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

Robert Armstrong
polymers, rheology, transport phenomena, applied math

Paul Barton
dynamic modeling, simulation & optimization, systems

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

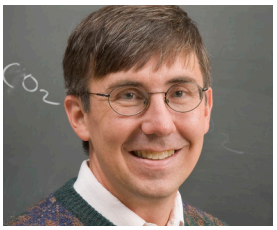
Connor Coley
autonomous discovery, machine learning, molecular design

Clark Colton
biomedical engineering, biochem engineering, mass transfer

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

T. Alan Hatton
transport phenomena, separation processes, microemulsions, colloids

Klavs Jensen
materials synthesis & processing, microsystems

Jesse Kroll
atmospheric chemistry, particulate matter, chemical kinetics

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

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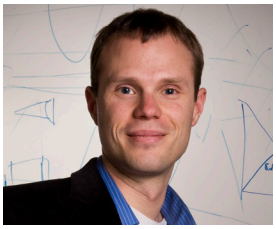
Robert Langer
drug delivery, biotech, tissue engineering, biomedical engineering

Doug Lauffenburger
cell, tissue, & biomolecular engineering

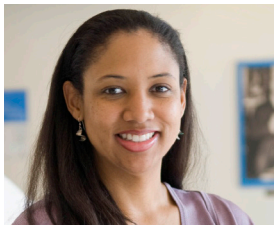
Christopher Love
micro/nanofabrication & surface chemistries, cellular immunology

Karthish Manthiram
catalysis, renewable energy, electrochemistry, nanotechnology

Allan Myerson
nucleation, polymorphism, & industrial applications of crystallization



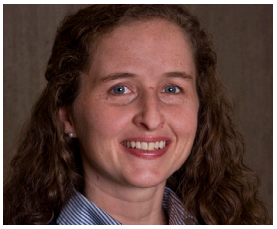
Bradley Olsen
block copolymers, soft condensed matter physics, bioelectronics



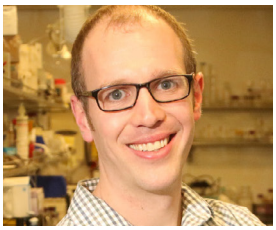
Kristala Prather
metabolic engineering, biochem engineering, synthetic biology

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

Gregory Rutledge
soft condensed matter, polymer engineering, statistical mechanics



Hadley Sikes
biomolecular engineering, redox chemistry, clinical diagnostics

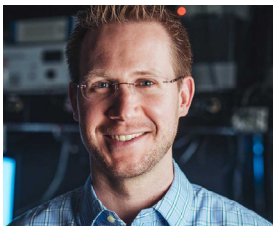


Zachary Smith
embrane separations, polymer physics, nanotechnology

Greg Stephanopoulos
metabolic & biochemical engineering, biotech, bioinformatics

Michael Strano
transport, texciton engineering for solar energy, nanosensors

James Swan
computational fluid mechanics, colloid science, nanomaterials



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.*

10/2020