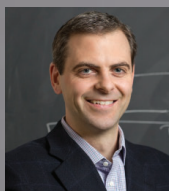
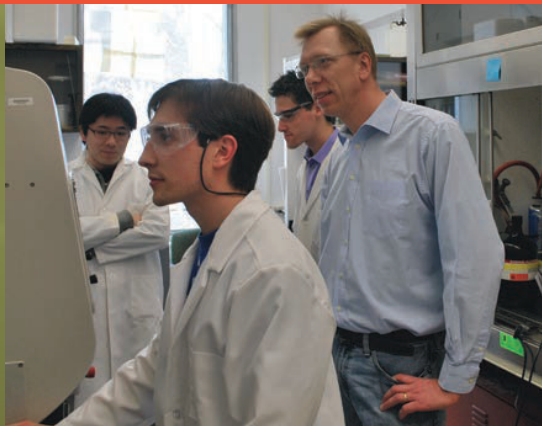


# Organic Chemistry

Department of Chemistry  
University of Illinois at Urbana-Champaign

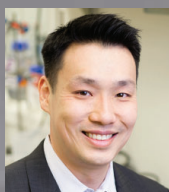
For more information, visit  
[chemistry.illinois.edu](http://chemistry.illinois.edu)



**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](http://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](http://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](http://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](http://chemistry.illinois.edu/hergenro)



**Angad Mehta**

Synthetic chemistry and synthetic biology (i) to combat emerging viral pathogens and drug-resistant bacteria; (ii) for directed endosymbiosis (an engineered, symbiotic cell within a host cell) to develop platforms for evolutionary studies and photosynthetic biosynthesis; and (iii) engineering selectivity in targeting cancer

[chemistry.illinois.edu/apm8](http://chemistry.illinois.edu/apm8)



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*also see reverse side*

rev. 10/2022

# Organic Chemistry

Other faculty with interests in Organic Chemistry

Gregory S. Girolami  
Organometallic chemistry; catalysis

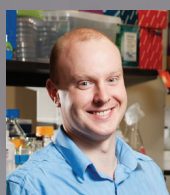
Mary L. Kraft (faculty affiliate)  
Biomembrane surface science

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

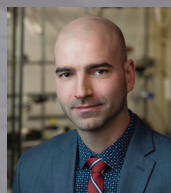
Huimin Zhao (faculty affiliate)  
Natural product biosynthesis; synthetic biology



**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/douglasm](http://chemistry.illinois.edu/douglasm)



**David Sarlah**

Synthesis of complex natural products and the related chemical biology; methodology development; asymmetric catalysis

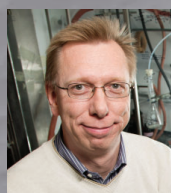
[chemistry.illinois.edu/sarlah](http://chemistry.illinois.edu/sarlah)



**Scott K. Silverman**

DNA as a catalyst

[chemistry.illinois.edu/sks](http://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](http://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 alkylations

[chemistry.illinois.edu/mcwhite7](http://chemistry.illinois.edu/mcwhite7)



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