

BRYANT N. SUGG

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EDUCATION

Bachelor of Science with Honors, Chemical Engineering, University of Texas at Austin	May 2016
University of Arkansas at Fayetteville	2012-2013
Houston Community College	2011-2012

RESEARCH EXPERIENCE

University of Texas at Austin <i>Research Assistant</i> <i>Austin, TX</i>	August 2016-present
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- Engineering various metal oxide nanocrystal films and evaluated their potential for thermochromic window applications.
- Optimizing the thermal annealing of solution-processed nanocrystal films containing vanadia
- Gained proficiency with colloidal nanocrystal syntheses, film annealing on Si and glass substrates, spin coating, Raman spectroscopy, FTIR spectroscopy, and UV/Vis spectroscopy.

University of Texas at Austin <i>Carbon Nanotube Computational Simulations</i> <i>Austin, TX</i>	2015
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- Performed molecular dynamic simulations of single walled carbon nanotubes using equilibrium and non-equilibrium techniques.
- Developed code using LAMMPS and Avogadro for simulations
- Gained proficiency with MATLAB for post processing data analysis.
- Determined theoretical thermal conductivity values for variable nanotube lengths and chirality using the Green-Kubo and Muller-Plathe methods in an NVE ensemble.
- Delivered final presentation covering quantitative thermal conductivity trends, computational set-up, and potential future analysis.

Rice University <i>NSF REU BioNetworks Intern</i> <i>Houston, TX</i>	2013
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- Competed nationally for NSF funded internship through the Institute of Biosciences and Bioengineering at Rice University.
- Worked on genetically encoding a tripartite AND logic gate using a trisected modified *E. coli* methionyl-tRNA synthetase (EcMetRS) to increase spatial and temporal control over cell-targeted metabolic labeling of proteins.
- Performed DNA sequence analysis, primer design, agarose gel electrophoresis, PCR, and maintained bacterial cultures associated with project.
- Developed and implemented lab protocols, completed quantitative genetic engineering data analysis, and presented biotechnology research.

ORGANIZATIONAL & ACTIVITY EXPERIENCE

Member , University of Texas at Austin Solar Vehicles Team	2015-present
Corporate Liaison , University of Texas Engineering Career EXPO	2015
Member , American Institute of Chemical Engineers	2013-present
Member , National Society of Professional Engineers	2013-present
Founding Member , Freshman Engineering Leadership Team	2012

Volunteer: Habitat for Humanity, Galveston Bay Foundation, Houston Food Bank

AWARDS & SCHOLARSHIPS

University of Texas Honors College Scholar	2016
National Science Foundation REU	2013
University of Arkansas Chancellor's List	2013
University of Arkansas Leadership Scholarship	2012
University of Arkansas Board of Directors Scholarship	2012

INDUSTRY EXPERIENCE

Shell	2016
<i>Intern, Commercial Trading & Supply</i>	<i>Houston, TX</i>
ConocoPhillips	2015
<i>Intern, Process Engineering</i>	<i>Houston, TX</i>
ConocoPhillips	2014
<i>Intern, Process Engineering</i>	<i>Laredo, TX</i>

SKILLS

Software Skills: MATLAB, JMP, ASPEN/HYSYS, MS Office Products, VBA

Laboratory Experience: Colloidal Nanocrystal Synthesis, Thermal Annealing, Raman Spectroscopy, UV/VIS Spectroscopy, IR Spectroscopy, Spin Coating, Drop Casting, PCR, Agarose Gel Electrophoresis