

Daniel George Smith

Department of Chemistry and Biochemistry
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Education

Auburn University

Auburn, Alabama

Currently pursuing a Ph. D. in Chemistry with a concentration in computational chemistry.
(August 2011 - Present)

College of Charleston

Charleston, South Carolina

Bachelor of Science, Biochemistry and Bachelor of Arts, Chemistry December 2009. Participated in undergraduate research starting sophomore year.

Research Experience

Auburn University

Auburn, Alabama

Advisor: Dr. Konrad Patkowski

Currently exploring the weak intermolecular interactions between various small molecules and carbon nanotubes in order to obtain a better understanding of the physisorption process of carbon based nanostructures. Additionally, looking at improving the accuracy, computational efficiency, and the range of applicability for symmetry-adapted perturbation theory.

College of Charleston

Charleston, South Carolina

Advisor: Dr. Richard Lavrich

Calculated physical properties using ab initio methods in order to help predict the microwave spectra of various strange chain amino acids. A secondary project involved polymerized micelles that underwent a large color shift in the visible spectrum when complexed as a possible biosensor .

Teaching Experience

Auburn University

Auburn, Alabama

Teaching Assistant. Organic Chemistry Laboratory and Honors General Chemistry Laboratory. Supervise and instruct students in chemistry laboratory techniques. (August 2011 - Current)

College of Charleston

Charleston, South Carolina

Teaching Assistant. Physical Chemistry Laboratory. Guided all physical chemistry students at the college through the prescribed procedures. (January 2010 - April 2010)

Publications

"Interactions Between Methane and Polycyclic Aromatic Hydrocarbons: A High Accuracy Benchmark Study" Smith, D.G.A.; Patkowski, K. *Journal of Chemical Theory and Computation*, **2013**, 9, 370.

Awards and Honors

Recipient of the Dow Award from Auburn University, Department of Chemistry and Biochemistry

Presentations

[Poster] "Towards an accurate description of methane physisorption on carbon nanotubes" Annual Meeting of the Southeastern Theoretical Chemistry Association at Auburn University. (May 2013)

[Poster] "Towards an accurate description of methane physisorption on carbon nanotubes" 245th ACS National Meeting in New Orleans, Louisiana. (April 2013)

[Poster] "Interactions Between Methane and Polycyclic Aromatic Hydrocarbons: A High Accuracy Benchmark Study." Gordon Research Conference: Atomic & Molecular Interactions in Boston, Massachusetts. (July 2012)

[Poster] "Interactions Between Methane and Polycyclic Aromatic Hydrocarbons: A High Accuracy Benchmark Study." Annual Meeting of the Southeastern Theoretical Chemistry Association at the University of Georgia. (May 2012)

[Presentation] "Interactions Between Methane and Polycyclic Aromatic Hydrocarbons." Joint RCA & Nano-Bio Symposium at Alabama State University. (March 2012)

[Poster] "The Competition Between Intermolecular and Intramolecular Hydrogen Bonding Networks in the Stabilization of Van Der Waals Complexes of a Series of Amino Alcohols with Water." Conference on Current Trends in Computational Chemistry in Jackson, Mississippi. (October 2011)

[Poster] "Effect of Solvent On Molecular Conformation: Microwave Spectra and Structures of 2-Aminoethanol and 3-Aminopropanol Water Complexes." Southeast Regional Meeting of the American Chemical Society in San Juan, Puerto Rico. (October 2009)

Outreach

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- Event Coordinator for "Food Science" Auburn University's Regional Science Olympiad (February 2012, 2013)
 - Event Judge for South's B.E.S.T. (Boosting Engineering, Science and Technology) Robotics Championship (December 2011, 2012)
 - Camp Counselor for Auburn University's Summer Science Institute (June 2012)
 - Event Coordinator for Chemistry Auburn University (AU) Explore (April 2012, 2013)
 - Event Judge for Greater East Alabama Regional Science and Engineering Fair (March 2012)
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Work Experience

Whairhouse Distributors Charleston, South Carolina
Cofounded a distribution services for salons and spas. Assisted in growing the company to over thirty clients in two states and half a dozen product lines employing five people. (January 2010 - July 2011)

The Math Tutor Charleston, South Carolina
Tutored high school students in chemistry, mathematics, biology, and prepared students for the SAT. (December 2010 - July 2011)