THE UNIVERSITY OF WISCONSIN-MADISON
CHEMICAL & BIOLOGICAL ENGINEERING
RESEARCH

FACULTY

Styliani Avraamidou
Circular economy systems; energy systems; multi-level optimization; supply-chain optimization

Matthew A. Gebbie
Interfaces; electrochemistry; soft materials; nanoscience; electrolytes; energy; ionic liquids

Michael D. Graham
Fluid mechanics; complex fluids; microfluidics; applied and computational mathematics

George W. Huber
Heterogeneous catalysis; renewable fuels and chemicals; biomass and natural gas conversion

Daniel J. Klingenberg
Colloid science; complex fluids; suspension rheology

Siddarth H. Krishna
Heterogeneous catalysis; kinetics and mechanisms; microporous materials; sustainable fuels and chemicals; pollution control

David M. Lynn
Soft materials; nanotechnology; polymers; biotechnology; drug delivery

Manos Mavrikakis
Thermodynamics; kinetics and catalysis; surface science; computational chemistry; fuel cells; sensors; nanoscience

Regina M. Murphy
Biomedical engineering; protein-protein interactions; neurodegenerative disorders

Sean P. Palecek
Stem cell engineering; antimicrobial agents; cell signaling

Brian F. Pfleger
Synthetic biology; biotechnology; protein engineering; sustainable chemical production

Thatcher W. Root
Green chemistry; renewable resources; catalysis; spectroscopy

Marcel Schreier
Electrocatalysis; renewable energy; electrified interfaces; kinetics and catalysis; surface chemistry; electrochemical synthesis of chemicals

Eric V. Shusta (Chair)
Drug delivery; protein engineering; biopharmaceutical design

Ross E. Swaney
Process design, synthesis, modeling and optimization

Reid C. Van Lehn
Nano-bio interactions; soft materials; cell membranes; engineered nanomaterials; molecular simulation

John Yin
Systems biology; virus-cell interactions; immunology; microfluidics

Victor M. Zavala
Large-scale optimization; dynamics and control; energy systems

AFFILIATE FACULTY

AJ Boydston
Additive manufacturing (3D printing); photoredox-catalyzed polymerizations; polymerizations in continuous flow; mechanochemistry

Padma Gopalan
Polymer synthesis and characterization; electro-optic and photonic materials; self-assembly of block copolymers; photonic devices; liquid crystalline polymers

Ive Hermans
Sustainable chemistry and catalysis engineering

Vatsan Raman
Systems and synthetic biology; protein design; biosensors; synthetic bacteriophages; high-throughput functional assays; sequence-function landscapes

Philip A. Romero
Protein engineering; computational biology; high-throughput technology

James J. Schauer
Developing measurement and chemical characterization tools to quantitatively understand the origin and impacts of air pollution

Saverio E. Spagnolie
Fluid mechanics; soft matter; biophysics; applied mathematics; numerical methods

Ophelia S. Venturelli
Synthetic & systems biology; computational modeling; microbiome and human health

For more information, please contact:

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