Martin D. Burke
Synthesis and study of small molecules with protein-like functions; molecular prosthetics; synthesis of complex natural products; iterative cross-coupling; MIDA boronates
chemistry.illinois.edu/mdburke

Jefferson Chan
Synthesis of activity-based sensing probes for point-of-care diagnostic applications; development of chemically responsive platforms for on-demand and site-selective drug delivery; rational design of therapeutic agents for neurological disorders and cancer
chemistry.illinois.edu/jeffchan

Scott E. Denmark
The invention, development, and application of catalytic, asymmetric organic reactions; elucidation of structure-reactivity relationships employing spectroscopic, crystallographic, and computational methods; application of AI/machine learning to accelerate optimization of catalysts and reaction conditions
chemistry.illinois.edu/sdenmark

Paul J. Hergenrother
Using compounds derived from synthetic organic chemistry and natural products to explore biological systems; examples include the synthesis and evaluation of anticancer and antibacterial agents with novel modes of action
chemistry.illinois.edu/hergenro

Angad Mehta
Using synthetic chemistry, biocatalysis and synthetic biology to develop (i) live attenuated vaccine platforms, (ii) phenotypic platforms for broad-spectrum antivirals identification, and (iii) engineered endosymbiotic platforms for evolutionary studies and metabolic engineering
chemistry.illinois.edu/apm8

Douglas A. Mitchell
Reactivity-based natural product discovery; complex molecule structural elucidation and derivatization; structure-activity relationships and mode of action determination of biomedically important compounds
chemistry.illinois.edu/douglassm
Other faculty with interests in Organic Chemistry

Alison R. Fout
Organometallic chemistry; catalysis

Gregory S. Girolami
Organometallic chemistry; catalysis

Mary L. Kraft (faculty affiliate)
Biomembrane surface science

Liviu M. Mirica
Transition metal-catalyzed oxidative organic transformations

Eric Oldfield
Antibiotics; anti-cancer drugs

Lisa Olshansky
Synthesis and application of switchable ligands to support dual metal ion coordination geometries

Huimin Zhao (faculty affiliate)
Natural product biosynthesis; synthetic biology

Jeffrey S. Moore
Organic materials including self-healing polymers; materials for energy storage; nanostructures; mechanochemistry
chemistry.illinois.edu/jsmoore

David Sarlah
Synthesis of complex natural products and the related chemical biology; methodology development; asymmetric catalysis
chemistry.illinois.edu/sarlah

Scott K. Silverman
DNA as a catalyst
chemistry.illinois.edu/sks

Wilfred A. van der Donk
Use of synthetic organic chemistry to address biological problems; antibiotic synthesis is of particular interest
chemistry.illinois.edu/vddonk

M. Christina White
Synthesis-driven reaction discovery dedicated to the discovery and study of practical, selective catalytic reactions that streamline the synthesis and late-stage functionalization of complex molecules; examples include site-selective C—H hydroxylations and aminations and asymmetric C—H oxidations and alkylation
chemistry.illinois.edu/mcwhite7

Steven C. Zimmerman
Organic synthesis of “smart” molecules, catalysts, and polymers to solve problems at the interface of chemistry and biology or chemistry and materials
chemistry.illinois.edu/sczimmer