conference · Reston, VA · June 15, 2017 (by Krishan Kanhaiya)
141. „Reliable Computational Design of Biological-Inorganic Materials“ · CECAM Workshop · Bremen, Germany · June 14, 2017
- 140.* “Discovery of New Materials by Simulation and Experiment: From Molecular Recognition to Catalysts, Composites, and Therapeutics“ · Bilkent University Nanoday · Ankara, Turkey · May 25, 2017

139. “Insight into Clay/Water Interfaces and Applications to Nanomaterials“ · Middle East Technical University, Geol. Engr. · Ankara, Turkey · May 24, 2017
138. “Explaining Cement Chemistry Using the INTERFACE Force Field: Foundations, Parameters, Surface Models, and Application“ · Nanocem Workshop · Les Diablerets, Switzerland · May 18, 2017
- 137.* “Development of Commercial Organic Additives for the Grinding of Inorganic Solids“ · SCS 13th Freiburger Symposium · Fribourg, Switzerland · May 12, 2017
136. “Simulation of Biological and Nanostructured Interfaces to Discover New Materials“ · IEEE-NEMS · UCLA, Los Angeles, CA · Apr 12, 2017
135. „Reliable Computational Design of Biological-Inorganic Materials to the Large Nanometer Scale Using INTERFACE-FF“ · ACS Spring Meeting · San Francisco, CA · Apr 4, 2017
134. „Computational Design of Biological-Inorganic Materials from the Nanoscale“ · Lonza AG · Visp, Switzerland · Mar 13, 2017
133. „Computational Design of Biological-Inorganic Materials from the Nanoscale“ · TMS National Meeting · San Diego, CA · Feb 28, 2017
132. „Reliable Computational Design of Biological-Inorganic Materials to the Large Nanometer Scale Using INTERFACE-FF“ · ICMS-2016 · Shanghai, China · Oct 24, 2016
131. „Rational Design of Mechanical Properties of Polyacrylonitrile Carbon Fibers“ · AFOSR Low Density Materials Review · Arlington, VA · Oct 13, 2016 (with Satish Kumar)
130. „Computational Design of Biological-Inorganic Materials to the Large Nanometer Scale Using INTERFACE-FF“ · CECAM School on Soft Matter Simulation · Schloss Waldthausen, Germany · Oct 12, 2016 (1.5 h Lecture + Tutorial)
- 129.* „Clay/Water Interfacial Models (Kaolinite, Micas, Montmorillonite) to Reproduce Contact Angles and Organic Adsorption“ · 5th Mediterranean Clay Meeting · Cesme/Izmir, Turkey · Sep 26, 2016 (Plenary after opening ceremony)
- 128.* “Development of Commercial Organic Additives for the Grinding of Inorganic Solids” · Sandmeyer Award Lecture, Swiss Chemical Society Fall Meeting · Zurich, Switzerland · Sep 15, 2016
127. “Simulation of Biological and Nanostructured Interfaces to Discover New Materials“ · Research Seminar, Adolphe Merkle Institute · Fribourg, Switzerland · Sep 13, 2016
126. “The INTERFACE Force Field and a Surface Model Database“ · Workshop on Integrated Simulation of Bio and Nanomaterials · Lehigh U, PA · Aug 24, 2016
125. “Simulation of Silicate and Aluminate Interfaces with Organic Additives, Water, and Alloys as a Function of Composition and pH” · Research Seminar, Corning · Corning, NY · Aug 4, 2016
124. “Nanoscale Modeling of Ni-Cr-Al and Mo-Si Oxidation and Interfacial Properties“ · ONR Program Review, UVa · Charlottesville, VA · Jun 29, 2016
123. “Simulation of Biological and Nanostructured Interfaces to Discover New Materials“ · CC3DMR Conference · Incheon, Korea · Jun 21, 2016
122. “Mechanism of Molecular Interaction of Superplasticizer Oligomers with Hydrated Cement Phases” · ETH Zurich, Dept of Civil Engr · Zurich, Switzerland · Jun 20, 2016 (by Tariq Jamil)

121. "Mechanism of Specific Recognition of Pt Nanocrystals by Peptides and of their Formation from Seed Crystals" · BIOMATSEN Conference · Istanbul, Turkey · Jun 2, 2016
120. "Simulation of Biological and Nanostructured Interfaces to Discover New Materials" · APMAS Conference · Istanbul, Turkey · Jun 1, 2016
119. "FATENANO: Simulation of Biological and Nanostructured Interfaces to Understand Biological Fate" · CIC Biomagune · San Sebastian, Spain · May 26, 2016
118. "Forcefield Improvements for CNT/Matrix Interactions and Nature of Polyacrylonitrile-CNT Interactions" · Structural CNT Working Group Meeting · NASA Langley Res Ctr, VA · Apr 28, 2016
117. "Simulation of Biological and Nanostructured Interfaces to Discover New Materials" · Global Nanotech Conf & Expo 2016 · Dubai, UAE · Apr 23, 2016
116. "Nanoscale and Multi-Scale Approaches to Design Building Materials" · Global Nanotech Conf & Expo 2016 · Dubai, UAE · Apr 21, 2016
115. "Simulation of Biological and Nanostructured Interfaces to Discover New Materials" · EMN Meeting · Kona, HI · Mar 22, 2016
114. "Prediction of Surface and pH-Specific Binding of Polymers and Biomacromolecules to Metal and Oxide Nanostructures Using Computational Models" · ACS Spring Meeting · San Diego, CA · Mar 15, 2016
113. "Mechanism of Specific Recognition of Pt Nanocrystals by Peptides and of their Formation from Seed Crystals" · TMS National Meeting · Nashville, TN · Feb 16, 2016
112. "Simulation of Biological and Nanostructured Interfaces to Discover New Materials" · University College London, Department of Chemistry · London, UK · Jan 4, 2016
111. "Mechanisms of Molecular Recognition and Assembly at the Nanoscale: Computation Meets Experiment" · University of Miami, Department of Chemistry · Miami, FL · October 23, 2015
110. "Prediction of Surface and pH-Specific Binding of Peptides to Metal and Oxide Nanoparticles" · ACS Fall Meeting · Boston, MA · August 16, 2015
109. "Simulation of Polymer-Inorganic Interfaces and Assembly at the Nanoscale: Computation Meets Experiment" · Corning · Corning, NY · August 11, 2015
108. "Mechanisms of Molecular Recognition and Assembly at the Nanoscale: Computation Meets Experiment" · Shanghai Jiao Tong University · Shanghai, China · Apr 29, 2015
107. "Mechanisms of Molecular Recognition and Assembly at the Nanoscale: Computation Meets Experiment" · Analytix2015 · Nanjing, China · Apr 26, 2015
106. "Mechanisms of Molecular Recognition and Assembly at the Nanoscale: Computation Meets Experiment" · IUPUI, Chemistry · Indianapolis, IN · Apr 22, 2015
105. "Insight into Nanoscale Properties of Polymers and Hydrogels from Molecular Simulation" · Eastman Chemical · Kingsport, TN · Apr 16, 2015
104. "Mechanisms of Molecular Recognition and Assembly at the Nanoscale: Computation Meets Experiment" · Northeastern University, Chemical Engineering · Boston, MA · Mar 17, 2015
103. "Mechanisms of Molecular Recognition and Assembly at the Nanoscale: Computation Meets Experiment" · Akron Section of ACS · Akron, OH · Feb 18, 2015

102. “Mechanisms of Molecular Recognition and Assembly at the Nanoscale: Computation Meets Experiment“ · Virginia Tech, Chemical Engineering · Blacksburg, VA · Feb 6, 2015
101. “Mechanisms of Molecular Recognition and Assembly at the Nanoscale: Computation Meets Experiment“ · University of Colorado-Boulder, Chemical and Biological Engineering · Boulder, CO · Jan 27, 2015
100. “The INTERFACE Force Field for the Accurate Simulation of Inorganic, Organic, and Biomolecular Compounds in a Single Platform“ · Biovia/Dassault Systemes · Webinar for Materials Community · Nov 13, 2014
99. “Atomic-Scale Structure and Catalytic Functionality of Bio-Inspired Nanoparticles: A Systematic Approach Using Computation and Experiment“ · MS&T 2014 · Pittsburgh, PA · Oct 15, 2014 (by H. Ramezani-Dakhel)
98. “Bioinspired and Layered Oxide Materials for Renewable Energy and Therapeutics: Insight from Molecular Models and Simulations at the 1-100 Nanometer Scale” · International Center for Materials Nanoarchitectonics (MANA) · National Institute for Materials Science (NIMS), Tsukuba, Japan · June 17, 2014
97. “Tutorial: How to Use the INTERFACE Force Field, Connect with Laboratory Tests and Multi-Scale Simulation Methods” · NSF Workshop on Transformative Technologies in Molecular Simulation · University of Wisconsin, Madison, WI · May 19, 2014
96. “The INTERFACE Force Field to Unite Materials and Biomolecular Simulation in a Single Platform: Examples of Protein Recognition on Metals, Silicates, and Phosphates” · NSF Workshop on Transformative Technologies in Molecular Simulation · University of Wisconsin, Madison, WI · May 19, 2014
95. “Challenges for Force Fields of Clay Minerals and New Kaolinite Parameters“ · Clay Minerals Society · College Station, TX · May 18, 2014
94. “Molecular Modeling of Multiphase Hydrogels for Particle Suspensions“ · Procter and Gamble · Cincinnati, OH · May 14, 2014
93. “Nanoscale pH-Responsive Interfaces of Hydroxyapatite - Molecular Modeling of Sn²⁺/Zn²⁺ Interaction with Enamel and Formulation Ingredients“ · Procter and Gamble · Cincinnati, OH · May 13, 2014
92. “Understanding Nanoscale pH-Responsive Interfaces of Hydroxyapatite and Silica for Selective Interactions with Peptides and Drug Molecules” · 6th Scientific Readings “A Modern Cement Plant” · Moscow, Russia · Nov 26, 2013
91. “Hybrid Solid-State Photovoltaic Materials and Devices” · US/Mexican Basic Research Initiative Final Workshop · Ensenada, MX · Sep 18, 2013
90. “Understanding Nanoscale pH-Responsive Interfaces of Hydroxyapatite and Silica for Selective Interactions with Peptides and Drug Molecules” · ACS National Meeting (D-COLL) · Indianapolis, IN · Sep 12, 2013
89. “Compatibility of Force Fields for Different Materials Classes and Validation of Interfacial Properties: The Interface Force Field as an Integrated Approach” · NIST Workshop on Interatomic Potentials for Industrial Needs · NIST, Gaithersburg, MD · August 14, 2013

88. “Metals, Silicates and Phosphates in Nanobiotechnology: From Nanoscale Interfaces to Applications” · Condensed Matter Theory Seminar, University of Mainz · Mainz, Germany · July 9, 2013
87. “Specific Adsorption of Grinding Aids and Molecules on Cement Phases and Silica” · Sika AG · Zurich, Switzerland · July 5, 2013
86. “Mechanisms of Molecular Recognition and Shape Control at the Nanoscale: Computation Meets Experiment” · CECAM Workshop on Solid-Liquid Interfaces · Lausanne, Switzerland · June 25, 2013
- 85.* “Silicates and Phosphates in Nanobiotechnology: From Nanoscale Interfaces to Applications” · Minerals for Life, Mineralogical Society · Edinburgh, UK · June 18, 2013
84. “Understanding Molecular Recognition and Growth of Metal Nanostructures from a Molecular Perspective” · University of Durham, Department of Chemistry · Durham, UK · June 10, 2013
83. “Structure, Dynamics, and Cohesion of Clay Intercalation Compounds with Functional Surfactants” · International Symposium on Materials Chemistry of Intercalation Compounds (MCIC2013) · Tokyo, Japan · May 11, 2013
82. “Aqueous Interfacial Properties of Silica, Cement Minerals, and Hydroxyapatite in Comparison to Clay Minerals” · Waseda University · Tokyo, Japan · May 9, 2013
81. “Mechanisms of Molecular Recognition and Self-Assembly at the Nanoscale: Computation Meets Experiment” · Department of Chemical Engineering, Auburn University · Auburn, AL · March 25, 2013
80. “Mechanisms of Molecular Recognition and Self-Assembly at the Nanoscale: Computation Meets Experiment” · School of Chemistry, Georgia Institute of Technology · Atlanta, GA · February 5, 2013
79. “Mechanisms of Molecular Recognition and Self-Assembly at the Nanoscale: Computation Meets Experiment” · Department of Materials Science and Engineering, University of California – Los Angeles · Los Angeles, CA · January 25, 2013
78. “Mechanisms of Molecular Recognition and Self-Assembly at the Nanoscale: Computation Meets Experiment” · SERMACS · Raleigh, NC · November 15, 2012
77. “Mechanisms of Molecular Recognition and Self-Assembly at the Nanoscale: Computation Meets Experiment” · Ohio Supercomputing Center, Ohio State University · Columbus, OH · November 2, 2012
76. “Clay Minerals for Nanocomposites and Biotechnology: Surface Modification, Dynamics, and Responses to Stimuli” · Clay Minerals Society Annual Meeting · Golden, CO · July 11, 2012
75. “Mechanisms of Molecular Recognition and Self-Assembly at the Nanoscale: Computation Meets Experiment” · California Institute of Technology, Chemistry and Chemical Engineering · Pasadena, CA · July 5, 2012
74. “Mechanisms of Molecular Recognition and Self-Assembly at the Nanoscale: Computation Meets Experiment” · University of Strathclyde, Chemical Engineering · Glasgow, UK · May 24, 2012
73. “Mechanisms of Molecular Recognition and Self-Assembly at the Nanoscale: Computation Meets Experiment” · University of Mainz (Physics) · Mainz, Germany · May 4, 2012

72. "Insight into Molecular Recognition and Mechanical Properties at the Nanoscale Using Computational Approaches" · Army Research Laboratory (Materials and Manufacturing Directorate) · Aberdeen Proving Ground, MD · Apr 25, 2012
71. "Force Field Parameters for Interfaces: Silicates and Hydroxides" · Accelrys, Inc. · San Diego, CA · Mar 30, 2012
70. "Mechanism of Adsorption of Peptides and Surfactants on Metal Surfaces" · ACS Spring Meeting (D-COLL) · San Diego, CA · Mar 27, 2012
69. "Understanding of Molecular Recognition and Self-Assembly at the Nanoscale Using Computational Tools" · Materials Science and Engineering Program · Sabanci University · Istanbul, Turkey · Mar 14, 2012
68. "Organic and Hybrid Organic Solid-State Photovoltaic Materials and Devices: Modeling and Simulation of Interfacial Dynamics" · AFOSR/MX Basic Research Initiative · Wright-Patterson AFB · Dayton, OH · Feb 8, 2012
67. "Understanding Size Control and Catalytic Performance of Peptide-Capped Pd Nanoparticles Using Simulation" · Biotechnology Review · Air Force Research Laboratory · Dayton, OH · Jan 17, 2012
66. "Computer-Aided Understanding of Molecular Recognition and Self-Assembly at the Nanoscale" · Adolphe Merkle Institute Fribourg, Switzerland · Dec 12, 2011
- 65.* The George Brown Lecture of the Mineralogical Society of Great Britain and Ireland: "Clay Minerals for Nanocomposites and Biotechnology: Surface Modification, Dynamics, and Responses to Stimuli" · Euroclay 2011 · Antalya, Turkey · Jun 27, 2011
64. "Understanding and tuning the binding strength of surfactants and biomolecules to Au and Pd surfaces in solution: Molecular epitaxy, covalent bonding, and induced charges" · CMOS Emerging Technologies Workshop · Hilton Resort and Spa · Whistler, CA · Jun 17, 2011
63. "Understanding Biomolecule-Inorganic Interfaces and Growth of Anisotropic Nanostructures" · NSTI Nanotech 2011 · Boston, MA · Jun 14, 2011
62. "Challenges and Opportunities for Nanomaterials Chemistry and Biology in Silico" · ETH Zurich, Department of Civil Engineering · Zurich, Switzerland · Jun 9, 2011
61. "Molecularly Designed Interfaces for Construction Materials, Sensors, and Catalysts: From Theory to Applications" · ETH Zurich, Department of Civil Engineering · Zurich, Switzerland · Jun 6, 2011
60. "Molecular-Level Understanding of Biomolecule-Inorganic Interactions" · CECAM Workshop "Grand Challenges in Understanding Interfaces Between Hard and Soft Matter" · EPFL Lausanne · Switzerland · May 11, 2011
59. "Molecularly Designed Interfaces for Biomaterials, Sensors, and Catalysts: From Theory to Applications" · University of Washington · Department of Materials Science and Engineering · Seattle, WA · Apr 18, 2011
58. "Molecularly Designed Interfaces for Biomaterials, Sensors, and Catalysts: Force-field Based Simulation and New Theory" · Center for Advanced Scientific Computing and Modeling · University of North Texas · Denton, TX · Apr 7, 2011
57. "Molecular-Level Understanding of Biomolecule-Inorganic Interactions" · Exploring Biological Interfaces Workshop · Caribe Hilton Hotel · San Juan, PR · Apr 4-6, 2011

56. "Simulation of Biomaterials and Interfaces" · Institute of Materials Science · University of Jena · Jena, Germany · Feb 14, 2011
55. "Binding of Peptides to Metal and Silica Nanostructures - Relation between Particle Size, Peptide Sequence, and Catalytic Activity" · AFRL Biotech Review · WPAFB, OH · Jan 12, 2011 (delivered by R. J. Berry due to weather).
54. "Selective Adsorption of Biomolecules on Nanostructured Metal and Silica Surfaces" · Department of Physics · University of Mainz, Germany · Dec 17, 2010
53. "NSF Career: Unraveling Molecular Mechanisms of Biomineralization" · Board of Trustees Meeting · University of Akron, OH · Dec 15, 2010
52. "Nanomechanics and Dispersion of Layered Silicates in Polymer Matrices" · 2nd Int. Conf. on Nanomechanics and Nanocomposites · Beijing, China · Oct 11, 2010
51. "A Model for CSH with Validated Structural and Surface Properties" · Sika Technology AG · Zurich, Switzerland · June 30, 2010
50. "Molecular Models and Methods to Understand Self-Assembly of Inorganic-Bioorganic Multiphase Materials" · NSTI Nanotech 2010 · Anaheim, CA · June 22, 2010
49. "Interaction of Protein Building Blocks and Surfactants with Shaped Surfaces of Au, Pd, and Silica in Aqueous Solution" · CERMACS 2010 · Dayton, OH · June 16, 2010
48. "Interaction of Protein Building Blocks and Surfactants with Shaped Surfaces of Au, Pd, and Silica in Aqueous Solution" · Institute for Complex Adaptive Matter, JNC for Adv Sci Res · Bangalore, India · April 26, 2010
47. "Interaction of Protein Building Blocks and Surfactants with Shaped Surfaces of Au, Pd, and Silica in Aqueous Solution" · Telluride Workshop on Interfacial Phenomena in Nanostructured Materials and Devices · Telluride, CO · Feb 10, 2010
46. "Molecular Simulation of Adsorption of Protein Building Blocks and Surfactants on Shaped Metal and Silicate Surfaces in Aqueous Solution" · Max-Planck Inst. for Dyn. Comp. Techn. Syst. · Magdeburg, Germany · Jan 8, 2010
45. "Force Field Development for Layered Silicates, FCC Metals, Polymers, and Their Application" · Accelrys, Inc. · Cambridge, UK · Nov 9, 2009
- 44.* "Interaction of Peptides and Surfactants with Shaped Surfaces of Au, Pd, and Silica in Aqueous Solution" · Int. Symp. Stim. Resp. Materials · Hattiesburg, MS · Oct 28, 2009
43. "Nanoscale Linear Mechanical and Cleavage Properties of Layered Silicates" · Sandia National Laboratories · Albuquerque, NM · Sep 22, 2009
42. "Interaction of Protein Building Blocks and Surfactants with Shaped Surfaces of Au, Pd, and Silica in Aqueous Solution" · AFRL/RX Biotech Review, WBI · Dayton, OH · Sep 15, 2009
41. "Interaction of Protein Building Blocks and Surfactants with Shaped Surfaces of Au and Pd Nanostructures in Solution" · University of Akron, Department of Polymer Science · Akron, OH · Sep 3, 2009
40. "Functional Interfaces of Silicates with Peptides and Polymers Guided By Molecular Simulation" · ACS Fall National Meeting · Washington, DC · August 19, 2009
39. "Interaction of Protein Building Blocks and Surfactants with Shaped Surfaces of Au and Pd Nanostructures in Solution" · University of Patras (Greece) · Department of Chemical Engineering · June 29, 2009

38. "Interaction of Amino Acids, Surfactants, and Peptides with Even, Stepped, and Spherical Surfaces of Gold and Palladium Nanostructures in Aqueous Solution" · AFRL/RX Research Meeting · Wright-Patterson AFB, OH · May 29, 2009
37. "Simulation of FCC Metals and Metal-Biological Interfaces for Nanoelectronic and Sensor Applications" · NIST · Workshop on Atomistic Simulations for Industrial Needs · Gaithersburg, MD · Apr 27, 2009
36. "Design of Functional Nanoparticle Interfaces and Polyelectrolytes Guided By Atomistic Simulation" · Int. Conf. on High Tech Mat. 2009 · IIT Kharagpur, India · Feb 12, 2009
35. "Molecular Dynamics Simulation of Poly(ethylene oxide) and Clay Mineral Interfaces with Surfactants and Peptides In Aqueous Solution" · Procter & Gamble · Cincinnati, OH · Dec 19, 2008
34. "Modeling the Interaction of Peptides and Surfactants with Inorganic Surfaces: Understanding Specificity Through Computation and Experiment" · Dept Seminar Chemistry · Nottingham Trent Univ · Nottingham, UK · Nov 5, 2008
33. "Adsorption of Single Amino Acids and Surfactants to Au {111} Surfaces in Aqueous Solution - Insight from Atomistic Simulation" · Dept Seminar Physics · Univ of South Mississippi, MS · Oct 31, 2008
- 32.* "Design of Functional Nanoparticle Interfaces and Polyelectrolytes Guided By Atomistic Simulation" · Int. Conf. on Stimuli-Responsive Materials · Hattiesburg, MS · Oct 29, 2008
31. "Nanomechanics and Energetics of Layered Silicates for Nanocomposites" · ACS Rubber Tech Meeting and Expo · Louisville, KY · Oct 15, 2008 (given by J. Feng)
30. "Simulation of Metals and Metal-Biological Interfaces for Sensor and Nanoelectronic Applications" · Dept Seminar Math and Applied Math · Univ of Akron, OH · Oct 2, 2008
29. "Atomistic Simulation of PEO in Solution – Challenges and New Models" · University of Mainz, Germany · Condensed Matter Physics Seminar · June 24, 2008
28. "Peptide Binding to Inorganic Surfaces and Thermal Transitions of Alkyl Chains on Nanoparticle Surfaces: Computation and Experiment" · ACS Central Regional Meeting · Columbus, OH · June 11, 2008
27. "Simulation of Inorganic-(bio)organic Interfaces and Thermal Transitions of Alkyl Chains on Surfaces" · Smart Coatings 2008 · Orlando, FL · Feb 27, 2008
26. "Molecular Simulation of Inorganic-Biological Interfaces and Optically Switchable Materials" · 7th Int. Conf. on Adv. Polymers for Macromol. Eng. (APME) · Miami, FL · Dec 17, 2007
- 25.* "Atomistic Simulation of Inorganic-Biological Interfaces and Optically Switchable Materials" · 2nd International Symposium on Stimuli-Responsive Materials · University of Southern Mississippi · Hattiesburg, MS · Oct 31, 2007
24. "Peptide Binding to Sheet Silicate and Metal Nanoparticles – Insight from Atomistic Simulation" · SAMPE Fall Technical Meeting · Cincinnati, OH · Oct 30, 2007
23. "Effective Atomistic Models for Inorganic-Biological Interfaces and Optically Switchable Materials" · Kent State University, Dept of Chemistry · Kent, OH · Sep 06, 2007
22. "Influence of Peptide Sequence on Adsorption on Au, Pd, and Montmorillonite Nanoparticle Surfaces - Insight from Atomistic Simulation" · WPAFB, AFRL/ML, Dayton, OH · Aug 14, 2007

21. "A Force Field for Layered Silicates and Simulation of Interfaces with Surfactants and Peptides" · 44th Annual Meeting of the Clay Minerals Society · Santa Fe · NM · June 6, 2007
20. "Simulation of Hybrid Materials and Interfaces: Insight from Atomistic and Coarse-grain Models" · ORNL · Chemical Sciences Division · Knoxville, TN · Mar 6, 2007
19. "Peptide Design for Binding to Metal Surfaces Using Atomistic Simulation" · WPAFB, AFRL/ML, Dayton, OH · Feb 20, 2007
18. "Force Fields for Sheet Silicates and Metals" · Accelrys User Meeting and Conference Baltimore, MD · Nov 15, 2006
17. "Simulation of Nanostructured Materials Using Atomistic and Coarse Grain Models" University of Central Florida · Nanoscience and Technology Center · Orlando, FL · Apr 26, 2006
16. "Simulation of Nanostructured Materials Using Atomistic and Coarse Grain Models" University of Akron · Dept. of Polymer Engineering · Akron, OH · Apr 18, 2006
15. "Simulation of Nanostructured Materials Using Atomistic and Coarse-Grain Models" Florida State University · Dept. of Chemical and Biomedical Engineering · Tallahassee, FL · Mar 14, 2006
14. "Simulation of Organic-Inorganic Interfaces Containing Sheet Silicates" · Los Alamos National Laboratory · Theory Division · Los Alamos, NM · Feb 15, 2006
13. "Simulation of Organic-Inorganic Interfaces Using Atomistic and Coarse Grain Models" Academia Sinica · Research Center for Applied Sciences · Taipei, Taiwan · Feb 9, 2006
12. "Simulation of Organic-Inorganic Interfaces Using Atomistic and Coarse Grain Models" University of Karlsruhe · DFG Center for Functional Nanomaterials · Karlsruhe, Germany Jan 18, 2006
11. "Atomistic Simulation of Nanostructured Interfaces with Sheet Silicates" · University of Mainz · Department of Physics · Condensed Matter Theory Seminar · Dec 22, 2005
10. "Towards Quantitative Atomistic Simulation of Nanostructured Hybrid Materials" · UIUC Department of Physics (Yia-Chung Chang) · Nov 9, 2005
9. "Simulation of Structure-Property Relationships in Polymer/Layered Silicate Nanocomposites" · ACS Rubber Expo, Fall 168th Technical Meeting · Pittsburgh, PA · Nov 1, 2005
8. "Self-assembly of alkylammonium chains on montmorillonite: Effect of chain length, head group structure, and cation exchange capacity" · AFRL/ML, WPAFB · Polymer Branch Research Seminar · Oct 7, 2005
7. "Molecular Modeling of Superplasticizers in Cementitious Systems: Progress" · Sika Technology AG · Zurich, Switzerland · Apr 12, 2005
6. "Energy Models and Atomistic Simulation of Clays with Surface-Grafted Alkylammonium Chains" · MIT · Atomistic Modeling and Simulation Seminar (AMASS) Cambridge, MA · Nov 29, 2004
5. "Modeling Single Molecule Spectral Shifts and Organically Modified Silicates" · ETH Zurich, Swiss Center for Scientific Computing · Computational Chemistry Seminar (M. Parrinello) · Manno, Switzerland · Sep 24, 2003

4. "Simple Energy Models and Simulation of Organically Modified Silicates" · University of Akron · Department of Polymer Science · Polymer Science Colloquium · Aug 19, 2003
3. "Simple Energy Models and Simulation of Organically Modified Silicates" · Air Force Research Laboratory, Wright-Patterson AFB · Materials Science and Technology Colloquium · Dayton, OH · Aug 15, 2003
2. "Partial Charges in Polar Solids" · University of Mainz · Department of Physics · Seminar on Condensed Matter Theory · Mainz, Germany · Dec 3, 2002
1. "Molecular Modeling of Dye-doped Hydrocarbons" · ETH Zurich · Institute of Quantum Electronics · Group Seminar Prof. H. Baltes · Zurich · Jan 20, 2001

Conference Contributions (Talks, Posters incl. coworkers)

- 141.T „Development and Validation of Polarized Models for Graphitic Biosensors“ · AVS Meeting · Tampa, FL · Oct 31, 2017 (by Amanda Garley)
- 140.T „Clay/Water Interfacial Models (Kaolinite, Micas, Montmorillonite) to Reproduce Hydration Energies, Contact Angles, and Organic Adsorption“ · 16th Int. Clay Conf. · Granada, Spain · July 18, 2017
- 139.T „Tricalcium Silicate Hydration in Absence and Presence of Aluminate Ions: A Step Towards a Molecular Understanding of How the Hydration Rate of Cement Depends On its Formulation“ · ACS Spring Meeting · San Francisco, CA · Apr 5, 2017 (by Jean-Baptiste d’Espinoise de Lacaillerie)
- 138.T “Reliable Computational Design of Biological-Inorganic Materials to the Large Nanometer Scale Using INTERFACE-FF” · Dechema ProcessNet · Frankfurt, Germany · Mar 10, 2017
- 137.T “Simulation of Biological and Nanostructured Interfaces to Discover New Materials” · AIChE Annual Meeting · San Francisco, CA · Nov 17, 2016
- 136.P “Diffusion of Molecular Oxygen on Low Index Ni and Al Surfaces” · MURI Review, University of Virginia · Charlottesville, VA · Jun 29, 2016 (by Krishan Kanhaiya)
- 135.P “Electronically Refined Force Fields for BCC and HCP Metals” · MURI Review, University of Virginia · Charlottesville, VA · Jun 29, 2016 (by Chamila Dharmawardhana)
- 134.P “Modeling of Mo₃Si (A15) Oxidation and Resulting Silica Morphology” · MURI Review, University of Virginia · Charlottesville, VA · Jun 29, 2016 (by Chamila Dharmawardhana)
- 133.P “MoSi₂ Oxidation: Mechanism and Silica Growth” · MURI Review, University of Virginia · Charlottesville, VA · Jun 29, 2016 (by Chamila Dharmawardhana)
- 132.P “Refined Parameters for Cations and Anions in Aqueous Solution for Atomistic Force Fields” · 5th World Congress on Mater. Sci. & Engr · Alicante, Spain · Jun 13-15, 2016 (by Tariq Jamil)
- 131.T “Mechanism of Molecular Interaction of Superplasticizer Oligomers with Hydrated Cement Phases” · 5th World Congress on Mater. Sci. & Engr · Alicante, Spain · Jun 13-15, 2016 (by Tariq Jamil)

- 130.T “Development of Atomistic Force Field and Interfacial Study of Cementitious Minerals” · 4th International Workshop on Mechanisms and Modelling of Waste/Cement Interactions · Murten, Switzerland · May 22-25, 2016 (by Ratan Mishra)
- 129.T “Tuning Catalytic Properties of Pd Nanoparticles through Bioinspired Synthesis and Control of Surface Disorder” · CU Boulder Catalysis Group · Boulder, CO · Apr 1, 2016
- 128.P “Development and Validation of Polarized Models for Peptide-Graphene Interactions” · APS March Meeting · Baltimore, MD · March 17, 2016 (by Amanda Garley)
- 127.T “Investigating the Binding of Peptides to Graphene Surfaces for Biosensing Applications” · APS March Meeting · Baltimore, MD · March 14, 2016 (by Amanda Garley)
- 126.P “Design and Testing of Nanoalloy Catalysts in 3D Resolution” · DoE/NSF Materials Genome Principal Investigators Meeting · Bethesda, MD · Jan 11/12, 2016 (by Yu Huang)
- 125.T “Development of Empirical Force Fields Parameters for Graphene/Graphite and Its Application to Biorecognition at Molecular Interface” · MRS Fall Meeting · Boston, MA · Dec 4, 2015 (by Nabanita Saikia)
- 123.T “Biomolecules at Gold-Water Interfaces: The Role of the Metal Polarization” · MRS Fall Meeting · Boston, MA · Dec 2, 2015 (by Marialore Sulpizi)
- 122.T “Modeling of High Temperature Oxidation of Ni-Cr-Al at the 1 to 100 nm Scale” · MS&T 2015 · Columbus, Ohio · Oct 8, 2015
- 121.T “Refined Parameters for Cations and Anions in Aqueous Solution for Atomistic Force Fields” · MS&T 2015 · Columbus, Ohio · Oct 7, 2015 (by Tariq Jamil)
- 120.T “Development of Accurate, Polarizable, and Transferable Force Field Parameters for Graphite and Graphene to Simulate Bionanointerfaces” · MS&T 2015 · Columbus, Ohio · Oct 7, 2015 (by Nabanita Saikia)
- 119.P “Mechanism of Molecular Interaction of Superplasticizer Oligomers with Hydrated Cement Phases” · MS&T 2015 · Columbus, Ohio · Oct 6, 2015 (by Tariq Jamil)
- 118.P “Mechanism of Molecular Interaction of Superplasticizer Oligomers with Hydrated Cement Phases” · POLYCHAR23 · University of Nebraska, Lincoln · Lincoln, NE · May 13, 2015 (by Tariq Jamil)
- 117.T “Towards Molecular-Level Insight into Reversible Swelling of Layered Titanates” · MRS Spring Meeting · San Francisco, CA · Apr 9, 2015
- 116.T “The INTERFACE Force Field to Unite Materials and Biomolecular Simulation in a Single Platform: Examples of Protein Recognition on Metals, Silicates, and Phosphates” · MRS Spring Meeting · San Francisco, CA · Apr 8, 2015
- 115.T “Peptide-Based Strategies to Control the Structure/Function Relationship of Nanocatalysts” · MRS Spring Meeting · San Francisco, CA · Apr 7, 2015 (by Marc Knecht)
- 114.P “Design and Testing of Nanoalloy Catalysts in 3D Resolution” · DoE/NSF Materials Genome Principal Investigators Meeting · Bethesda, MD · Jan 12, 2015
- 113.T “Molecular Interaction of Peptides and Ionic Liquids with Gold Surfaces and the Mechanism of Nanorod Growth” · MRS Fall Meeting · Boston, MA · Dec 3, 2014
- 112.T “Elucidation of Structure/Function Relationships of Metal Nanoparticles Using a Combination of X-Ray Diffraction, Reverse Monte Carlo, and Molecular Dynamics” · MRS Fall Meeting · Boston, MA · Dec 2, 2014

- 111.P “A Simple Polarizable Model for the Simulation of FCC Metals at Biological Interfaces” · MRS Fall Meeting · Boston, MA · Dec 1, 2014 (by H. Ramezani-Dakhel)
- 110.P “Interfacial Structure of Substituted Poly(phenyleneethynylene)s in Contact with Ligand-Stabilized CdS Nanoparticles” · MRS Fall Meeting · Boston, MA · Dec 1, 2014
- 109.T “A Silica Surface Model Database and Computational Prediction of Specific Peptide Binding as a Function of pH and Particle Size” · MRS Fall Meeting · Boston, MA · Dec 1, 2014
- 108.T “The INTERFACE Approach toward Accurate Force Field Parameters – Example Predictions for Aluminosilicates at the 1 to 100 nm Scale” · MS&T 2014 · Pittsburgh, PA · Oct 16, 2014
- 107.T “Nanocoatings on Clay and Cement: Understanding the Action of Surfactants and Grinding Aids” · MS&T 2014 · Pittsburgh, PA · Oct 15, 2014 (by T. Jamil)
- 106.T “Unraveling Molecular Mechanism of Pt{100} Recognition and Formation of Cubic Nanoparticles in Peptide Directed Synthesis” · MS&T 2014 · Pittsburgh, PA · Oct 15, 2014 (by H. Ramezani-Dakhel)
- 105.T “Accurate Atomistic Models of pH Responsive Surfaces of Silica and Apatite to Quantify Recognition of Proteins and Drugs” · MS&T 2014 · Pittsburgh, PA · Oct 15, 2014
- 104.T “Facet-Specific Molecular Recognition Mechanisms on Metal Surfaces and Applications to Nanostructure Shape Control” · MS&T 2014 · Pittsburgh, PA · Oct 15, 2014
- 103.T “Molecular Mechanisms of Size Control and Catalytic Functionality of Peptide-Directed Palladium Nanocrystals in Aqueous Solution” · MS&T 2014 · Pittsburgh, PA · Oct 13, 2014 (by H. Ramezani-Dakhel)
- 102.T “Atomic-Level Insight into Interactions of Poly(phenyleneethynylene)s with Ligand-Stabilized CdS Nanoparticles” · MS&T 2014 · Pittsburgh, PA · Oct 13, 2014
- 101.P “Properties of PAN-Carbon Nanotube Composites via Multiscale Simulation” · DARPA Carbon Nanofiber Review · Georgia Inst of Technology, Atlanta, GA · Oct 9, 2014 (by Jake Gissinger)
- 100.T “Alloys and Oxide Phases in Chemical Resolution up to the 100 Nanometer Scale: Modeling and Experiment” · MURI Kickoff Meeting on Corrosion in 4D · Evanston, IL · Oct 2, 2014
- 99.T “Multi-Modelling Approach to Clinker Grinding” · 34th Cement and Concrete Science Conference · Sheffield, UK · Sep 14-17, 2014 (given by Robert Flatt)
- 98.T “Accurate Atomistic Force Fields and Models for Cement Minerals and Aqueous Organic Interfaces” · American Ceramic Society, Cement Division Meeting (ACerS-D) · Cookville, TN · July 11, 2014
- 97.T “Multi-Modelling Approach to Study the Effectiveness of Grinding Aids” · American Ceramic Society, Cement Division Meeting (ACerS-D) · Cookville, TN · July 10, 2014 (with R. J. Flatt)
- 96.P “Atomic-Scale Examination of Bio-Derived Nanoparticles: From Structure to Catalytic Functionality” · NSF Workshop on Transformative Technologies in Molecular Simulation · University of Wisconsin, Madison, WI · May 20, 2014 (by H. Ramezani-Dakhel)
- 95.P “Polarizable Force Field for the Simulation of Face-Centered Cubic Metals and Biological Interfaces” · ACS Spring Meeting · Dallas, TX · Mar 18, 2014 (by H. Ramezani-Dakhel)

- 94.T “Mechanism of Selective Recognition of Cubic Platinum Nanocrystals by Peptides in Aqueous Solution” · ACS Spring Meeting · Dallas, TX · Mar 16, 2014 (by H. Ramezani-Dakhel)
- 93.T “Structure, Dynamics, and Cohesion of Clay Intercalation Compounds with Functional Surfactants” · MRS Fall Meeting · Boston, MA · Dec 4, 2013
- 92.T “Understanding Molecular Mechanisms of Size Control of Peptide Directed Palladium Nanocrystals and Catalytic Activity in Coupling Reactions” · MRS Fall Meeting · Boston, MA · Dec 4, 2013 (by H. Ramezani-Dakhel)
- 91.P “Platinum Cubic Nanocrystals: Unraveling Molecular Mechanism of Shape Control in Peptide Mediated Synthesis” · MRS Fall Meeting · Boston, MA · Dec 2, 2013 (by H. Ramezani-Dakhel)
- 90.T “Clay Minerals and Cement Minerals: Molecular and Interfacial Properties in Model and Experiment” Clay Minerals Society Annual Meeting · Urbana-Champaign, IN · Oct 7, 2013
- 89.T “Nanoscale Interfaces of Tricalcium Silicate and Organic Dispersants in Cement – Agglomeration and Initial Hydration” · ACS National Meeting (D-COLL) · Indianapolis, IN · Sep 11, 2013
- 88.T “Understanding Molecular Recognition and Growth of Nanostructures from a Molecular Perspective” · Workshop Directed Assembly of Functional Nanomaterials · University of Strathclyde, Glasgow, UK · June 13, 2013
- 87.T “Understanding the Effectiveness of Polycarboxylates as Grinding Aids” · 10th Int. Conference on Superplasticizers and Other Chemical Admixtures in Concrete · Prague, Czech Republic · October 29, 2012 (by R. K. Mishra)
- 86.T “Control Over Self Assembly of Diblock Copolymers on Hexagonal and Square Templates for High Area Density Circuit Boards” · ACS Fall Meeting (D-POLY) · Philadelphia, PA · Aug 24, 2012
- 85.T “Influence of the Shape of Nanostructured Metal Surfaces on Adsorption of Single Peptide Molecules in Aqueous Solution” · ACS Fall Meeting (D-POLY) · Philadelphia, PA · Aug 22, 2012
- 84.T “Stabilization Mechanism of Cubic Platinum Nanocrystals in Peptide Mediated Synthesis” · ACS Fall Meeting (D-POLY) · Philadelphia, PA · Aug 22, 2012 (given by H. Ramezani-Dakhel)
- 83.P “Interaction of Substituted Poly(phenylene ethynylene) with Core-Shell CdS Nanoparticles” · ACS Fall Meeting (D-ENFL) · Philadelphia, PA · Aug 22, 2012 (given by H. Liu)
- 82.P “Abstraction Energy Controls Catalytic Activity of Palladium Nanocrystals in Atom Leaching Carbon-Carbon Coupling Reactions” · ACS Fall Meeting (D-COMP) · Philadelphia, PA · Aug 22, 2012 (given by H. Ramezani-Dakhel)
- 81.P “Simulation of Dye Sensitized Solar Cells” · ACS Fall Meeting (D-POLY) · Philadelphia, PA · Aug 21, 2012 (given by H. Liu)
- 80.P “Towards Rational Biomimetic Design: A Dynamic Phenyl Molecular Switch for Pt {111} Facet Recognition” · ACS Fall Meeting (D-COLL) · Philadelphia, PA · Aug 21, 2012 (given by L. Ruan)

- 79.P “Surface Properties of Hydroxyapatite and Molecular Models for the Simulation of Hybrid Interfaces” · ACS Fall Meeting (D-COLL) · Philadelphia, PA · Aug 21, 2012 (given by T. J. Lin)
- 78.T “Nanomechanics and Dispersion of Layered Silicates in Polymer Matrices: Moduli, Cleavage Energy, and Free Energy of Exfoliation” · S-Polymat 2012 · Kerkrade, Netherlands · May 22, 2012
- 77.T “Bending of Layered Silicates on the Nanometer Scale: Mechanism, Stored Energy, and Curvature Limits” · ACS Spring Meeting (D-COLL) · San Diego, CA · Mar 29, 2012
- 76.T “Nanomechanics and Dispersion of Layered Silicates in Polymer Matrices: Moduli, Cleavage Energy, and Free Energy of Exfoliation” · ACS Spring Meeting (D-INOR) · San Diego, CA · Mar 29, 2012
- 75.T “Atomistic Simulation of Aqueous Silica Interfaces” · ACS Spring Meeting (D-INOR) · San Diego, CA · Mar 27, 2012 (given by F. S. Emami)
- 74.T “Cleavage Energy of Tricalcium Silicate and Interactions with Amine Additives” · 13th Int. Congress on Cement Chemistry · Madrid, Spain · Jul 7, 2011 (given by R. K. Mishra, won best short presentation award).
- 73.T “Molecular Understanding of Directional Surface and Interface Tensions of Gypsum and Plaster of Paris” · 13th Int. Congress on Cement Chemistry · Madrid, Spain · Jul 7, 2011 (given by R. K. Mishra).
- 72.P “Nanomechanics, Bending Stability, and Failure of Layered Silicates as Function of CEC and Stress” · MRS Fall Meeting · Boston, MA · Dec 2, 2010
- 71.T “Molecular Mechanism of Peptide Binding to Silica Surfaces – Experiment and Simulation” · MRS Fall Meeting · Boston, MA · Dec 1, 2010
- 70.T “Tuning Exfoliation Thermodynamics by Surface Modification of Organoclays” · PPS-26 Istanbul · Istanbul, Turkey · Oct 20, 2010
- 69.T “Molecular Models and Methods to Understand Self-Assembly of Inorganic-Bioorganic Multiphase Materials” · ACS Fall Meeting 2010 · Boston, MA · Aug 26, 2010
- 68.T “An Accurate Force Field and Atomistic Models for Tricalcium Silicate, Alite, and Adsorption of Molecular Grinding Aids” · NIST Computer Modeling Workshop · Gaithersburg, MD · Aug 11-13, 2010 (given by R. Mishra)
- 67.T “Molecular Mechanisms of Selective Peptide-Metal Interactions and Effects on Particle Growth” · OCCBIO 2010 · Columbus, OH · Jun 15, 2010 (given by J. Feng)
[Further talks by R. J. Berry, R. B. Pandey in between not listed here]
- 66.T “Directed Self-assembly of Block Copolymers on Topological Substrates: A Monte Carlo Simulation” · AIChE Meeting · Nashville, TN · Nov 11, 2009 (given by J. Feng)
- 65.T “Quantifying Adsorption of Amino Acids and Surfactants on Au {111} Surfaces in Aqueous Solution” · ACS Fall National Meeting · Washington, DC · Aug 19, 2009 (given by J. Feng)
- 64.T “Nature of Molecular Interactions of Peptides With Gold, Palladium, and Pd-Au Bimetal Surfaces in Aqueous Solution” · ACS Fall National Meeting · Washington, DC · Aug 17, 2009
- 63.T “Accurate Simulation of Layered Silicates and Their Interfaces” · 14th Int. Clay Conf. · Castellaneta Marina, Italy · Jun 18, 2009

- 62.T “Structure and Cleavage Energy of Surfactant-Modified Clays: Influence of CEC, Head Group, and Chain Length” · 14th Int. Clay Conf. · Castellaneta Marina, Italy · Jun 14, 2009
- 61.P “Trends in Cleavage Energies of Alkylammonium-Modified Layered Silicates as a Function of Cation Density, Head Group Structure, and Chain Length” · Y. T. Fu, HH et al. · APS March Meeting · Pittsburgh, PA · Mar 16–20, 2009
- 60.P “Quantifying Polarization at Metal-Biological Interfaces in Solution” · K. C. Jha, HH et al. · APS March Meeting · Pittsburgh, PA · Mar 16–20, 2009
- 59.P “Simulation of Peptide Binding to Silica and Silica Mineralization” · F. S. Emami, HH et al. · APS March Meeting · Pittsburgh, PA · Mar 16–20, 2009
- 58.T “Atomistic Simulation of Cleavage Energy of C3S and Organic-silicate Interactions” · R. K. Mishra, HH et al. · NanoCem Workshop · Derio, Spain · Mar 3, 2009
- 57.T “Peptide Binding to Metal, Bimetal, and Layered Silicate Even Surfaces” · MRS Fall Meeting · Boston, MA · Dec 1, 2008 (given by R. B. Pandey)
- 56.T “Adsorption of Single Amino Acids and Surfactants to Au {111} Surfaces In Aqueous Solution - Insight from Atomistic Simulation” · AIChE Annual Meeting · Philadelphia, PA · Nov 20, 2008 (given by J. Feng)
- 55.T “Atomistic Simulation of Poly(ethylene oxide) In Aqueous Solution: Challenges and Suggestions for Models” · AIChE Annual Meeting · Philadelphia, PA · Nov 17, 2008 (given by J. Feng)
- 54.P “Design of Functional Nanoparticle-Peptide Interfaces Guided By Atomistic Simulation” · AFOSR Biotech Review · Arlington, VA · Nov 12/13, 2008 (given by R. J. Berry)
- 53.P G. D. Zartman & HH: “Calculation of Nanoscale Elastic, Shear, and Bending Properties of Sheet Silicates Using Molecular Dynamics Simulation” · PINO Meeting · Case Western Reserve University, OH · Jul 3, 2008
- 52.T “A Force Field for Layered Silicates and Simulation of Interfaces with Surfactants: Structure, Surface Energy, and Phase Transitions” · PPS-24 · Salerno, Italy · June 18, 2008
- 51.T “Peptide Binding to Sheet Silicate and Metal Nanoparticles: Insight from Atomistic Simulation and Experiment” · PPS-24 · Salerno, Italy · June 17, 2008
- 50.T Y. T. Fu & HH: “Modification of surface energies of layered silicates through surfactants of different chain length” · ACS National Meeting · New Orleans, LA · Apr 9, 2008
- 49.T “Peptide Binding to Sheet Silicate and Metal Nanoparticles - Insight from Atomistic Simulation” · ACS Spring Meeting · New Orleans, LA · Apr 06, 2008 (B. L. Farmer)
- 48.T “Photoisomerization of Azobenzene: A Quantitative Force Field-based Implementation and Simulation of Assemblies with Layered Silicates in Comparison with Experiment” · ACS Spring Meeting · New Orleans, LA · Apr 06, 2008
- 47.T “Relation between Packing Density and Thermal Transitions of Alkyl Chains on Layered Silicate and Metal Surfaces” · MRS Spring Meeting · San Francisco, CA · Mar 27, 2008
- 46.P G. D. Zartman & HH: “Calculation of Nanoscale Elastic, Shear, and Bending Properties of Sheet Silicates Using Molecular Dynamics Simulation” · MRS Spring Meeting · San Francisco, CA · Mar 27, 2008
- 45.P K. C. Jha & HH: “Polarization Effect at Peptide-Gold Interfaces Estimated by MD Simulation” · MRS Spring Meeting · San Francisco, CA · Mar 26, 2008

- 44.T "Peptide Binding to Sheet Silicate and Metal Nanoparticles - Insight from Atomistic Simulation" · MRS Spring Meeting · San Francisco, CA · Mar 25, 2008
- 43.P "Relation between Packing Density and Thermal Transitions of Alkyl Chains on Layered Silicate and Metal Surfaces" · APS March Meeting · New Orleans, LA · Mar 12, 2008
- 42.T "Peptide Binding to Sheet Silicate and Metal Nanoparticles: Insight from Atomistic Simulation" · APS March Meeting · New Orleans, LA · Mar 10, 2008 (R. B. Pandey)
- 41.P "Atomistic Simulation of Inorganic-Biological Interfaces and Accurate Force Fields for FCC Metals and Layered Silicates" · Zing Conference on Computational Biophysics with Chemical Accuracy · Jolly Beach Resort · Bolans Village, Antigua · Jan 15, 2008
- 40.T "Self-Assembly of Peptides on Montmorillonite Nanoparticles" · AIChE Annual Meeting · Salt Lake City, UT · Nov 7, 2007
- 39.T "Atomistic Simulation of Peptide Binding to Metal Nanoparticle Surfaces" · AIChE Annual Meeting · Salt Lake City, UT · Nov 6, 2007
- 38.T G. D. Zartman & HH: "Nanomechanics of Sheet Silicates" · NASA Glenn Undergraduate Conference · Cleveland, OH · Aug 8, 2007
- 37.T "Atomistic Simulation of the Interaction of Peptides with Metal and Sheet Silicate Nanoparticles" · Mainz Materials Simulation Days 2007 · Max-Planck-Institute for Polymer Research · Mainz, Germany · June 13, 2007
- 36.T "Force Fields for Sheet Silicates and Metals" · AIChE Annual Meeting · San Francisco, CA · Nov 17, 2006
- 35.T "Calculation of Local Pressure Tensors in Systems with Many-Body Interactions" · AIChE Annual Meeting · San Francisco, CA · Nov 17, 2006
- 34.T "Simulation of Interfaces in Nanocomposites and Biomaterials" · University of Akron Sponsor's Day Dept of Polymer Eng · Akron, OH · Oct 26, 2006.
- 33.T "Force Fields for Inorganic Components in Hybrid Systems" · ACS National Meeting San Francisco · Sep 13, 2006
- 32.T "Simulation of Peptide Binding to Metal and Clay Nanoparticles" · AFRL/MLBP WPAFB · OH, Aug 22, 2006.
- 31.P "Simulation of Polymer Adsorption on Surfaces" · Gordon Research Conference on Polymer Physics · Connecticut College, CT · Jul 23-28, 2006
- 30.P "Atomistic Simulation of Organic-Inorganic Interfaces Containing Sheet Silicates" · ACS Dayton section · Annual Poster Session · Dayton, OH · Mar 7, 2006
- 29.T "Towards Quantitative Modeling of Surface Properties in Inorganic-Organic Hybrid Materials" · AFRL–Sandia National Laboratory Collaborative Meeting · WPAFB · November 8, 2005
- 28.T "Calculation of Local Pressures in Systems with Many-Body Interactions" · Rutgers University, NJ · Department of Applied Mathematics · 93rd Statistical Mechanics Conference · May 16, 2005
- 27.T "Computer Simulation of the Light-Induced Trans-Cis Isomerization of Azobenzene Grafted Onto Montmorillonite Sheets" · MRS Fall Meeting · Boston, MA · Nov 31, 2005
- 26.P "Modeling of the Photochemical Trans-Cis Isomerization of Azobenzene Confined Between Montmorillonite Sheets" · MRS Fall Meeting · Boston, MA · Nov 31, 2005
- 25.P "Towards Quantitative Modeling of Interface Properties of Organic-Inorganic Hybrid Materials" · AIChE Annual Meeting · Cincinnati, OH · Oct 31, 2005

- 24.T "Calculation of Local Pressure Tensors in Systems with Many-Body Interactions" · ACS national meeting · Washington, D. C. · Sep 1, 2005
- 23.T "Free Energy of Exfoliation Between Layered Silicate Sheets" · ACS national meeting · Washington, D. C. · Aug 31, 2005
- 22.T "Towards Quantitative Modeling of Surface Properties in Inorganic-Organic Hybrid Materials" · ACS national meeting · Washington, D. C. · Aug 31, 2005
- 21.P "Towards Quantitative Modeling of Interface Properties of Organic-Inorganic Hybrid Materials" · ACS National Meeting (AEI) · Washington, D. C. · Aug 29, 2005
- 20.T "Self-Assembly of Alkylammonium Chains on Montmorillonite: Effect of Chain Length, Head Group Structure, and Cation Exchange Capacity" · ACS national meeting · Washington, D. C. · Aug 28, 2005
- 19.P "Free Energy of Exfoliation Between Layered Silicate Sheets" · Symposium "Oligomers to Macromolecules in Akron" · University of Akron, OH · Jun 27, 2005 · With R. A. Vaia and B. L. Farmer
- 18.T "Progress in Molecular Modeling of Superplasticizers in Cementitious Systems" · ETH Zurich · Department of Materials · Apr 14, 2005
- 17.P "Conformation and Dynamics of a Flexible Sheet in Solvent Media by Monte Carlo Simulations" · APS March Meeting · Los Angeles, USA · Mar 21-25, 2005 · By Pandey, R.; Anderson, K. L.; Heinz, H.; Farmer, B.
- 16.T "Atomic Charges for Classical Simulations of Polar Systems" · WATOC 2005—7th World Congress of Theoretically Oriented Chemists · Cape Town, South Africa · Jan 19, 2005
- 15.T "Semiempirical Atomistic Simulation of Interactions between Sheets of Layered Silicates" · MRS Fall meeting · Boston, MA · Dec 1, 2004
- 14.T "A Semiempirical Energy Model and Atomistic Simulation of Organically Modified Montmorillonite" · MRS Fall meeting · Boston, MA · Dec 1, 2004
- 13.T "A Semiempirical Energy Model and Atomistic Simulation of Organically Modified Montmorillonite" · AFRL/ML · Polymer Technology Colloquium · Wright-Patterson AFB Dayton, OH · Nov 24, 2004
- 12.T "Structure and Phase Transitions of Alkylammonium Chains on Mica" · ACS national meeting · Philadelphia, PA · Aug 26, 2004
- 11.P "Atomic Charges for Classical Simulation of Polar Systems" · ACS national meeting · Philadelphia, PA · Aug 23, 2004 · With U. W. Suter
- 10.P "Atomistic Modeling of Organically Modified Mica" · NANO 2004 · Wiesbaden, Germany · Jun 22-26, 2004 · With U. W. Suter
- 9.T "Atomic Charges for Classical Simulations of Polar Systems" · APS march meeting · Montreal, Canada · Mar 26, 2004
- 8.T "A Perylene Chromophore in *n*-Alkanes: Modeling Geometries and $\pi \rightarrow \pi^*$ Spectral Shifts Based on Local Electron Density" · APS march meeting · Montreal, Canada · Mar 26, 2004
- 7.P "Atomistic Modeling of Organically Modified Mica" · 20th Annual Meeting of the Swiss User Group Surfaces and Interfaces · Fribourg, Switzerland · Jan 23, 2004 · With U. W. Suter
- 6.T "Molecular Modeling of Superplasticizers in Cementitious Systems: Introductory Steps" · Sika Technology AG · Zürich, Switzerland · Jan 22, 2004

- 5.T "Understanding Materials by Atomistic Simulation?" · Annual Meeting of the Association for the International Chemistry Olympiad · University of Leipzig, Germany · Jan 8, 2004
- 4.P "Structure and Phase Transitions of Alkyl Chains on Mica: Understanding by MD Simulation" · NATO-Advanced Study Institute "Computer Simulation of Surfaces and Interfaces" · Albena Black Sea Resort · Albena, Bulgaria · Sep 9-20, 2002 · with H. J. Castelijns and U. W. Suter
- 3.P "Partial Charges in Polar Solids" · 6th World Congress of Theoretically Oriented Chemists (WATOC) · Lugano, Switzerland · Palazzo dei Congressi · Aug 4-9, 2002 With U. W. Suter
- 2.T "Dynamics of Alkane Chains on Mica" · ETH Zurich · Department of Materials · Materials Science Seminar · Jul 3, 2002
- 1.P "MD-Simulation of Phase Transitions in Alkyl-Layered Mica Particles" · Center Stefano Francini Monte Verità · Ascona, Switzerland · Workshop on Atomistic to Continuum Models for Long Molecules and Thin Films · Jul 15-20, 2001 · with U. W. Suter

Reviewing, Editorial, Conference Organization

1) Reviewer for Journals: Nature, Nat. Chem., Nat. Comm., Adv. Mater, Nano Letters, JACS, Angew. Chem. Int. Ed., ACS Nano, ACS Photonics, Chem. Sci., Chem. Comm., Chem. Mater., Soft Matter, J. Phys. Chem. C, J. Chem. Phys., Phys. Chem. Chem. Phys., Chem. Phys. Chem., Macromolecules, Langmuir, Polymer, J. Polym. Sci., J. Coll. Interface Sci., MRS Bulletin, Macromolecular Theory and Simulation, Comput. Mater. Sci., J. Mater. Res., Mechanics of Time Dependent Materials, Polymer International, Polymer Engineering and Science, Microscopy Research and Technique, Chemical Papers, Scientific Reports, ACS Appl. Mater. Interf.

2) Reviewer for Proposals: NSF (panel and individual), AFOSR, NASA, DoE, Army Research Laboratory, ACS-PRF, DFG, Austrian Science Fund, Netherlands Science Organization (NWO), Israel Science Foundation, Kazakhstan Science Foundation, Book proposals (CRC, Oxford U Press, Nova)

3) Editorial: Associate editor for New J. Chem. (since 2017), Associate Editor for RSC Advances (2015-2017); Editor of Book "Self-Assembled Nanostructures of Biopolymers, Organic Semiconductors, and Inorganics" (Wiley & Sons); member of editorial boards (Journal of Composites Science, Journal of Theoretical Chemistry, ISRN Physical Chemistry, Annals of Materials Science and Engineering, Silicon, World Journal of Gastrointestinal Pharmacology and Therapeutics)

4) Symposia/sessions organized:

- Symposium WW "Modeling and Theory-Driven Design of Soft Materials" at Fall MRS 2015 (with M. Dutt, Y. Yingling, T. R. Walsh), Boston, MA, 4 days
- Symposium GG "Foundations of Bio/Nano Interfaces: Synthesis, Modeling, Design Principles and Applications" at Spring MRS 2015 (with C. C. Perry, C. Tamerler, Y. Hayamizu), San Francisco, CA, 4 days
- Symposium "Structural Composites and Biomaterials: Modeling and Experiments" at ACS Fall 2013, D-POLY (with J. Moller, R. J. Berry), Indianapolis, IN, 20 contributions
- Symposium "Modeling and Simulation of Polymers" at ACS Fall 2012, D-POLY (with B. L. Farmer, E. Sun, A. Bosse), Philadelphia, PA, 50 contributions

- Symposium “Self-assembled Nanostructures of Biopolymers, Organic Semiconductors, and Inorganics” at ACS Spring 2012, D-PMSE/D-COMP (with R. Berry, J. Luettmmer-Strathmann, J. Gilman), San Diego, CA, 50 contributions
- Symposium “Nano & Micro: Computational Methods, Simulation & Software Tools” at NSTI Nanotech 2011 (with M. Makowski and S. McGrother), 90 contributions
- Symposium “Simulation of Hybrid Interfaces and Multi-Component Polymeric Materials” at ACS Fall 2010, D-PMSE/D-COMP, 30 contributions
- Symposium “Synthetic and Biological Macromolecules for Emerging Nanotechnologies” at ACS Spring 2010, D-POLY (with S. Patwardhan), 30 contributions
- Symposium “Simulation of (Bio)Organic-Inorganic Interfaces and Nanostructures Using MD, MC, and Multiscale Approaches” at ACS Fall 2009, D-PMSE & D-COMP, 30 presenters
- Symposium “Simulation and Theory of Clay Minerals and Interfaces” at XIV. International Clay Conference, Italy, 2009, 30 contributions
- 3 Sessions “Modeling Composites”, “Multifunctional Composites”, “Properties and Characterization of Nanocomposites” at AIChE, 2008
- Session “Clay Nanomaterials” at the Annual Clay Minerals Society Meeting, 2007

Affiliations

- American Chemical Society, member
- Materials Research Society, member
- American Physical Society, member
- Member of German Chemical Society (GDCh), Mineralogical Society (MinSoc), Clay Minerals Society, ACerS, and TMS

Teaching Experience

- Chemical Engineering Materials · University of Colorado-Boulder Spring 2017
Undergraduate course
- Senior Chemical Engineering Laboratory · University of Colorado-Boulder Fall 2016, 2017
Undergraduate course
- Fluid Mechanics · University of Colorado-Boulder Spring 2016
Undergraduate course
- Chemical Engineering Thermodynamics · University of Colorado-Boulder Fall 2015
Graduate course
- Advanced Characterization of Functional Polymers · University of Akron Fall 2008, 2011
Graduate course
- Nanocomposites · University of Akron Spring 2008
Graduate course (with S. Jana and M. Soucek)
- Engineering Properties of Polymers · University of Akron Spring 2008-2014
Undergraduate course
- Advanced Functional Polymers · University of Akron Fall 2007, 2009
Graduate course

- Simulation of Nanoscale Materials · University of Akron Spring 2007, Fall 2010, 2012
Graduate course
 - Organized Department Seminar · University of Akron Spring 2007
 - Assistant Lab Supervisor · ETH Zurich · Switzerland 02/2003 – 03/2003
Undergraduate lab course in polymer science (with Peter Walde)
 - Private Teaching 2001 – 2003
Taught several undergraduate students in chemistry, physics, and mathematics
 - Lecturer · Student Association ETH Zurich 07/2000
Invited to teach an intensive, daily thermodynamics class for 4 weeks with exercises to prepare undergraduate students for their exam needs (1st and 2nd year)
 - Teaching Assistant · ETH Zurich 04/2000 – 07/2000
Assistant for an undergraduate environmental chemistry class (with U. Mueller-Herold)
 - Teaching Assistant · Leibniz-Institute for Education in the Natural Sciences 1995 – 1998
Germany
Prepared talented high school students for the International Chemistry Olympiad (4 preparatory spring and summer schools, developed problem sets for qualifying exams, supervised lab courses) · University of Kiel and Ministry of Education · With Wolfgang Buender and Wolfgang Hampe
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Supervision

- Postdocs & visiting Ph.D. scientists: three current; 6 completed: Chandrani Pramanik (2015-2017, then Tata Motors), Nada Mehio (2016, then LANL), Nabanita Saikia (2016, then Michigan Tech U), Jie Feng (2010, then NETL, Pittsburgh), Jian-jie Liang (Sabbatical 2008, Accelrys, Inc.), Pratyush Dayal (2007, Asst Prof at IIT Gandhinagar)
 - PhD students: 8 current; 8 graduated: Hadi Ramezani-Dakhel (2015), Fateme S. Emami (2013, then Northwestern U), Tzu-Jen Lin (2013, then National Taiwan U), Hua Liu (2013, then Singapore), Ratan K. Mishra (2012, then ETH Zurich), Kshitij C. Jha (2012, then founded Bienatech/ U Akron), Yao-Tsung Fu (2011, GA Tech), Amir Vahid (2012, co-supervised with R. Elliott, then Northwestern U)
 - Visiting PhD students: Mahdi Tavakol (Sharif U of Technology, Iran, current), Peiying Li (Tokyo Institute of Technology, 2017), Thomas Underwood (U Durham, UK, 2017), Leon Perez (U Antioquia, Colombia, 2008)
 - Master students: none current
Heijn J. Castelijns (at ETH Zurich 2002)
 - Undergraduate students: 6 current; 7 past: Marcus Sharp (2017 summer), Mohammed Almarri (2017 summer), Adam Cronce (2017 Spring), Christopher Kirby (2016 summer, RIT), Gregory D. Zartman (2007-2008, then Goodyear, Inc.), John Repasky (2008, then Sony, Inc.), Michael Heinrich (2003 at ETH Zurich)
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Languages and Hobbies

Hendrik Heinz - CV

- German (native), English, Spanish, Russian
 - Music (piano), Swimming, Dancing
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