ChemE MIT Chemical Engineering

Current Faculty Research Summaries

for more info, go to *cheme.mit.edu*

Biomedical & Biotechnology | Energy | Materials | Environment & Sustainability

Math & Computational Systems | Transport & Thermodynamics | Catalysis & Reaction Engineering

Daniel Anderson
nano-based drugs, personalized medicine, cancer immunology

Martin Bazant
transport, systems, microfluidics, applied math, electrokinetics

Daniel Blankschtein
colloid &interface science, thermodynamics, statistical mechanics

Richard Braatz
systems & controls, materials, systems nanotech, applied math

Fikile Brushett
electrochemical energy conversion & storage, microfluidics

Arup Chakraborty
immunology, regulation of transcription, statistical mechanics

Kwanghun Chung
neuroscience, medical imaging, brain mapping, polymer science

Connor Coley
autonomous discovery, machine learning, molecular design

Brandon DeKosky
biotechnology, vaccines, molecular immunology, antibodies, t cells

Javit Drake
electrochemical energy, continuum modeling-based product design

Patrick Doyle
microfluidics, complex fluids, polymer physics, rheology & transport

Ariel Furst
bioelectrochemistry, clinical diagnostics, biotechnology

Kate E. Galloway
synthetic biology, systems biology, genetic control systems

William Green
chemical kinetics, molecular simulation, free radical reactions

Paula Hammond
macromolecular design & synthesis, nanoscale assembly, drug delivery

Jesse Kroll
atmospheric chemistry, particulate matter, chemical kinetics

Heather Kulik
catalysis, transition-metal chemistry, electronic structure methods

Robert Langer
drug delivery, biotech, tissue engineering, biomedical engineering

Doug Lauffenburger
cell, tissue, & biomolecular engineering

Christopher Love
micro/nanofabrication & surface chemistries, cellular immunology

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Allan Myerson
nucleation, polymorphism, & industrial applications of crystallization

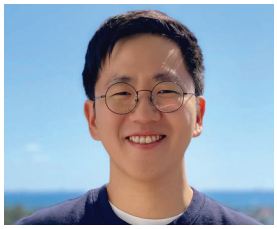
Bradley Olsen
block copolymers, soft condensed matter physics, bioelectronics

Kristala Prather
metabolic engineering, biochem engineering, synthetic biology

Qin (Maggie) Qi
bio transport phenomena, biomechanics, complex fluids, microfluidics,

Yuriy Román
catalysis, biomass, biofuels, design of catalytic materials

Gregory Rutledge
soft condensed matter, polymer engineering, statistical mechanics



Sungho Shin
control theory, process systems engineering, energy systems

Hadley Sikes
biomolecular engineering, redox chemistry, clinical diagnostics

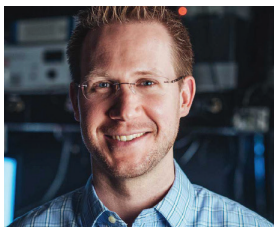
Zachary Smith
membrane separations, polymer physics, nanotechnology

Jessica Stark
systems biology, cellular & biomolecular engineering

Greg Stephanopoulos
metabolic & biochemical engineering, biotech, bioinformatics

Michael Strano
transport, exciton engineering for solar energy, nanosensors

Yogesh Surendranath
electrocatalysis, CO_2 utilization, interfacial engineering



William Tisdale
renewable energy, nanotech, nanomaterials, nonlinear spectroscopy

Bernhardt Trout
pharma manufacturing, biopharmaceuticals, nucleation & crystallization

K. Dane Wittrup
molecular bioengineering, protein engineering, biotechnology

These are just a few of our faculty's research interests; for more information, go to *cheme.mit.edu.*

03/2025