

Invited Lectures

- 1) "The Azulene to Naphthalene Rearrangement", The University of Arkansas (Main Campus), Department of Chemistry, Jan. 1986.
- 2) "The Azulene to Naphthalene Rearrangement", Northern Illinois University, Department of Chemistry, Jan 1986.
- 3) "The Azulene to Naphthalene Rearrangement", Mississippi State University, Department of Chemistry, Jan 1986.
- 4) "The Azulene to Naphthalene Rearrangement", Sterling-Winthrop Inc., Department of Medicinal Chemistry, Mar. 1986.
- 5) "The Azulene to Naphthalene Rearrangement", University of Belgrade (Yugoslavia), Department of Chemistry, July 1987.
- 6) "The Azulene to Naphthalene Rearrangement", The Boris Kidric Institute, Vinca, (Yugoslavia), Department of Chemistry, July 1987.
- 7) "The Mode of Action of Carbonic Anhydrase and the Inhibition of Thermolysin" The Pennsylvania State University (University Park), Dec. 1987.
- 8) "The Mode of Action of Carbonic Anhydrase and the Inhibition of Thermolysin", The University of Texas at Austin, Department of Pharmaceutical Chemistry, Jan. 1988.
- 9) "The Mode of Action of Carbonic Anhydrase and the Inhibition of Thermolysin", The University of Alabama (Main Campus), Department of Chemistry, Jan. 1988.
- 10) "The Mode of Action of Carbonic Anhydrase and the Inhibition of Thermolysin", The University of Missouri (Main Campus), Department of Chemistry, Jan. 1988.
- 11) "The Mode of Action of Carbonic Anhydrase and the Inhibition of Thermolysin", Oregon State University, Department of Chemistry, Jan. 1988.
- 12) "The Mode of Action of Carbonic Anhydrase and the Inhibition of Thermolysin", North Texas State University, Department of Chemistry, Feb. 1988.
- 13) "Computer Simulations of Zinc-Containing Enzymes", "Industrial Applications of Computational Chemistry Conference", Ithaca, New York, June 15-16, 1988.
- 14) "Application of the Free Energy Perturbation Method to Drug Design", "8th International Biotechnology Symposium", Paris, France, July 17-22, 1988.

- 15) "Computer-Aided Drug Design", "National Cooperative Drug Discovery and Development Meeting", Oakland, California, October 31-November 2, 1988.
- 16) "Drug Design in Zinc Metalloenzymes: Carbonic Anhydrase", "Fourth International Conference on Supercomputing and Third World Supercomputer Exhibition", Santa Clara, California, April 30-May 5, 1989.
- 17) "Substrate Binding in Carbonic Anhydrase II", University of Firenze, Firenze, Italy, June 14, 1989.
- 18) "Free Energy Perturbation Studies on the Inhibition of Thermolysin and Human Carbonic Anhydrase II", "From Molecular Modeling and Dynamics to Protein Structures and Drug Interactions Conference", San Miniato, Italy, June 19-20, 1989.
- 19) "The Binding and Hydration of Carbon Dioxide by Human Carbonic Anhydrase II", "NATO Advanced Study Institute, Summer School on Enzymatic and Model Carboxylation and Reduction Reactions for Carbon Dioxide Utilization", Riva dei Tessali, Italy, June 17-28, 1989.
- 20) "Computer Simulation of Human Carbonic Anhydrase II: Inhibition and Substrate Binding", "Computer Simulation of New Materials Conference", Ithaca, New York, October 3-4, 1989.
- 21) "Computer Simulations of Zinc Metalloenzymes", Susquehanna Regional ACS Meeting, Lycoming College, March 14, 1990.
- 22) "CO₂ Binding to HCAII", Duke University, April 12, 1990.
- 23) "CO₂ Binding to HCAII", University of Pennsylvania, October 25, 1990.
- 24) "Structure, Function and Dynamics of Antibiotic Ionophores", INDO-U.S. Workshop: Membrane Structure and Function. The State of The Art. Bangalore, India, January 7-18, 1991.
- 25) "Structure, Function and Inhibition of Human Carbonic Anhydrase II", Merck, Sharp and Dohme, West Point, Pennsylvania, March 20, 1991.
- 26) "Molecular Design Using Free Energy Perturbation Techniques", 1991 Joint Central-Great Lakes Regional American Chemical Society Meeting, May 29-31, 1991.
- 27) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", Carbonic Anhydrase. Symposium in the Leibniz House, Hannover, Germany, July 10-12, 1991.
- 28) "Theoretical Investigations of Zinc Metalloenzymes" Structure and Function of Mutated Proteins, Firenze, Italy, August 25-30, 1991.
- 29) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", University of Florida, December 3, 1991.

- 30) "Computer Simulation of the DLPE Lipid Bilayer", University of Cincinnati, March 5, 1992.
- 31) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", University of Cincinnati, March 6, 1992.
- 32) "Quantum Chemical Applications to Carbohydrates and Their Analogs", American Chemical Society Meeting, San Francisco, California, April, 5, 1992.
- 33) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", University of Umeå, Sweden, April 9, 1992.
- 34) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", University of Uppsala, Sweden, April 10, 1992.
- 35) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", University of Lund, Sweden, April 14, 1992.
- 36) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", University of Firenze, Italy, May 15, 1992.
- 37) "Recent Advances in the Design of Metal Force Fields", Computational Chemistry Gordon Research Conference, New Hampton School, June 29-July 3, 1992.
- 39) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", Enzymes, Coenzymes and Metabolic Pathways Gordon Research Conference, Kimball Union Academy, July 18-22, 1990.
- 40) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", Merck, Sharp and Dohme, West Point, Pennsylvania, July 13, 1992.
- 41) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", Glaxo, Research Triangle Park, North Carolina, August 6, 1992.
- 42) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", Miami University, October 8, 1992.
- 43) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", Eli Lilly & Co., Indianapolis, Indiana, October 9, 1992.
- 44) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", Temple University, Philadelphia, Pennsylvania, November 6, 1992.
- 45) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", University of North Carolina, Chapel Hill, North Carolina, March 16, 1993.

- 46) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", 3rd International Conference on the Carbonic Anhydrases, Oulu, Finland, July 12-15, 1993.
- 47) "Computer Simulation of the Lipid Bilayer Assemblies", 11th International Congress of Biophysics, Budapest, Hungary, July 25-30, 1993.
- 48) "Theoretical Investigations of the Structure, Function and Dynamics of HCAII", The Structure/Function Relationships in Proteins and Enzymes, State College, Pennsylvania, July 26-30, 1993.
- 49) "Non-Aqueous Solvation of Proteins", American Chemical Society Meeting, Chicago, Illinois, August 22-27, 1993.
- 50) "Structure, Function and Dynamics of the Antibiotic Ionophores Valinomycin and Nonactin", "NATO Advanced Research Workshop, "Computational Approaches to Supramolecular Chemistry", Strasbourg, France, September 1-5, 1993.
- 51) "Studies of Reactions Using a Combined QM/MM Methodology" ISQBP President's Meeting, "Chemical Reactions and Molecular Recognition in Drug Design" Asilomar, California, December 12-15, 1993.
- 52) "Interaction of Small Peptides with Lipid Bilayers: Molecular Dynamics and Free Energy Simulation Studies" Biophysical Society Meeting, New Orleans, Louisiana, March 6-10, 1993
- 53) "Development and Application of Quantum Mechanical/Molecular Mechanical Coupled Potentials" American Chemical Society Meeting, San Diego, California, March 13-18, 1994.
- 54) "Molecular Dynamics Simulations of Carbyne Network Polymers" American Chemical Society Meeting, San Diego, California, March 13-18, 1994.
- 55) "Protein Dynamics in Aqueous and Nonaqueous Environments" American Chemical Society Meeting, San Diego, California, March 13-18, 1994.
- 56) "Sugar/Surface Interactions" Molecular Interactions at Marine Interfaces, Buffalo, New York, June 8-10, 1994.
- 57) "Parallel Molecular Dynamics Simulations: Methodology and Application to Lipid Bilayers" American Chemical Society Meeting, Washington, DC, August 21-26, 1994.
- 58) "Non-Aqueous Solvation of Proteins" Biomolecular Recognition at ONR, Berkeley Springs, West Virginia, October 26-30, 1994.
- 59) "Computer Simulation of Reactive Processes Using Coupled Quantum Mechanical/Molecular Mechanical Methods" International Symposium on Computational Molecular Dynamics, University of Minnesota Supercomputer Institute, Minneapolis, Minnesota, October 24-26, 1994.

- 60) "Computer Simulation of Peptide/Lipid Interactions" University of Virginia, Charlottesville, Virginia, October 13, 1994.
- 61) "Computer Simulation of Reactive Processes Using Coupled Quantum Mechanical/Molecular Mechanical Methods" Indiana University Purdue University Indianapolis, Indianapolis, Indiana, November 9, 1994.
- 62) "Theoretical Investigation of the Structure, Function and Dynamics of Human Carbonic Anhydrase II" University of Montreal, Montreal, Canada, February 28, 1995.
- 63) "Computer Simulation of Bilayer/Peptide Interactions" Wyeth-Ayerst Research, Princeton, New Jersey, March 10, 1995.
- 64) "Theoretical Studies of Peptide/Lipid Interactions" Villanova University, Villanova, Pennsylvania, March 21, 1995.
- 65) "Theoretical Studies of Peptide/Lipid Interactions" American Chemical Society Meeting, Anaheim, California, April 2-7, 1995.
- 66) "Development of a Quantum Free Energy Perturbation Methodology" American Chemical Society Meeting, Anaheim, California, April 2-7, 1995.
- 67) "Development of a Quantum Free Energy Perturbation Methodology" CECAM Meeting, Lyon, France, May 9-11, 1995.
- 68) "Theoretical Investigation of the Structure, Function and Dynamics of Human Carbonic Anhydrase II" 4th International Conference on the Carbonic Anhydrases, Oxford, England, July 26-30, 1995.
- 69) "Computer Simulation of Bilayer/Peptide Interactions" High Performance Computing Conference (HPCC), Pleasanton, California, August 13-16, 1995.
- 70) "Computer Simulation of Saccharide/Surface Interactions" American Chemical Society Meeting, Chicago, Illinois, August 20-24, 1995.
- 71) "Computer Simulation of Bilayer/Peptide Interactions" American Chemical Society Meeting, Chicago, Illinois, August 20-24, 1995.
- 72) "Theoretical Investigation of the Structure, Function and Dynamics of Human Carbonic Anhydrase II" Fox Chase Cancer Center, Philadelphia, Pennsylvania, November 9, 1995.
- 73) "Application of Combined Quantum Mechanical/Molecular Mechanical Methodologies to Chemistry" Rohm and Haas Co. Philadelphia, Pennsylvania, November 16, 1995.
- 74) "Development and Application of Quantum Free Energy Perturbation Methodologies" Pacific Symposium on Biocomputing, Hawaii, January 3-6, 1996.
- 75) "Mechanism of Action of Fusion Inhibiting Peptides" Biophysical Society Meeting, Baltimore, Maryland, February 18-22, 1996.

- 76) "Application of Coupled Potentials to Chemical Problems" Georgetown University, Washington DC, April 17, 1996.
- 77) "Application of Coupled Potentials to Enzyme Solvation" Theoretical Methods for the Study of Solvation", Barcelona, Spain, June 16-18, 1996.
- 78) "Application of Coupled Potentials to Chemical Problems" WATOC '96 Conference, Jerusalem, Israel, July 7-12, 1996.
- 79) "Mechanism of Action of Fusion and Fusion Inhibiting Peptides" FASEB Summer Conference on the Molecular Biophysics of Cellular Membranes, Saxton's River, Vermont, July 20-25, 1996.
- 80) "Linear-Scaling Quantum Mechanical Calculations of Biomacromolecules" HyperCem User Group Meeting, September 8-11, 1996.
- 81) "Sugar/Surface Interactions" Molecular Interactions at Marine Interfaces, Atlantic Beach, Florida, September 23-25, 1996.
- 82) "Linear-Scaling Quantum Mechanical Calculations of Biomacromolecules" University of Florida Quantum Theory Project, September 26, 1996.
- 83) "Mechanism of Action of Fusion and Fusion Inhibiting Peptides" The International Symposium on Molecular Dynamics of Biomembranes, University of North Carolina, Chapel Hill, North Carolina, October 24-26, 1996.
- 84) "Linear-Scaling Quantum Mechanical Calculations of Biomacromolecules" NASA-Ames Research Center, Moffett Field, California, November 20, 1996.
- 85) "Linear-Scaling Quantum Mechanical Calculations of Biomacromolecules" University of Southern California, Los Angeles, California, December 2, 1996.
- 86) "Linear-Scaling Quantum Mechanical Calculations of Biomacromolecules" California Institute of Technology, Pasadena, California December 4, 1996.
- 87) "Linear-Scaling Quantum Mechanical Calculations of Biomacromolecules" University of California, Los Angeles, Los Angeles, California, December 5, 1996.
- 88) "Combined Classical/Quantum Mechanical Studies of Enzyme Structure and Function" University of California, San Barbara, Santa Barbara, California, December 9, 1996.
- 89) "Linear-Scaling Quantum Mechanical Calculations of Biomacromolecules" University of California, San Diego, San Diego California, December 11, 1996.
- 90) "Combined Classical/Quantum Mechanical Studies of Enzyme Structure and Function" Scripps Research Clinic, San Diego, California, December 12, 1996.

- 91) "Linear-Scaling Quantum Mechanical Calculations of Biomacromolecules" Pacific Symposium on Biocomputing, Hawaii, January 3-6, 1996.
- 92) "Linear-Scaling Quantum Mechanical Calculations of Biomacromolecules" University of California, Berkeley, Berkeley, California, January 14, 1997.
- 93) "Combined Classical/Quantum Mechanical Studies of Enzyme Structure and Function" University of Virginia, Charlottesville, Virginia, January 16, 1997.
- 94) "Combined Classical/Quantum Mechanical Studies of Enzyme Structure and Function" ETH, Zurich, Switzerland, January 30, 1997.
- 95) "Combined Classical/Quantum Mechanical Studies of Enzyme Structure and Function" NATO Advanced Workshop: Molecular Modeling and Dynamics of Biological Molecules Containing Metal Ions, San Miniato, Pisa, Italy, March 15-21, 1997.
- 96) "Combined Classical/Quantum Mechanical Studies of Enzyme Structure and Function" State University of Groningen, Groningen, The Netherlands, March 26, 1997.
- 97) "Combined Classical/Quantum Mechanical Studies of Enzyme Structure and Function" University of Louis Pasteur, Strasbourg, France, April 1, 1997.
- 98) "Linear-Scaling Quantum Mechanical Calculations of Biomacromolecules" University of Zurich, Zurich, Switzerland, April 15, 1997.
- 99) "Linear-Scaling Quantum Mechanical Calculations of Biomacromolecules" Theoretical Chemistry in Biology: From Molecular Structure to Functional Mechanisms, Savannah, Georgia, June 3-7, 1997.
- 100) "Linear-Scaling Quantum Mechanical Calculations of Biomacromolecules" Model(l)ing '97, Erlangen, Germany, September 2-5, 1997.
- 101) "Linear-Scaling Quantum Mechanical Calculations of Biomacromolecules" American Chemical Society Meeting, Las Vegas, Nevada, September 7-11, 1997.
- 102) "Combined QM/MM Methodologies: Strategies and Applications" University of Geneva, Geneva, Switzerland October 6, 1997.
- 103) "Linear-Scaling QM Methodologies: Strategies and Applications" University of Geneva, Geneva, Switzerland October 7, 1997.
- 104) "Strategies Towards Modeling Enzyme Catalysis Using QM/MM Methods" University of Basel, Basel, Switzerland October 8, 1997.
- 105) "Quantum Mechanical and Molecular Mechanical Methods" University of Fribourg, Fribourg, Switzerland October 9, 1997.
- 106) "Divide and Conquer Semiempirical Quantum Calculations" University of Fribourg, Fribourg, Switzerland October 10, 1997.

- 107) "Towards All-Electron Modeling of Biological Molecules" University of Utah , Salt Lake City, Utah November 3, 1997.
- 108) "Application of Linear-Scaling Quantum Mechanical Calculations to Biological Systems" California Institute of Technology , Pasadena, California November 4, 1997.
- 109) "ChargeTransfer Effects in Biomolecular Systems" Southern Illinois University, Carbondale, Illinois January 23, 1998.
- 110) "Towards All-Electron Modeling in Biomolecular Systems" State University of Groningen, Groningen, The Netherlands, March 9, 1998.
- 111) "ChargeTransfer Effects in Biomolecular Systems" American Chemical Society Meeting, Dallas, Texas, March 23-27, 1998.
- 112) "Towards All-Electron Modeling in Biomolecular Systems" American Chemical Society Meeting, Dallas, Texas, March 23-27, 1998.
- 113) "Towards All-Electron Modeling in Biomolecular Systems" XXXIII ICCG, Florence, Italy, August 30, - September 4, 1998.
- 114) "Towards All-Electron Modeling in Biomolecular Systems" 34th Symposium for Theoretical Chemistry, Gwatt-Zentrum am Thunersee, Switzerland, September 20-24, 1998.
- 115) "Towards All-Electron Modeling in Biomolecular Systems" DARPA BioInformatics Workshop, Washington, DC, January 19-20, 1999.
- 116) "Property Estimation Tools to Facilitate Library Design" Computational Technologies for Library Design and Analysis, Princeton, New Jersey, May 26, 1999.
- 117) "Property Estimation Tools to Facilitate Library Design" Techniques for Library Design, Analysis, Profiling and Data Utilization, Cambridge, MA, May 27, 1999.
- 118) "Towards All-Electron Modeling in Biomolecular Systems" SFB Congress, Jena, Germany, September 12-16, 1998.
- 119) "Towards All-Electron Modeling in Biomolecular Systems" Sanibel Symposium, Sanibel, Florida, February 26- March 3, 2000.
- 120) "Predicting ADMET Properties" Department of Medicinal Chemistry, University of Minnesota, Minneapolis, Minnesota, March 21, 2000.
- 121) "Computing ADMET Properties" InfoTech Pharma, Philadelphia, PA, June 22-23.
- 122) "Modeling Metal Ions in Biological Systems" Metal Ions In Biology, NIH Washington, DC June 28-30.
- 123) "Mechanism of Action of β -Lactamaes" ISQBP Meeting, New Orleans, Louisiana August 17-19.
- 124) "Computing ADMET Properties" CombiChem Consortium Meetings, Paris, France, September 11-13 May 2000.

- 125) "New Approaches to Modeling ADMET Properties" International Workshop: New Approaches in Drug Design and Discovery", Marburg, Germany March 19-22, 2001
- 126) "Towards All-Electron Modeling in Biomolecular Systems" American Chemical Society Meeting, San Diego, California, April 1-5, 2001.
- 127) "In Silico Library Design Tools" American Chemical Society Meeting, San Diego, California, April 1-5, 2001.
- 128) "Mechanism of Action of β -Lactamases" American Chemical Society Meeting, San Diego, California, April 1-5, 2001.
- 129) "Quantum Bioinformatics: Methods and Applications", Emerging Methods in Computational Chemistry and Materials Science, Aberdeen, Maryland, May 31-June 1, 2001.
- 130) "Towards All-Electron Modeling in Biomolecular Systems", 14th Canadian Symposium on Theoretical Chemistry, Ottawa, Canada, August 4-9, 2001.
- 131) "Quantum Bioinformatics: Methods and Applications" American Chemical Society Meeting, Chicago, Illinois, August 26-31, 2001.
- 132) "One-Dimensional Molecular Representations: Methodology and Validation Studies" Model(ing) 2001, Erlangen, Germany, September 17-21, 2001. (Missed due to events of Sept. 11, 2001).
- 133) "Quantum Bioinformatics" 4th. Advanced Seminars on Molecular Design and Bioinformatics, Havana, Cuba, February 3-9, 2002.
- 134) "Towards All-electron Modeling of Biological Systems" Molecular Simulations in Structural Biology and Drug Discovery - Symposium in Remembrance of Peter A. Kollman, American Chemical Society Meeting, Orlando, Florida, February 21-22, 2002.
- 135) "Towards All-electron Modeling of Biological Systems" MGMS Annual Meeting, Bristol, UK, April 3-5, 2002.
- 136) "Towards All-electron Modeling of Biological Systems" ACS COMP Division Symposium in Remembrance of Peter A. Kollman, American Chemical Society Meeting, Orlando, Florida, April 7-11, 2002.
- 137) "Quantum Bioinformatics" Blue Gene Seminar, IBM T. J. Watson Research Center, Yorktown Heights, NY, March 1, 2002.
- 138) "Towards All-electron Modeling of Biological Systems" University of Florida, Gainesville, Florida, June 10, 2002.
- 139) "Structure and Function of Zinc- β -lactamases" Quantum Bioinorganic Chemistry (QBIC-2), Lund, Sweden, July 27-29, 2002.
- 140) "Structure and Function of Zinc- β -lactamases" Metal Mediated Reactions Modelled after Nature, Jena, Germany, September 15-19, 2002.
- 141) "Towards All-electron Modeling of Biological Systems" RIKEN Japan, September 18-20, 2002.

- 142) "Towards All-electron Modeling of Biological Systems" SUNY Stony Brook, Stony Brook, NY, November 7, 2002.
- 143) "Towards All-electron Modeling of Biological Systems: Applications to Drug Discovery/Design" ISQBP President's Meeting, Snowbird, Utah, December 13-14, 2002.
- 144) "Towards All-electron Modeling of Biological Systems: Applications to Drug Discovery/Design" Pfizer, San Diego, January 14, 2003.
- 145) "Towards All-electron Modeling of Biological Systems: Applications to Drug Discovery/Design" Concurrent Pharmaceuticals, Philadelphia, January 27, 2003.
- 146) "Towards All-electron Modeling of Biological Systems: Applications to Drug Discovery/Design" DuPont Ag, Newark, January 29, 2003.
- 147) "Towards All-electron Modeling of Biological Systems: Applications to Drug Discovery/Design" Wyeth, Boston, January 30, 2003.
- 148) "Towards All-electron Modeling of Biological Systems: Applications to Drug Discovery" Sanibel Symposium, Sanibel, Florida, February 22- March 1, 2003.
- 149) "Quantum Mechanical Scoring Function" CHARMM/AMBER Meeting, San Diego, California, July 10-12, 2003
- 150) "Towards All-electron Modeling of Biological Systems" XI International Congress of Quantum Chemistry, Bonn, Germany, July 20-26, 2003.
- 151) "Quantum Mechanics in Drug Discovery and Design" Computer-Aided Drug Design Gordon Conference, Tilton School, NH, July 20-25, 2003.
- 152) "Towards All-electron Modeling of Biological Systems: Applications to Drug Discovery" MERCURY Conference, Hamilton College, New York, July 31- August 1, 2003.
- 153) "Towards All-electron Modeling of Biological Systems: Applications to Drug Discovery" University of Florida, Gainesville, Florida, September 23, 2003.
- 154) "Semiempirical Density Functional Theory" University of Florida, Gainesville, Florida, September 24, 2003.
- 155) "Quantum Mechanics in Drug Discovery and Design" Syrrx, Inc., San Diego, California, October 15, 2003.
- 156) "Quantum Mechanics in Drug Discovery and Design" 5AM Ventures, Palo Alto, California, October 16, 2003.
- 157) "Quantum Mechanics in Drug Discovery and Design" University of Michigan, Ann Arbor, California, November 20, 2003.
- 158) "Quantum Mechanics in Drug Discovery and Design" Millenium Pharmaceuticals., Boston, Massachusetts, December 5, 2003.
- 159) "Quantum Mechanics in Drug Discovery and Design" New Jersey Technology Council, Mt Laurel, New Jersey, December 10, 2003.

- 160) "Quantum Mechanics in Drug Discovery and Design" Schering-Plough, Kenilworth, New Jersey, December 10, 2003.
- 161) "Quantum Mechanics in Drug Discovery and Design" Targacept, Winston-Salem, North Carolina, December 16, 2003.
- 162) "The Impact of Semiempirical Quantum Mechanics in Biology" American Chemical Society Meeting, Anaheim, California, March 28, 2004.
- 163) "Quantum Mechanics in Drug Discovery and Design" University of Maryland, College Park, Maryland, April 7, 2004.
- 164) "The Impact of Semiempirical Quantum Mechanics on Structure-Based Design" Glaxo Smith Kline, Philadelphia, Pennsylvania, May 20, 2004.
- 165) "Pose Scoring by NMR" University of Milano, Milano, Italy, June 9, 2004.
- 166) "Pose Scoring by NMR" University of Firenze, Firenze, Italy, June 15, 2004.
- 167) "The Impact of Semiempirical Quantum Mechanics on Structure-Based Design" Pharmacia, Inc. Princeton, New Jersey, July 16, 2004.
- 168) "The Impact of Semiempirical Quantum Mechanics on Structure-Based Design" Eli Lilly & Co., Indianapolis, Indiana, August 3, 2004.
- 169) "Pose Scoring by NMR" American Chemical Society Meeting, Philadelphia, Pennsylvania, August 22-26, 2004.
- 170) "Pose Scoring by NMR" Johnson & Johnson, Philadelphia, Pennsylvania, September 10, 2004.
- 171) "The Impact of Semiempirical Quantum Mechanics on Structure-Based Design" BMS Princeton, New Jersey, September 22, 2004.
- 172) "The Role of Quantum Mechanics in Structure-Based Drug Design" Frontiers in Computational Biophysics and Drug Design, Washington, DC, October 21-22, 2004.
- 173) "The Role of Quantum Mechanics in Structure-Based Drug Design" Cornell Weill Medical College, New York, New York, November 11, 2004.
- 174) "The Role of Quantum Mechanics in Structure-Based Drug Design" SUNY, New York, New York, November 12, 2004.
- 175) "Using NMR Spectroscopy Combined with Quantum Mechanics to Elucidate Protein-Small Molecule Interactions" Juniata College, December 1, 2004.
- 176) "The Role of Quantum Mechanics in Structure-Based Drug Design" WATOC05, Capetown, South Africa, January 16-21, 2005.

Contributed Presentations

Posters

- 1) "The Catalytic Mechanism of Human Carbonic Anhydrase II", The International Symposium on Physical Organic/Theoretical Chemistry, Austin, Texas, February 25-28 1988.
- 2) Electrostatic Potential Derived Point Charges for Monosaccharides", Computational Chemistry Gordon Research Conference, Plymouth State College, July 18-22, 1990.
- 3) "CO₂ Binding to HCAII," Biophysical Society Meeting, San Francisco, California, February 24-28, 1991.
- 4) "Non-Aqueous Solvation of Proteins", Computational Chemistry Gordon Research Conference, New Hampton School, June 29-July 3, 1992.
- 5) "A Force Field for 1-4 Linked Polysaccharides", Biophysical Society Meeting, Washington, DC, February 14-18, 1993.
- 6) "Molecular Dynamics Simulation of a Lipid Bilayer-Peptide System", Biophysical Society Meeting, Washington, DC, February 14-18, 1993.
- 7) "Protein Dynamics in Aqueous and Nonaqueous Environments", Biophysical Society Meeting, Washington, DC, February 14-18, 1993.
- 8) "A Force Field for 1-4 Linked Polysaccharides", The Structure/Function Relationships in Proteins and Enzymes, State College, Pennsylvania, July 26-30, 1993.
- 9) "Coupled Quantum/Molecular Mechanical Simulations of Human Carbonic Anhydrase II", 11th International Congress of Biophysics, Budapest, Hungary, July 25-30, 1993.
- 10) "Interaction of Small Peptides with Lipid Bilayers", Biophysical Society Meeting, New Orleans, Louisiana, March 6-10, 1994.
- 11) "Testing of a Density Functional/Molecular Mechanical Coupled Potential", American Chemical Society Meeting, San Diego, California, March 13-18, 1994.
- 12) "Parallel Implementation of a Density Functional/Molecular Mechanical Coupled Potential", Computational Chemistry Gordon Research Conference, New Hampton School, New Hampshire, July 3-8, 1994.
- 13) "The Adsorption of Carbohydrates onto Metal Surfaces", Computational Chemistry Gordon Research Conference, New Hampton School, New Hampshire, July 3-8, 1994.

14) "Interaction of the Fusion Inhibiting Peptide Z-D-Phe-L-Phe-Gly with N-Methyl DOPE (DOPE-Me) Bilayers", FASEB Conference on Membrane Molecular Biophysics, Saxtons River, Vermont, July 16-21, 1994.

15) "Solvation and Dynamics of Chymotrypsin in Hexane" S Toba; K. M. Merz, Jr. Protein Society Meeting, San Jose, California, August 4-9, 1996.

16) "Ice-Binding Mechanism of the Anti-Freeze Protein Determined By Molecular Dynamics Simulations" A. Cheng; K. M. Merz, Jr. 12th International Biophysics Congress, Amsterdam, The Netherlands, August 11-16, 1996.

17) "Role of Active Site Water Molecules in the Mechanism of Human Carbonic Anhydrase II" S. Toba; K. M. Merz, Jr. American Chemical Society Meeting, Dallas, Texas, March 23-27, 1998.

18) "Fully Quantum Mechanical Calculations on Solvated Biomolecular Systems: New Insights and Implications for QM/MM Simulation Techniques" A. van der Vaart; K. M. Merz, Jr. American Chemical Society Meeting, New Orleans, Louisiana, August 22-26, 1999.

18) "Investigation of Enzyme Reactivity Using MM, QM/MM and Linear Scaling Approaches: Human Fibroblast Collagenase" G. Monard; K. M. Merz, Jr. American Chemical Society Meeting, New Orleans, Louisiana, August 22-26, 1999.

19) "A Molecular Dynamics Simulation of Liquid water Using the Divide and Conquer Approach and a Corrected PM3 Semiempirical Method" G. Monard; M. J. Bernal-Uruchurtu; A. van der Vaart; K. M. Merz, Jr.; M. F. Ruiz-Lopez "ESCR Conference", Bellaterra, Spain, September 19-22, 2001.

20) "Pose Scoring by NMR" ISQBP President's Meeting, Como, Italy, June 6-8, 2004.

Lectures

1) "CO₂ Binding to HCAII", Biophysical Society Meeting. San Francisco, California, February 24-28, 1991

2) "Association Dynamics of HCO₃⁻ and CO₂ with Human Carbonic Anhydrase II" Biophysical Society Meeting, Houston, Texas, February 9-13, 1992.

3) "Solvent Structure at the Lipid Bilayer-Solvent Interface: Comparison Between DLPE and DMPC Based Bilayers" Biophysical Society Meeting, Washington, DC, February 14-18, 1993.

4) "Mechanism of Action of Fusion Inhibiting Peptides" Biophysical Society Meeting, San Francisco, California, February 12-16, 1995.

5) "Calculation of Octanol-Water Partition Coefficients Using the GB/SA Solvation Model" C. H. Reynolds; S. A. Best; L. C. van Zant; K. M. Merz, Jr. American Chemical Society Meeting, Dallas, Texas, March 23-27, 1998.

6) "Enzyme Inhibitor Interactions in Matrix Metalloproteinases: Structural and Energetic Studies" K. V. Damodaran; K. M. Merz, Jr. American Chemical Society Meeting, Dallas, Texas, March 23-27, 1998.

7) "Multiple Time-Step Algorithm for Biomolecular Systems" A. Cheng; K. M. Merz, Jr. American Chemical Society Meeting, Dallas, Texas, March 23-27, 1998.

Session Chairmanships

1) "Proteins: Molecular Dynamics" Biophysical Society Meeting, Houston, Texas, February 9-13, 1992.

2) "Proteins: Predictions and Structural Motifs" Biophysical Society Meeting, Houston, Texas, February 9-13, 1992.

3) "Recent Advances in Force Fields", Computational Chemistry Gordon Research Conference, New Hampton School, June 29-July 3, 1992.

4) "Membrane Structure" Biophysical Society Meeting, Washington, DC, February 14-18, 1993.

5) "Using the Computer to Understand Biological Membranes" Biophysical Society Meeting, Baltimore, Maryland, February 18-22, 1996.

6) "Molecular Dynamics" WATOC '96 Conference, Jerusalem, Israel, July 7-12, 1996.

7) "Large-Scale Electronic Structure Calculations" American Chemical Society Meeting, Dallas, Texas, March 23-27, 1998.

8) "QM/MM Methods" American Chemical Society Meeting, New Orleans, Louisiana, August 22-26, 1999.

9) "Molecular Simulations in Structural Biology and Drug Discovery", in memory of Peter Kollman, San Francisco, California, February 21-22, 2002.

Invited Workshop Lectures

1) "Force Field Design" Molecular Mechanics and Dynamics of Biopolymers Workshop, Pittsburgh Supercomputer Center, Pittsburgh, Pennsylvania, April 7-10, 1991.

2) "Interaction Energies" Molecular Mechanics and Dynamics of Biopolymers Workshop, Pittsburgh Supercomputer Center, Pittsburgh, Pennsylvania, April 7-10, 1991.

3) "Force Field Design" Molecular Mechanics and Dynamics of Biopolymers Workshop, Pittsburgh Supercomputer Center, Pittsburgh, Pennsylvania, May 14-16, 1991.

4) "Interaction Energies" Molecular Mechanics and Dynamics of Biopolymers Workshop, Pittsburgh Supercomputer Center, Pittsburgh, Pennsylvania, May 14-16, 1991.

5) "Force Field Design" Computational Chemistry Workshop, RPI, Troy, New York, July 31-August 3, 1991.

Visiting Professorships/Lectureships

1) "Molecular Modelling" University of Firenze, Italy, April 18-May 15, 1992. This was a ten lecture course on molecular modelling techniques.

2) "Combined Classical/Quantum Mechanical Studies of Enzyme Structure and Function" University of Louis Pasteur, Strasbourg, France, January 25-July 28, 1997.