

Anh N. Huynh

Chemical & Biological Engineering Department
Center for Automation Technology, CAT 288
Mobile: (703) 731-3556
Email: anh88@drexel.edu

Education

Doctor of Philosophy in Chemical Engineering Expected 2022
Chemical & Biological Engineering Department, Drexel University

Bachelor of Science in Chemical Engineering June 2017
Chemical & Biological Engineering Department, Drexel University
Cum Laude

Peer-Reviewed Publications

- **Non-equilibrium Plasma Decontamination of Corn Steep Liquor for Ethanol Production: SO₂ removal and Disinfection**, Anh Huynh, Thomas Li, Mykola Kovalenko, Ryan Robinson, Alexander Fridman, Alexander Rabinovich, Gregory Fridman, *Special Issue on Plasma Agriculture, Plasma Medicine journal*, 6(3): pp1–16 (2016) (DOI: 10.1615/PlasmaMed.2016018656)

Conference Presentations

- International Symposium on Plasma Chemistry, August 2017
- Gordon Research Conference on Plasma Processing Science, July 2016

Professional experience

Research Assistant January 2018–Present
Polymer Composite Laboratory, Drexel University, Philadelphia, PA

- Formulate high-performance thermoset resins that contain bismaleimide and cyanate ester for stereolithography
- Evaluate the effect of chemistry and processing parameters such as light intensity, exposure time, and temperature on shrinkage and thermal and mechanical properties of printed object
- Evaluate the effect of interpenetrating network chemistry and processing parameters on residual stress

Capstone Project, Team Leader September 2016–June 2017
Drexel University, Philadelphia, PA

- Collaborated with advisor and four team members to utilize conventional hydrotreating process to generate renewable diesel from palm oil in industrial scale
- Evaluated process chemistry and feedstocks, calculated equipment sizing based on production rate
- Developed process-flow diagram and performed economic analysis of production plant
- Optimized production process including heat integration, reactor design, and equipment arrangement to reduce capital and production cost

Research Assistant

March–August 2016

Nyheim Plasma Institute, Drexel University, Philadelphia, PA

- Conducted experiments to investigate the effects of atmospheric pressure non-equilibrium plasma discharge on sterilizing water, produce, and food packaging
- Successfully studied effects of four plasma systems on sulfur dioxide removal and disinfection in corn steep liquor for ethanol production
- Evaluated and measured electrical and optical characteristics of micro-second-pulsed DBD used for removing ethylene to improve fresh produce shelf life
- Studied scale-up process of generating plasma activated water utilized for produce washing
- Assisted faculty in application for NSF grant for Industry/University Cooperative Research Program (subsequently awarded in January, 2017)
- Assisted in organizing and hosting 1st International Workshop on Plasma Agriculture (www.iwopa.org)

Analytical Chemist

March–September 2015

Evonik Oil Additives, Horsham, PA

- Performed experiments to separate additives from oil and analyzed components utilizing FT-IR, Pyrolysis GC-MS, GPC, and XRF
- Modified settings and calibrated equipment to improve accuracy, specifically for lubricant additives, and updated experimental procedures based on collected data
- Assisted process engineers in analyzing products from production plant to troubleshoot and ensure quality
- Shadowed a process specialist to learn about lab-scale additives synthesis procedures and quality testing

Stormwater Management Plan Reviewer

March–September 2014

Philadelphia Water Department, Philadelphia, PA

- Verified approximately 70 stormwater management plans for completeness, approved or communicated missing elements to applicants
- Applied appropriate stormwater management regulations to proposed projects and calculated loading ratio for practices, such as green roof and bioretention basin, using AutoCAD
- Enforced regulations regarding total project size, using ArcMap, and identified one project in violation, leading to investigation and resolution

Honors

- International Symposium on Plasma Chemistry: Student Award August 2017
- Undergraduate Research Travel Grant, Drexel University August 2017
- Chemical Engineering Department, Drexel University: Student Travel Fellowship July 2016
- Dean's Scholarship, Drexel University 2013–Present
- Phi Theta Kappa Scholarship 2013–Present

Skills

- Laboratory: FTIR, Thermal Analysis instruments for polymer (DMA, TGA, DSC), Rheometer, GC-MS, XRF, Viscometer, Oscilloscope, Optical Spectrometer
- Plasma systems: Dielectric Barrier Discharge, Gliding Arc Plasma, Spark Discharge
- Basic microbiology: cell culture, aseptic technique
- Aspen: used for chemical process simulation
- AutoCAD, 2D CAD: used for basic 2D architectural schematics

- MathWorks Matlab: used for simple calculations, graphing, and user interface
- COMSOL: used for heat transfer modeling
- Microsoft Office: full proficiency in Word, Excel, and PowerPoint

Other activities

- Teaching Assistant for Undergraduate Chemical Engineering classes September 2017–December 2018

Languages

- Vietnamese (fluent)