

XXXXXXXXXXXXXXXXXXXX

Ph.D. Candidate | Chemical and Environmental Engineering

Riverside, CA | (C) PHONE | EMAIL | LINKEDIN PROFILE URL

Graduate Researcher, Lab & Teaching Assistant

Ph.D. Candidate, Chemical and Environmental Engineering from the University of California, Riverside, CA, (Expected November 2018) - GPA 3.81

M.S. Chemistry & Biochemistry from Northern Illinois University, DeKalb, IL, 2013 - GPA 3.75

B.S. Material Science Engineering with a minor in Chemistry from the University of Illinois, Champaign-Urbana, IL, 2010 - GPA 3.0

- **Dean's Fellowship:** Chemical and Environmental Engineering; University of California, Riverside, 2013; **1st Place Winner of 2nd Annual Ethics Competition:** NIU, April 13th, 2012
- **Secretary & Treasurer, Engineers Without Borders,** NIU, Fall 2012 - December 2012
 - Prepared and managed projects for the nonprofit infrastructure at a children's school in Tanzania and water filtration in Mexico
 - **AIESEC Outgoing Exchange Team Leader:** NIU, Spring 2012 – December 2012
Facilitated the allocation of international internships for NIU students
 - **UIUC Garner LEADS Living Learning Community:** 2006 – 2008
 - **New Life Volunteering Society:** 2006 – 2007

Expertise & Leadership

Technology, Materials Science & Engineering | Quantitative Research, Theory & Modeling | Project Management Methodologies | Communication & Technical Reports | Presentation Skills
Lab Equipment Management & Safety Supervision | Statistical & Machine Learning
Data Collection & Analysis | Process Control & Project Costs

Advanced Programming: Matlab, Mathematica, Aspen Plus, MS Office, Computer Languages (HTML, C++), Python

Laboratory: Electron Microscopy, Liquid Chromatography, X-ray Equipment, Nuclear Magnetic Resonance

Data Processing: Statistical Analysis, Compiling Databases, Techno-Economic Analysis, FTIR/Raman

Creative & Website Design: Adobe Photoshop, Adobe Fireworks, Adobe Dreamweaver, HTML, CSS

Research Experience

UNIVERSITY OF CALIFORNIA, Riverside, CA

Ph.D. Graduate Researcher, Center for Environmental Research and Technology Expected Nov 2018

- ☐ Works with a team of 3 Ph.D. advisors and 1 graduate student as part of a million-dollar USDA grant.
- Mentors/trains 2 undergraduate students conducting laboratory experiments
- Presented 3 podium and 2 poster presentations at scientific research conferences
- Evaluates methods for optimizing biofuel production and performs techno-economic analysis on biofuel production to develop cost-effective processes

Ph.D. Graduate Researcher, Battery Research Laboratory Aug 2013 - Dec 2014

- ☐ Highly involved in the research, study and development of novel carbonaceous anode materials to maximize charge capacity in lithium batteries.

NORTHERN ILLINOIS UNIVERSITY, Dekalb, IL

M.S. Graduate Researcher Aug 2013 - Dec 2014

- ☐ Performed as Supervisor to undergraduates; directed research, set deadline goals, and guidance with lessons. Systemized research towards dynamically improving carbon-based nano lithium-ion batteries at the distinguished Hosmane Laboratories.

Researcher/Intern

- Demonstrated advanced skill and knowledge of engineering innovative designs for new self-healing coating technologies. Met employers' requests to program Mathematica modeling software for theoretical analysis and experimental design.

Teaching Experience

UNIVERSITY OF CALIFORNIA, Riverside, CA

Teaching Assistant

- Prepared and instructed weekly discussions for the following courses: Graduate Teaching Assistantship CHE 116 Heat Transfer, CEE 118 Chemical Process Control, and CEE 110 C++ Programming. Graded assignments prepared lessons, and oversaw the needs of 50 students per section.

NORTHERN ILLINOIS UNIVERSITY, Dekalb, IL

Graduate Assistantship/Teaching Assistant

- Instructed 10 advanced undergraduate chemistry classes with approximately 25 students per section in the following classes: Graduate Teaching Assistantship CHEM 111 Chemistry Laboratory, CHEM 210 General Chemistry, and CHEM 440 Physical Chemistry. Supervised two undergraduates by directing research projects, setting deadline goals, and providing lesson guidance including preparation of lessons and feedback to students.
- Systemized research towards dynamically improving carbon-based nano-technology in lithium-ion batteries at the distinguished Hosmane laboratories.

Additional Relevant Experiences

UNIVERSITY OF ILLINOIS at CHAMPAIGN URBANA, Champaign, IL

Geopolymer Research Assistant

May 2009 - May 2010

- Worked as part of a research team to respond to requests from the U.S. Airforce for the procedural testing of composite cement for takeoff pads. Conducted experiments on the development of thermoelectric materials.

Registration Lab Assistant

June 2008 - Sep 2009

- Facilitated class registration for 800 incoming undergraduate engineering students. Examined Advisors' Academic plans supported the management of the personnel schedule and connected with parents/students.

Mathematica Course Teaching Assistant

Sept 2008 - Jan 2009

- Accountable for the online tutoring to nearly 100 students in the areas of basic to advance math courses. Graded online homework and tests and provided feedback to the students.

Website Developer

Sept 2008 - Jan 2009

- Assisted in the creation and development of an online optical resource center by lecture and website design. Programmed several advance physic demonstrations using Mathematica software.

Past & Current Projects
Catalyst Design

Sept 2015 - Present

- Developed novel experimental techniques to generate new process reactors and catalysts for higher yielding and low-cost production of valued chemicals.

Publications

- **XXXXXX, X.;** XXXXXX, X.; XXXXXXXXXX and XXXXXXX X. Led project team to successfully take a *Kinase Inhibitor through discovery and unifying mechanistic analysis of factors controlling selectivity in fructose dehydration to 5-Hydroxymethylfurfural by homogeneous acid catalysts in aprotic solvents*. ACS CatalysiX, 2018