Arun K. Sharma

Department of Biology and Chemistry
📞 *831-582-4713*
✉ *arsharma@csumb.edu*
🌐 *sites.google.com/csumb.edu/sharmalab*
in *draksharma*

APPOINTMENTS

2023 –	**Doctoral Candidate Co-Supervisor**, *Institute of Chemical Technology, Mumbai, India*
2022 –	**Assistant Professor of Chemistry**, *California State University, Monterey Bay*
2020 – 2022	**Associate Professor of Chemistry**, *Wagner College, Staten Island, NY*
2014 – 2020	**Assistant Professor of Chemistry**, *Wagner College, Staten Island, NY*
2011 – 2014	**Lecturer of Chemistry**, *Christopher Newport University, Newport News, VA*

EDUCATION

2011	**Ph.D Physical-Theoretical Chemistry**, *University of Southern California, Los Angeles*
2004	**M.Sc Physical Chemistry**, *University of Mumbai, India*
2002	**B.Sc Chemistry**, *University of Mumbai, India*

EXTERNAL GRANTS

2024 – 2027	**National Science Foundation (CHE-2404124)** Collaborative Research: RUI: Elucidating Ion Interactions at Interfaces through Synergistic Experiments and Simulations Co-PI: Joshua Patterson (Christopher Newport University)
2024 – 2026	**United States Department of Agriculture (2023-11716)** Weeding out Trouble: Machine Learning and Hyperspectral Imaging to protect Crop Health
2024 – 2025	**National Aeronautics and Space Administration (MPLAN)** Crafting Biofules via Molecular Insights
Summer 2023	**Department of Energy** Visiting Faculty Program at Lawrence Livermore National Laboratory with 2 undergraduates Computational prediction of ionic liquid properties
2021 – 2024	**American Chemical Society Petroleum Research Fund (UR4-61864)** Investigating inhibitor selectivity and affinity to prevent asphaltene aggregation
2017 – 2023	**National Science Foundation (CHE-1708635)** RUI: Collaborative Research: Quantifying the Interfacial Partitioning and the Structural Modifications of Polyatomic Ions in Model Aerosol Systems. Co-PI: Joshua Patterson (Christopher Newport University)
2014 –	**NSF – XSEDE and ACCESS** Computing allocation of 2 million compute hours on multiple supercomputers for research and teaching

LEADERSHIP ROLES

2024 – 2027	**Chemistry Division Representative**
	Council of Undergraduate Research
2023 –	**Chemistry program development at CSUMB**
	Four-year and Transfer program
2023 – 2024	**CSU STEM-NET Faculty Fellow**
	Inaugural fellow from CSUMB - engaged with colleagues from other CSUs in proposal development
2023 – 2025	**Co-Chair of Innovation subcommittee**
	University Strategic Planning Committee
2024 –	**Organizer of Primarily Undergraduate Nanomaterials Cooperative Symposium**
	ACS Spring National Meetings

Honors & Awards

2023 – 2024	CSUMB Outstanding Research and Creative Activity Award, Immediate Impact
2022 – 2023	CSUMB Outstanding Teaching Award, Immediate Impact
2021 – 2022	Advanced Computing for Social Change Development Fellow, XSEDE
2021	Featured Author on Wolfram Blog: Enhancing Chemistry Education with Neural Networks
2021	Wagner College Faculty Award for Exceptional Performance in Scholarship
2019	Best Presentation Award, International Conference on Advances in STEM Education
2018	Elected Member of Royal Society of Chemistry, **MRSC**
2018	Wagner College Faculty Award for Exceptional Performance in Scholarship
2017	Wagner College Faculty Award for Exceptional Performance in Teaching
2009	University of Southern California Award for Excellence in Teaching
2009 & 2006	USC Chemistry Outstanding Teaching Assistant in Advanced General Chemistry

Peer Reviewed Publications

Undergraduate co-authors[†], Corresponding author[*]

Journal Articles

16. A. K. Sharma[*], S. Arsala[†], J. Brady[†], M. Franke[†],S. Franke[†],S. Gandhok[†], S. Gingras[†],A. Gomez[†], K. Huie[†], K. Katz[†], S. Kozlo[†], M. Longoria[†], L. Molnar[†], N. Peña[†], S. Regis[†], Machine learning to identify structural motifs in asphaltenes, *Results in Chemistry*, **101551**, 7 (2024).

15. M. Franke[†], S. Arsala[†], F. Tahiry[†], S. Gingras[†], A. K. Sharma[*], Curated Dataset of Asphaltene Structures, *Data in Brief*, **52**, 109907 (2024).

14. M. Crowder[†], I. Lizarraga[†], J. Patterson, A. K. Sharma[*], Ionic partitioning of KCl in AOT reverse micelles from molecular dynamics simulations, *Fluid Phase Equilibria*, **574**, 113904 (2023).

13. M. Crowder[†], F. Tahiry[†], I. Lizarraga[†], N. Peña[†], S. Rodriguez[†], A. K. Sharma[*], Computational analysis of water dynamics in AOT reverse micelles, *Journal of Molecular Liquids*, **375**, 121340 (2023).

12. R. Choudhury [*], A. K. Sharma, P. Paudel[†], P. Wilson[†], A. Pereira[†], In situ generation of a zwitterionic fluorescent probe for detection of human serum albumin protein, *Analytical Biochemistry*, **646**, 114630 (2022).

11. R. Choudhury[*], P. Paudel[†], A. K. Sharma, S. Webb[†], M. Ware[†], Evaluating the merit of a syringol derived fluorophore as a charge transfer probe for detection of serum albumins, *Journal of Photochemistry and Photobiology A: Chemistry*,

422, 113563 (2021).

10. V. Ruan[†], A. K. Sharma*, Polarizability of pyruvate anion in small water clusters, *Journal of Computational Biophysics and Chemistry,* **20**, 3 (2021).

9. A. K. Sharma*, Laboratory Glassware Identification: Supervised machine learning example for science students, *Journal of Computational Science Education,* **12**, 1 (2021).

8. A. K. Sharma*, M. Hernandez[†], V. Phuong[†], Engaging students with computing and societal issues through a course in Scientific Computing, *Journal of STEM Education,* **20**, 2 (2019).

7. A. K. Sharma*, R. DeCicco, Discovering Isomerism: A guided-inquiry computational exercise for undergraduate organic chemistry, *The Chemical Educator,* **23**, 39 (2018).

6. A. K. Sharma*, R. Choudhury, J. Persichetti[†], E. Tale[†], G. Prelvukaj[†], and T. Cropley[†], A computational examination of the binding interactions of Amyloidβ and Human Cystatin C, *Journal of Theoretical and Computational Chemistry,* **17**, 1 (2018).

5. A. K. Sharma*, A model scientific computing course for freshman students at liberal arts colleges, *Journal of Computational Science Education,* **8**, 2 (2017).

4. A. K. Sharma*, D. E. Wolfgang, The Golden Drain: A stoichiometry case study for general chemistry, *The Chemical Educator,* **21**, 77 (2016).

3. A. K. Sharma*, Guided inquiry and discovery in general chemistry: Solubility product and common ion effect, *The Chemical Educator,* **20**, 6 (2015).

2. A. K. Sharma*, K. Hammerton[†], Comparative study of heavy water models: Solvation of trp-cage, *Journal of Computational and Theoretical Nanoscience,* **12**, 113 (2015).

1. C. H. Mak*, A. K. Sharma, Reverse Monte Carlo Methods and Its Implications for Generalized Cluster Monte Carlo Algorithms, *Physical Review Letters,* **98**, 180602 (2007).

Invited Book Chapters

2. A. K. Sharma*, V. Ruan[†], C. Thuermer[†], Learning programming through chemistry in a first-year scientific computing course, *Teaching programming across the chemistry curriculum,* **July 27, 2021**, 43 − 56.

1. A. K. Sharma*, L. Asirwatham[†], Learning by computing: A first-year honors chemistry curriculum, *Using computational methods to teach chemical principles,* **January 1, 2019**, 127−138.

Code Contributions

1. M. Crowder[†], A. K. Sharma*, IsodesmicReactionQ, *A Wolfram language function to determine if the supplied chemical reaction is isodesmic,* **2023**, Wolfram Function Repository.

Selected Presentations

Invited Talks

04/2024	**California State University, Stanislaus**, *Applications of Computer Vision in Chemistry*
11/2023	**Maths & Stats Dept, CSUMB**, *Aerosol Modeling and Machine Learning in Chemistry*
10/2023	**Gentrain Society, Monterey Peninsula College**, *Demystifying Artificial Intelligence*
10/2022	**Sonoma State University**, *Reverse micelle dynamics and machine learning for chemistry laboratory*
06/2022	**Ohio Supercomputer Center**, *Advanced computing for social change faculty workshop: Computing as a civic tool*

12/2021	**Reed College**, *Simulations and computations: Reverse micelles, asphaltenes, and machine learning*
11/2020	**Stevens Institute of Technology**, *canceled due to death in the family*
03/2019	**California Polytechnic State University**, *Computational investigation of ionic distribution in reverse micelles*
11/2017	**Haverford College**, *Computational biophysics and environmental chemistry projects at Wagner College*

Conference Presentations

03/2024	**ACS National Meeting**, *Classifying asphaltenes with machine learning as a CURE module*
08/2023	**ACS National Meeting**, *Core-intermediate-interface model for water layers in reverse micelles*
03/2023	**CSU STEM-NET Conference**, *Supporting student success through experiential learning in the College of Science*
02/2023	**International Conference on Best Innovative Teaching Strategies**, *Programming and machine learning in the chemistry classroom*
08/2022	**ACS National Meeting**, *Rotational and diffusional investigations of water in a reverse micelle system*
07/2022	**Biennial Conference on Chemical Education**, *Water, water everywhere: A guided-inquiry molecular dynamics experiment*, with Chrystal Bruce (JCU), Rob Whitnell (Guilford), and Mark Perri (Sonoma State)
08/2021	**ACS National Meeting**, *First-year Chemistry programming exercises using Wolfram language*
07/2021	**American Association of Philosophy Teachers Conference**, *Computing as a civic tool to engage with philosophical social issues*, with Sarah Donovan (Philosophy)
04/2021	**ACS National Meeting**, *Image recognition for laboratory glassware: A data-science and machine learning project for chemistry students*
12/2019	**International Conference on Advances in STEM Education**, *Scientific computing for first-year students at liberal arts Colleges in USA*
05/2019	**ACS Middle Atlantic Regional Meeting (MARM)**, *Computing activities to increase engagement with chemistry concepts in the General Chemistry lecture*
05/2019	**ACS MARM**, *Distribution of ionic salts in model sea-spray aerosols*
05/2019	**ACS MARM**, *Wolfram programming language applications for Chemistry education*
08/2018	**ACS National Meeting**, *Experiential learning in Honors General Chemistry with free computational resources*
11/2018	**ACS Southwest Regional Meeting**, *Scientific computing for chemists using the Wolfram programming language*
03/2018	**ACS National Meeting**, *A CURE for climate change: Engaging the next generation with scientific computing and climate change data analysis*
03/2018	**ACS National Meeting**, *Molecular dynamics investigation of ionic interfacial partitioning in reverse micelles*
08/2017	**ACS National Meeting**, *Scientific computing to enrich the freshman Chemistry curriculum*
10/2016	**ACS Northeast Regional Meeting (NERM)**, *ChemDetectives: A stoichiometry case study for General Chemistry*
06/2015	**ACS NERM**, *A generalized approach to guided inquiry and discovery experiments in General Chemistry*
2012 -	**National and regional meetings**, *Mentored undergraduates for presentations, see later*

Workshops Attended

07/2024	**Leadership Skills for STEM Faculty**, *MIT Professional Education* Acquired advanced leadership strategies and techniques at MIT's intensive two-day course to enhance the effectiveness and productivity of engineering research groups and academic teams.
07/2023	**Wolfram Data Science Boot Camp**, *Wolfram Research* Successfully completed a two-week online boot camp, gaining expertise in applied multiparadigm data science and the creation of computational essays and reports for advanced analyses.
2022 - 2023	**Course-Based Undergraduate Research (CURE) Faculty Fellow**, *Undergraduate Research Opportunities Center, CSUMB* Engaged with faculty to develop CURE modules and courses for implementation at CSUMB.
2022 - 2023	**Transforming STEM Teaching Faculty Learning Program**, *College of Science, CSUMB* Gained insights into dynamic active learning strategies that enhance student participation, elevate classroom dialogue, and refine questioning skills, all aimed at boosting academic performance in STEM undergraduate courses.
03/2022	**Wolfram Neural Networks Boot Camp**, *Wolfram Research* Successfully completed an intensive two-week boot camp on neural networks, model training, and AI applications in text, image, and audio analysis.
02/2021	**Virtual-Academic Leadership Training**, *American Chemical Society* Engaged with academic leaders from Chemistry to learn about best practices to lead a department.
07/2019	**POGIL-PCL Computational Chemistry**, *Virginia Commonwealth University* Invited to develop computational chemistry module in the POGIL framework.
06/2017	**Wolfram Summer School**, *Bentley University* Selected in a world-wide competition to attend the inaugural Summer School Education track and to interact with Stephen Wolfram on the integration of computational thinking in STEM courses.
02/2017	**Council of Undergraduate Research Dialogues**, *Washington, D.C* Participated in proposal writing workshops and research program development at PUIs.
10/2016	**Course Based Undergraduate Research Design Workshop**, *University of West Alabama* Re-designed Scientific Computing course within the CURE framework.
06/2016	**NIH funded workshop on Computational Biophysics**, *Pittsburgh Supercomputing Center* Engaged with advanced applications of NAMD and VMD for molecular simulation of biological systems.
05/2016	**NSF supported Computational Chemistry for Chemistry Educators**, *Benedictine University* Developed strategies to integrate computational experiences across the undergraduate Chemistry curriculum.
11/2015	**Fostering deep learning**, *Wagner College* Participated in the workshop to engender deep learning with Ken Bain and Wagner College colleagues.
05/2013	**Bridging the gap between learning and teaching**, *Old Dominion University* Participated in the two-day workshop to engage with best practices in teaching.
05/2013	**NSF supported Proposal Writing Workshop**, *College of William and Mary* Collaborated with colleagues from CNU to compose a proposal for external funding.

Teaching Experience

Survey of Physical Chemistry, Spring [2024]

Developed a standalone one-semester introduction to the essential concepts of physical chemistry. The course is structured to provide an introduction to quantum mechanics, detailing the behavior of atoms and molecules at the subatomic level. It also delves into thermodynamics, elucidating the laws that govern energy exchange and the fundamental reasons behind chemical reactions. Students utilize Mathematica and SystemModeler to engage with

complicated mathematical concepts.

Introduction to Molecular Modeling, Fall [2022, 2023]

Developed an introductory chemical modeling course focused on molecular visualization, property calculations via software, and Wolfram language programming. Integrated machine learning, including cheminformatics and neural networks, for real-world chemical and biological problem-solving. Conducted a hands-on Course-based Undergraduate Research (CURE) module to enhance research skills and collaborative learning. Led a collective inquiry into the efficacy of computers in identifying molecular features, bolstering students' scientific acumen and confidence.

Computational Chemistry, Spring [2013, 2016, 2020, 2022]

A hands-on introduction to principles and applications of computational chemistry and cheminformatics for STEM majors. The course trains students to perform molecular dynamics simulations using GROMACS and ab-initio calculations with Gaussian. Students perform short projects to demonstrate their proficiency and to apply research tools to problems of interest. The course also provides with a working introduction to machine learning and its scientific applications.

Scientific Computing, Spring [2015 – 2018], Fall [2019,2020]

A course designed for first-year students to engage them with computational thinking and its applications to their chosen field of study. Students learn Wolfram language programming and get acquainted with data science principles, analysis of large data-sets, and visualization tools commonly used in scientific research. Students perform short projects to apply their learning to issues like climate change, analysis of hurricane data, genome sequence analysis, etc.

Computing, Guns, and Ethics: Gun Violence in USA, Spring[2019, 2020]

Developed and co-taught with a colleague in Philosophy at Wagner College. The course trains students in principles of scientific computing and data analysis. The students learn to access large databases and analyze them with database programming. The course provides them with a historical backdrop of philosophical models of society, the foundations of ethics, and the political grounding of the Second Amendment. Students work with both instructors to analyze gun violence issues in the US and other countries and provide reasoned responses backed with data. *(co-taught with S. Donovan)*

Physical Chemistry I, Fall [2011, 2014 – 2021]

Atoms-first approach introducing Quantum Mechanics in the first semester. Integrated Mathematica into every-day course lectures, homework assignments, and take-home exams. The course also engages students with concepts of Statistical Mechanics to provide a natural bridge to the second semester.

Physical Chemistry II, Spring [2012, 2015 – 2022]

Thermodynamics and Kinetics starting from a statistical thermodynamics background. Continued integration of Mathematica into the coursework allows students to focus on concepts and develop the physical insights underlying the mathematical description.

Physical Chemistry Laboratory, Spring [2012, 2015 – 2020], Fall [2014 – 2020]

The laboratory experience is designed to engage students with computational chemistry tools that bring Physical Chemistry principles to life. Students perform POGIL experiments, write programs to simulate approach to equilibrium in simple systems, and use state-of-the art tools to perform computational experiments.

General Chemistry I, Fall [2011 – 2020, 2022]

The first-semester General Chemistry course to introduce students to the discipline. I have taught the course in multiple variants in large sections of more than 100 students and smaller sections with less than 30 students. I have successfully implemented clickers, guided-inquiry activities, simulations, and visualization exercises to engage students and provide an active learning experience.

General Chemistry II, Spring [2012 – 2016, 2019]

The second semester in General Chemistry sequence to introduce students to equilibrium, chemical kinetics, and thermodynamics. I have successfully implemented clickers, guided-inquiry activities, simulations, and visualization exercises to engage students and provide an active learning experience.

Honors General Chemistry II, Spring [2017, 2018]

Honors course for advanced second semester General Chemistry students. 33% of the lectures were replaced by dedicated time to perform computational activities to supplement student learning and discovery of course concepts.

First Year Program at Wagner College, Fall [2014 – 2021]

Developed the Learning Community, "The Love-Hate relationship between humans, microbes, and chemicals", with a colleague from Microbiology. This was a writing intensive learning experience for first-year students. The students were mentored on writing techniques and guided to reflect on the connections between Chemistry, Microbiology, and Society. *(co-taught with C. Corbo)*

SERVICE

Professional Peer Review

Ad-hoc reviewer for: *Petroleum Research Fund, Biology, Journal of Molecular Liquids, Computational Chemistry, Journal of Biophysical Chemistry, International Journal of Nanomedicine, Journal of the Electrochemical Society, Synthetic Metals, Processes, Journal of Chemical Education, The Chemical Educator, Journal of Educators Online, Journal of STEM Education: Innovations and Research, K-12 STEM Education.*

California State University, Monterey Bay

2023 –	Academic Senate Technology Committee
2023 –	University Strategic Planning Committee
2023 –	University Faculty Affairs Committee
2023 –	University Honorary Degree Committee
2023 –	University Athletic Affairs Committee
Fall 2023	Search Committee for Director of Tutoring Services for the Cooperative Learning Center
Spring 2023 –	Departmental Lecturer Range Elevation Committee
2022 –	Chair of Adjunct Faculty Research Committee
2022 –	College of Science Elections & Service Committee
2022 –	Chemistry Curriculum Working Group
2022 –	Chemistry Program Development Group

Wagner College

2020 – 2022	Priorities and Budget Committee
2019 – 2020	Middle States Working Group on Educational Effectiveness Assessment
2018 – 2022	Departmental adviser for Chemistry majors
2015 – 2021	Academic Review Committee
2016 – 2022	First Year Program Review Committee
2016 – 2022	Departmental Representative at the Faculty Library Committee
2016 – 2017	Information Technology Steering Committee
Fall 2016	Search Committee for IT Client Services Director
2015 – 2021	Teaching in the Intermediate Learning Community and Honors Program
2014 – 2020	Teaching in the First Year Program
2014 – 2020	Organized Science Colloquium Series
2014 – 2020	Academic adviser for first-year students
2014 – 2022	Website administration for Department of Chemistry & Physics
Fall 2014	Search Committee for Organic Chemistry tenure-track position

Christopher Newport University

2012 – 2014	Department Liaison for Chemistry Assessment
2012 – 2014	Department Representative at University Curriculum Committee
2012 – 2014	Academic adviser for first-year students

PROFESSIONAL AFFILIATIONS

▸ American Chemical Society
▸ Royal Society of Chemistry
▸ Process Oriented Guided Inquiry Learning (POGIL)
▸ SIGHPC Education Chapter, Association of Computing Machinery (ACM)
▸ ACCESS Allocations Reviewer Group, NSF supported supercomputer infrastructure
▸ Campus Champion, ACCESS
▸ Primarily Undergraduate Nanomaterials Cooperative

MENTORED STUDENT PRESENTATIONS

27. DFT study of Arsenic sensing in an aqueous solution using water-soluble porphyrins, Nisha Sahane, Shraeddha Tiwari, A. K. Sharma, ACS National Meeting, Spring 2024

26. Interaction of iron nanoclusters with sulfur oxides, Jude Saxton[†], A. K. Sharma, ACS National Meeting, Spring 2024

25. Computational investigation of the impact of orientations on ionic contact pairs, Shelby Franke[†], Madison Franke[†], A. K. Sharma, ACS National Meeting, Spring 2024

24. Asphaltene-Inhibitor non-covalent interactions database, Madison Franke[†], Selsela Arsala[†], Shelby Franke[†], Simon Olivier-Gingras[†], A. K. Sharma, ACS National Meeting, Spring 2024

23. Computational investigation of ortho toludinium carboxylate ionic liquids to increase antimicrobial activity against fungi and bacteria, Kayla Katz[†], A. K. Sharma, National Conference on Undergraduate Research, April 2024

22. Determining the Polarizability and Chemical Hardness of Ionic Liquids, Nathaly Pena[†], Supreet Gandhok[†], A. K. Sharma, National Conference on Undergraduate Research, April 2024.

21. Computational prediction of orientation and vibrational frequencies for surfactant ion pairs, Nathaly Pena[†], Kayla Katz[†], Ana Gomez[†], A. K. Sharma, ACS National Meeting, Fall 2023

20. Curated library of asphaltene structures for molecular simulations, Frozan Tahiry[†], Isabel Lizarraga[†], Simon-Olivier Gingras[†], Selsela Arsala[†], Nishka Saxena[†], A. K. Sharma, ACS National Meeting, Fall 2023

19. Water Dynamics in AOT reverse micelles, Max Crowder[†], A. K. Sharma, Middle Atlantic Regional Meeting, June 2022

18. Polarizability of Pyruvate Anion in Small Water Clusters, Victor Ruan[†], A. K. Sharma, ACS National Meeting, Spring 2021

17. Beaker, Flask, or Graduated Cylinder?: Teaching a computer to identify laboratory glassware, Lennox Apudo[†], Emil Matti[†], Christeen Perera[†], A. K. Sharma, National Conference on Undergraduate Research, April 2021

16. Solvation properties of microhydrated environmentally sensitive anions, Victor Ruan[†], Vinh Phuong[†], A. K. Sharma, ACS Middle Atlantic Regional Meeting, 2019

15. Ionic distribution of monovalent and divalent cations in aqueous reverse micelles, Michelle Hernandez[†], Caecilia Thuermer[†], A. K. Sharma, ACS Middle Atlantic Regional Meeting, 2019

14. Global Sea Level Measurements: History, Current Status, and Future Impact, Derek Avery[†], Zachary Pandorf[†], Michelle Hernandez[†], A. K. Sharma, Eastern Colleges Science Conference, 2018

13. Analysis of climate change data and predicted impact on Japan and surrounding areas, Mara Mineo[†], Tamar Amirov[†], Vinh Phuong[†], A. K. Sharma, Eastern Colleges Science Conference, 2018

12. Global Carbon dioxide emissions: Sources, trends, and links to economic growth, Samantha Susi[†], Jack Leighton[†], A. K. Sharma, Eastern Colleges Science Conference, 2018

11. Analysis of hurricanes and cyclones in North America and Asia, Victor Ruan[†], Matthew Barretto[†], A. K. Sharma, Eastern Colleges Science Conference, 2018

10. Embedding computing using free resources in Honors General Chemistry, L. Asirwatham[†], A. K. Sharma, ACS National Meeting, 2018

9. Interfacial ionic partitioning and its impact on small reverse micelles, G. Prelvukaj[†], E. Tale[†], A. K. Sharma, ACS National Meeting, 2018

8. Chemistry in the interfacial region: A computational study, T. Cropley[†], A. K. Sharma, National Conference on Undergraduate Research, April 2016

7. Computational study of Human Cystatin C with β-amyloid protein in Alzheimer's disease, J. Persichetti[†], A. K. Sharma, National Conference on Undergraduate Research, April 2016

6. Investigation of AOT Reverse Micelle as a Model Aerosol Using Molecular Dynamics Simulations, M. Do[†], T. Cropley[†], G. Prelvukaj[†], J. D. Patterson, A. K. Sharma, Sigma Xi Research Conference, 2015

5. Amyloid β and HCC complex formation in Alzheimer's Disease, J. Persichetti[†], A. K. Sharma, Metropolitan Association of College and University Biologists, 2015

4. Molecular Dynamics simulation to understand the role of Human Cystatin C in Alzheimer's disease, J. Persichetti[†], A. K. Sharma, Eastern Colleges Science Conference, 2015

3. Molecular Docking in Alzheimer's disease: The Binding of Human Cystatin C to β amyloid protein, S. Kyte[†] and A. K. Sharma, Christopher Newport University, PAIDEIA, Spring 2014

2. Molecular Dynamics investigation of Solvent Isotope effect on lysozyme, Mai Anh Do[†] and A. K. Sharma, Christopher Newport University, PAIDEIA, 2014

1. Molecular Dynamics simulation of trp-cage in water and heavy water, K. Hammerton[†] and A. K. Sharma, Molecular Biology and Chemistry Seminar Series, Christopher Newport University, Spring 2012