

To: New Graduate Students and ChE Faculty
 From: John Morgan, Director of Graduate Studies
 Subject: Advisor Assignments, Fall 2024
 Date: 1/10/2025
 Cc: Business office, B. Johnson, J. Valley

For the students joining our graduate program this fall, the advisor assignments are shown below. Students should contact their new advisors at their earliest convenience to plan and discuss their research.

ADVISOR ASSIGNMENTS – Fall 2024

Student	Project Name	Advisor
Aguirre, Angela	Advancing polymer upcycling: hydrogenolysis on metal catalysts for sustainable recycling	Hibbitts
Arfa, Nafisa	Block Copolymers at the Air-Water Interface (Applications in Polymer Lung Surfactants)	Won
Ariyaphuttarat, Phin	Cell-material interactions in synthetic hydrogel scaffolds	Schultz
Bolding, Meilani	Advanced chromatography methods for producing high-purity critical materials	Wang
Cabeza, Andres	Optimization-aided process synthesis and operations	Bernal
Chang, Chao-Hsiang	Metal Coatings on Biotemplates	Harris
Chiu, Hsuan-Han	Analysis of Single Cell RNA Datasets Using Large Language Models	Li
Choi, Yongseok	Modeling of Eukaryotic Systems	Ramkrishna
Chung, Wei-Ting	Selective catalytic reduction of nitrogen oxides on Cu-zeolites	Gounder
Conlon, Matthew	Electrochemical synthesis of energetic materials (EMBR Center)	Tackett
Connors, TJ	Cartilage Tissue Engineering	Liu
Czaplewski, Emily	Development of a novel microwave-assisted drying unit operation for high-value pharmaceutical products	Alexeenko/Ristroph
Genc, Destina	Designing responsive hydrogels for regenerative tendon healing	Hebner
Gusev, Sergey	Hybrid Quantum Algorithms for Structured Optimization Problems in Process Systems Engineering	Bernal
Guzman Julio, Luis	Model-based control of modular manufacturing networks	Nagy
Ha, Seungwoo	Separating blood and other suspensions in microfluidic environments	Narsimhan/Ardekani
Harmancilar, Orhun	First principles studies of solid-solid interfaces in lithium- and sodium-based batteries	Greeley
Houf, William	Flow creation of energetic materials	Beaudoin
Huckabee, Reagan	Manipulating active site distributions in zeolites to control hydrocarbon catalysis	Gounder
Jung, Sung-Kwang	Extreme Temperature Energy Harvesting and Storage	Pol
Kahane, Nishant	Effects of diffusion and site proximity on reactions of hydrocarbons metal-zeolite bifunctional catalysts	Gounder/Iglesia
Lavallee, Caleb	Hydrogen management using bimetallic catalysts for the production of liquid organic hydrogen carriers	Gounder/Iglesia
Lee, Dana	Dehydrogenation and C-H bond activation routes at Lewis acid-base pairs on earth-abundant oxides	Hibbitts/Iglesia
Maciel Xavier, Pedro	Mathematical Programming formulations and algorithms for Process Systems Engineering	Bernal
Medicharla, Rajeev	Engineering microfibrillated cellulose as molecular delivery vehicles	Schultz
Michael, Nate	Model-based control of modular manufacturing networks	Nagy
Nasr, Danny	Semi-continuous bladeless mixing of energetic materials	Beaudoin
Oyung, Bocheng	AI driven digital design of sustainable crystallization systems	Nagy
Pal, Shraman	Explainable and Physics-Informed Machine Learning for Cell Typing via a Modern Optimization Lens	Li
Rath, Josh	Low Temperature Electrocatalytic Manufacturing of Essential Chemical Building Blocks	Tackett
Rubio, Mirand	Programming autonomous response regulation in active polymers	Hebner
Sahu, Pravinkumar	Modeling and Optimization of TFF for processing lipid and virus particle based drug formulations	Reklaitis
Sharma, Piyush	Optimization Methods to Control Multiple Steady States for Electrochemical Production of Net-Zero Fuels	Li/Tackett
Shen, John	Engineer and manufacture immune cells from human pluripotent stem cells	Bao
Sudhakaran, Sooryadas	Sustainable, Safer Sodium-ion Storage	Pol
Tan, Yan	Biomaterial mediated ex vivo and in vivo neutrophil engineering	Bao/Won
Wright, Aniela	Using Dynamic Covalent Bonds to Control Properties of Additively Manufactured Energetic Formulations	Beaudoin
Zhao, Sylvia	Understand gene-environmental interactions towards Alzheimer's Disease risk using hiPSC model	Yuan
Zhao, Yuehua	Swelling, rupture, and rheology of polymer gels – applications to biology and foods	Narsimhan
Zheng, Rain	Sustainable aviation biofuels from algae	Morgan
Zheng, James	Fabrication and characterization Solar cells from thin films and nanoparticles	Agrawal