

## EDUCATION

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<b>University of Delaware</b> · Newark, DE	Spring 2018 (Expected)
Ph.D. candidate · Chemical and Biomolecular Engineering	
Thesis advisor: Prof. Eleftherios T. Papoutsakis	
<b>North Carolina State University</b> · Raleigh, NC	2010 – 2013
B.S. · Chemical and Biomolecular Engineering	
Summa cum laude · Biotechnology minor	
<b>Catawba Valley Community College</b> · Hickory, NC	2008 – 2010
A.S. · Chemistry	

## RESEARCH AND WORK EXPERIENCE

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<b>Graduate Research Assistant</b>	2013 – Present
University of Delaware · Chemical and Biomolecular Engineering	
Thesis advisor: Prof. Eleftherios T. Papoutsakis	
Thesis: “Engineering nonnative methanol metabolism in <i>Escherichia coli</i> ”	
<ul style="list-style-type: none"><li>- Performing genomic modifications (gene knockouts, knockins) and regulation of gene expression (RNA interference, metabolite responsive promoters)</li><li>- Applying molecular biology techniques for recombinant protein expression and characterization (plasmid construction, protein purification, enzymatic assays)</li><li>- Improving enzymatic function using protein engineering and high-throughput screening (library construction, fluorescence activated cell sorting, sequencing)</li><li>- Operating benchtop bioreactors for controlled <i>E. coli</i> fermentations (bioreactor sterilization, optimization of fermentation parameters, pH, DO monitoring)</li></ul>	
<b>Undergraduate Research Assistant</b>	2012 – 2013
North Carolina State University · Chemical and Biomolecular Engineering	
Advisor: Prof. Robert M. Kelly	
<ul style="list-style-type: none"><li>- Performed recombinant enzyme purification and characterization (protein chromatography, immunoblot analysis, enzymatic assays)</li><li>- Cultured hyperthermophilic organisms for degradation of lignocellulosic biomass and production of fuels and chemicals</li></ul>	
<b>Special Metals Welding Products Company</b>	2011
A Precision Castparts Corporation Company · Newton, NC	
<ul style="list-style-type: none"><li>- Full-time summer internship as a process engineer</li><li>- Contributed to the review and improvement of ultrasonic cleaning processes</li><li>- Performed tensile testing on wire specimens for process improvement</li></ul>	

## TEACHING EXPERIENCE

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<b>Graduate Teaching Assistant</b>	2015
University of Delaware · Chemical and Biomolecular Engineering	
Instructor: Prof. Prasad Dhurjati	
<ul style="list-style-type: none"><li>- Advised undergraduate seniors participating in Chemical Engineering Laboratory II, Fermentation and Bioseparation experiment</li><li>- Responsible for teaching bioreactor operation, microfiltration and ion-exchange chromatography to purify proteins upon complete fermentation</li></ul>	