

Chemical Engineering at The University of Rochester

CELEBRATE
ChemE
100 years

Graduate Studies & Research Programs

Advanced Materials

- Liquid Crystals
- Colloids & Surfactants
- Functional Polymers
- Inorganic/Organic Hybrids
- CO₂ Reduction

Functional Interfaces

- Monomolecular interfaces
- Molecular models
- AR/VR
- Electrolytic surface coating

Electrochemistry

- Hydrogen fuel cells
- Solid state lithium batteries
- Hydroxyapatite
- Electro-polymerization

Theory & Simulation

- Modeling Peptides self-assembly
- Monte Carlo Algorithm
- Molecular modeling methods

Biotechnology

- Biofuels
- Systems Biology
- Biochemical Engineering
- Bone Marrow Engineering

The Chemical Engineering Department at the University of Rochester offers M.S. and Ph.D. programs designed to both challenge and support our students' learning. Our graduate programs are among the highest ranked in the nation according to a recent NRC survey*. We provide leading edge research opportunities that cut across the boundaries of chemistry, physics, biology and chemical engineering disciplines with emphasis in energy, materials and biotechnology research. For qualified students, we offer competitive teaching and research assistantships and tuition scholarships.

* 2010 National Research Council Report www.nap.edu/rdp/



Faculty

M. ANTHAMATTEN

PhD MIT, 2001
Macromolecular Self-assembly; Associative and Functional Polymers; Nanostructured Materials; Interfacial Phenomena; Optoelectronic Materials; Vapor Deposition Polymerization

D. BENOIT

PhD Colorado, 2006
Rational Design, Synthesis, Characterization; Employment of Materials to Treat Diseases; Control Cell Behavior for Applications in Drug Therapy; Regenerative Medicine; Tissue Engineering

S. H. CHEN

PhD Minnesota, 1981
Green Chem Engineering; Photoalignment of Liquid Crystals; Photopatterned Liquid Crystal Devices; Amphipolar Hybrid Hosts for Electro-phosphorescence; Monodisperse Microemulsions from Microfluidic T-Junctions

E. H. CHIMOWITZ

PhD Connecticut, 1982
Critical Phenomena; Supercritical Fluids; Percolation; Computer Simulation

D. R. HARDING

PhD Cambridge, 1986
Cryogenic Properties of Solid Deuterium & Tritium; Thin-Film Deposition; Microfluidic Processes

J. JORNE

PhD UC Berkeley, 1972
Electrochemistry; Energy Conversion & Storage; Fuel Cells; Flow Batteries; Lithium Batteries; Green Energy; Microelectronic Processing; Copper Electrodeposition; Reaction-Diffusion Interactions; Scaling Theory

A. MÜLLER

PhD Max-Planck Institute of Quantum Optics & LMU München (Germany), 2000
Heterogeneous Electrocatalysis; Pulsed-laser-liquids; Preparation of Controlled Nanomaterials; Nanocatalyst Property Functionality Relationships; Selective CO₂ Reduction Catalysis; Integrated Solar Fuels Photoelectrodes; Nanomaterials for Anti-Cancer Applications

M. D. POROSOFF

PhD Columbia University 2015
CO₂ Reduction; Heterogeneous Catalysis; Catalyst Structure-Property Relationships; C₁ Chemistry; Upgrading Light Alkanes

L. J. ROTHBERG

PhD Harvard, 1984
Polymer electronics; Optoelectronic devices; Light-Emitting diodes; Thin-film transistors; Photodetectors; Xerographic photoreceptors; Biological sensors; Electrooptic modulators

Y. SHAPIR

PhD Tel Aviv (Israel), 1981
Critical Phenomena, Transport in Disordered Media, Scaling behavior of Growing Surfaces

A. SHESTOPALOV

PhD Duke, 2009
Surface Chemistry; Organic Chemistry; Surface Patterning; Nanostructured Materials; Interfacial Thermodynamics

W. TENHAEFF

PhD MIT, 2009
Electrochemical Energy Storage; Solid State Lithium Batteries and Solid Electrolytes; Polymer Thin Films, Interfaces and Thin Film Synthesis & Characterization; Vacuum Deposition Techniques

A. WHITE

PhD Washington, 2013
Materials Design; Self-Assembly; Computer Simulation; Machine Learning

J. H. DAVID WU

PhD MIT, 1987
Biofuels; Systems Biology; Genomics; Transcriptional Network; Biochemical Engineering; Fermentation; Biocatalysts; Bone Marrow Engineering; Lymphoid Tissue Engineering; Molecular Biology

M. Z. YATES

PhD Texas, 1999
Colloids & Interfaces; Fuel Cell Membranes; Crystallization; Microencapsulation; Particle Synthesis; Colloidal Stabilization



Chemical Engineering Graduate Studies

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