

Wesley A. Beckner

CONTACT INFORMATION	Benson Hall Room B17 Dept. of Chemical Engineering University of Washington Seattle, WA 1750 USA	<i>Cell:</i> (817) 676-6617 <i>E-mail:</i> wab665@uw.edu <i>Website:</i> http://www.wesleybeckner.github.io
RESEARCH INTERESTS	Analysis and simulation of materials for energy and medicine using data science and statistical methods	
EDUCATION	University of Washington , Seattle, Washington USA Ph.D. Student, Chemical Engineering, December 2018 (expected graduation date) <ul style="list-style-type: none">• Advisor: Jim Pfaendtner University of Washington , Seattle, Washington USA M.S., Chemical Engineering, December, 2016 University of Texas , Austin, Texas USA B.S., Chemical Engineering, May, 2014	
HONORS AND AWARDS	Data Science Accelerator Award (National Science Foundation), 2017-2018 Data Intensive Research Enabling Clean Technologies (DIRECT) graduate trainee, 2016-2018 National Science Foundation Graduate Research Fellowship Honorable Mention, 2015 Chemical Engineering Endowment, 2014 Achievement Rewards for College Scientists Fellow, 2014-2016 Friends of Alec Scholar, 2014 Undergraduate Research Fellowship, 2013 Tracor/Frank W. McBee, Jr. Scholarship, 2013	
ACADEMIC EXPERIENCE	University of Washington , Seattle, Washington USA <i>Graduate Student</i> September, 2014 - present Includes current Ph.D. research, Ph.D. and Masters level coursework and research/consulting projects. <i>Visiting Researcher</i> June 2016 Assisted in the training of new graduate students to use molecular simulation engines in the research lab of Dr. Yi He at Zhejiang University, Hangzhou, China. <i>Study Abroad Teaching Assistant</i> June - July, 2016 Co-taught unit operations labs for undergraduates from University of Wisconsin and University of Washington at Zhejiang University in Hangzhou, China. Emphasis on responsibility for heat and mass transfer workshops. <i>Instructor</i> July - August, 2015 Co-taught programming course for data science incubator for social good at the UW eScience Institute. Shared responsibility for lectures, workshops, and homework assignments.	

PUBLICATIONS	<p>W. A. Beckner, Y. He, J. Pfaendtner, "Chain Flexibility in Self-Assembled Monolayers Affects Protein Adsorption and Surface Hydration, a Molecular Dynamics Study", <i>J. Phys. Chem. B.</i>, 2016, 120(40), 10423-10432. DOI: 10.1021/acs.jpcc.6b05882</p> <p>W. A. Beckner, C. Mao, J. Pfaendtner, "Statistical models are able to predict ionic liquid viscosity across a wide range of chemical functionalities and experimental conditions" , <i>Mol. Syst. Des. Eng.</i>, 2018. DOI: 10.1039/C7ME00094D</p>
PAPERS IN PREPARATION	L. Schmser, M. Trefz, S. Roeters, W. A. Beckner, J. Pfaendtner, S. Woutersen, M. Bonn, D. Schneider, T. Weidner, "Refining the X-ray crystal structure of aquaporin with Sum Frequency Generation spectroscopy"
CONFERENCE PRESENTATIONS	<p>Beckner, W. A., Navigating Solvent Design with Statistical Models. Graduate Student Symposium, Seattle, WA, 2017.</p> <p>Beckner, W. A., Application of High Performance Computing and Machine Learning to Accelerate Material Discovery for Energy Capture and Storage. American Institute of Chemical Engineers Conference, San Francisco, CA, 2016.</p> <p>Beckner, W. A., Green Events: Engaging Students in Sustainable Practice Through On-Campus Event Planning. Smart and Sustainable Campus Conference, Baltimore, MA, 2014.</p> <p>Beckner, W. A., Entzminger, K., and Maynard, J. A. Site-Directed Incorporation of Nitrophenylalanine to Study Antibody:Nitro Group Interaction. Rice University Regional Undergraduate Symposium, Houston, TX, 2013.</p>
PROFESSIONAL EXPERIENCE	<p>Campus Environmental Center, Austin, Texas USA <i>Assistant Director</i> August, 2012 - August, 2014</p> <ul style="list-style-type: none"> • Co-founded Green Events, a university-funded events consultation service for registered student organizations • Provided network of campus resources to organization partners • Executed and expanded campus sustainability initiatives • Served as a student liaison between students and administrators • Planned milestone sustainability events including a world record-breaking build-a-thon on America Recycles Day 2013 • Participated in search committee with other administrators and facilities directors to hire campus zero waste coordinator
SKILLS	<ul style="list-style-type: none"> • Languages: C, Unix shell scripts, Python MPI parallel processing library. • Applications: L^AT_EX, common Windows database, spreadsheet, and presentation software • Algorithms: GROMACS molecular dynamics engine • Operating Systems: Unix/Linux, Windows, iOS.