

Chemical and Biological Engineering

A top-ranked department for graduate study and research

- The UW–Madison Department of Chemical and Biological Engineering has a tradition of excellence dating to 1905, consistently ranking among the top programs in the U.S.
- Award-winning faculty offer a range of cutting-edge research opportunities, which, together with outstanding students and a collegial atmosphere, create an intellectually stimulating environment.
- Research on campus is highly interdisciplinary, benefitting from nationally prominent centers, including the NSF Materials Research Science and Engineering Center, and the Great Lakes Bioenergy Research Center, as well as a leading medical school, uniformly strong programs across the biological, chemical, and physical sciences, many NIH-funded graduate training programs, graduate internships and international collaborations.
- The city of Madison is consistently ranked as a top community in which to live, work, and play.



WISCONSIN

UNIVERSITY OF WISCONSIN–MADISON

Faculty research areas

Nicholas L. Abbott (NAE)

Interfacial phenomena; colloid science; soft materials; nanotechnology; biomolecular interfaces

James A. Dumesic (NAE, NAS)

Kinetics and catalysis; surface chemistry; energy from renewable resources

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

Thomas F. Kuech (NAE)

Advanced materials processing; solid-state, electronic, and nanostructured materials; interface science; alternative energy materials

David M. Lynn

Soft materials; nanotechnology; polymers; biotechnology; drug delivery

Christos T. Maravelias

Production planning and scheduling; supply chain management; process synthesis; novel material discovery

Manos Mavrikakis (Chair)

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

James B. Rawlings (NAE)

Process modeling, dynamics and control; nonlinear model predictive control; chemical reaction engineering

Jennifer L. Reed

Systems biology; computational biology; metabolic engineering; microbial interactions

Thatcher W. Root

Green chemistry; renewable resources; catalysis; spectroscopy

Eric V. Shusta

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

For more information, please contact:

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