Graduate students earning degrees between July 1, 2018 and June 30, 2019

Master’s Degrees

Anna Abfalterer
Synthesis and Characterization of Novel Layered Materials

Matthew Bigert
Selectivity Optimization in Tandem Column Liquid Chromatography Using the Eluent Composition as the Tuning Variable

John Biswakarma
Jack Elder
Isaac Prichett
Jingjing Qin
Rachel Voss
Eugene Schneider III

Doctorates

Junwei Bao, Ph.D.
Professor Donald Truhlar, adviser
Reaction Rate Theory, Electronic Structure Theory, and Applications

Heather Brown, Ph.D.
Professor Edgar Arriaga, adviser
Profiling the Heterogeneity of Intracellular Recycling in Aging Skeletal Muscle at the Individual Cell and Organelle Levels

Joseph Buchman, Ph.D.
Professor Christy Haynes, adviser
An Investigation of Nanoparticle Toxicity Mechanisms against Environmentally Relevant Bacteria and the Potential for Sustainable Agriculture Applications

Ryan Cammarota, Ph.D.
Professor Connie Lu, adviser
Greater than the Sum of Its Parts: Tuning Nickel for Uncommon Small Molecule Reactivity and Catalysis via Dative Bonds with Group 13 Lewis Acidic Metalloligands

Suyue Chen, Ph.D.
Professor Lee Penn, adviser
Controlled Synthesis of Silver Nanostructures Using Polyol Methods

Hsin-chun Chiu, Ph.D.
Professor Ian Tonks, adviser
Unsaturated Hydrocarbons as Building Blocks for Polymers and Pyrroles via Homogeneous Organometallic Catalysis

Zachary DeGregorio, Ph.D.
Professor James Johns, adviser
Chemical Vapor Deposition Growth of Two-Dimensional Transition Metal Dichalcogenides and Related Heterostructures

Busra Derell, Ph.D.
Professor Christopher Cramer, adviser
Modeling Chemical Reactions Mediated by Earth-Abundant Transition-Metal Complexes

Peter Dunn, Ph.D.
Professor Ian Tonks, adviser
Synthesis, Characterization, and Reactivity of Early-Late Multimetallic Complexes Supported by Phosphinopyrrolides
Courtney Elwell, Ph.D.
Professors William Tolman and Lawrence Que Jr., advisers
Investigation of the Structure and Reactivity of a Series of Mono- and Dicopper Complexes Supported by Biomimetic Ligands

Grant Fahnhorst, Ph.D.
Professor Thomas Hoye, adviser
Traditional Polymers with Nontraditional Side-chain Functionality: Carboalkoxylated Polyvalerolactones and Polyisoprenes from Malic Acid and Glucose

Yang Fan, Ph.D.
Professor Steven Kass, adviser
Electrostatically Enhanced Thioureas: Synthesis, Reactivity and Selectivity

Grant Frost, Ph.D.
Professor Christopher Douglas, adviser
Organic Reaction Selectivity via Metal-Catalysis: Discovery, Development, and Mechanistic Analysis of Nitrile, Ester, Arene, Azide, and Alkene Transformations

Souman Ghosh, Ph.D.
Professor Christopher Cramer and Laura Gagliardi, advisers
Static and Dynamic Charge and Energy Transport in Organic Electronics

Zachary Gilbert, Ph.D.
Professor Ian Tonks, adviser
Development, Mechanism, and Application of Titanium(II/IV) Catalysed C-N Bond Forming Reactions

Cecilia Hall, Ph.D.
Professor Timothy Lodge, adviser
Solution Phase Behavior of Stimuli-responsive Block Polymers in Ionic Liquids

Siyao He, Ph.D.
Professor Andreas Stein, adviser
Toughening Thermosetting Resins with Modified Graphene Oxide

Shaofei Ji, Ph.D.
Professor Natalia Tretyakova, adviser
Chemistry and Biology of DNA-protein Cross-links

Lindsay Johnson, Ph.D.
Professor Marc Hillmyer, adviser
Polymeric Excipients for the Enhanced Oral Delivery of Poorly Soluble Pharmaceutical Compounds

Subhasree Kal, Ph.D.
Professor Lawrence Que Jr., adviser
High-valent Iron Intermediates in Nonheme Iron Catalytic Systems Designed for Hydrocarbon Oxidations

Emily Keller, Ph.D.
Professor Renee Frontiera, adviser
Probing the Role of Hot Carriers and Photothermal Effects in Plasmonic Photocatalysis with Ultrafast Surface-Enhanced Raman Spectroscopy

Leon Lillie, Ph.D.
Professors Theresa Reineke and William Tolman, advisers
Degradable Materials from Sugar-Derived Feedstocks

Jie Ma, Ph.D.
Professor Steven Kass, adviser
Electrostatically Enhanced Phosphoric Acids and Their Applications in Brønsted Acid Catalysis
Courtney Olson, Ph.D.
Professor Aaron Massari, adviser
Electrostatically Enhanced Phosphoric Acids and Their Applications in Brønsted Acid Catalysis

Sunipa Pramanik, Ph.D.
Professor Christy Haynes, adviser
Interactions of Semiconductor Nanoparticles with Environmentally Relevant Bacteria Model

Anatolli Purchel, Ph.D.
Professor Theresa Reineke, adviser
Investigating the Interactions of Polymeric Excipients with Poorly Water-Soluble Drugs as Means for Pharmaceuticals Bioavailability Enhancement

Lafe Purvis, Ph.D.
Professor Christopher Douglas, adviser
Structure-function Relationships of Acene Based Organic Semiconductors for use in Organic Field-effect Transistors and Organic Photovoltaic Devices

Waqas Rasheed, Ph.D.
Professor Lawrence Que Jr., adviser
Structural- and Spectroscopic-Reactivity Relationships of Nonheme Oxoiron(IV) Complexes

Paul Rudd, Ph.D.
Professor Connie Lu, adviser
Stabilizing Metal-Alanes and Metal-Metal Multiple Bonds to Effect Small Molecule Transformations

Samuel Stoneburner, Ph.D.
Professor Laura Gagliardi, adviser
Active Space Methods in Electronic Structure Theory and Applications to Gas Separations in Metal-Organic Frameworks

Victoria Szlag, Ph.D.
Professors Christy Haynes and Theresa Reineke, advisers
Linear Polymer Affinity Agents for the Intrinsic SERS Detection of Food Safety Targets

Severin Thompson, Ph.D.
Professor Thomas Hoye, adviser
The Aza-HDDA Reaction and Other Adventures in Cycloaromatization Chemistry

Matthew Vollmer, Ph.D.
Professor Connie Lu, adviser
Exploring Small Molecule Reactivity with Low-Valent Nickel and Cobalt Complexes Supported by Lewis Acidic

Yuanxian Wang, Ph.D.
Professor Thomas Hoye, adviser
Thermal Rearrangement Reactions of Polynes and Preparation of Bio-renewable Monomers and Their Polymerizations

Annabelle Watts, Ph.D.
Professor Marc Hillmyer, adviser
High Performing Sustainable Thermoplastic Elastomers

Xiao Xiao, Ph.D.
Professor Thomas Hoye, adviser
The Hexadehydro-Diels–Alder (HDDA) Reaction-Enabled Bottom-up Synthesis of Elaborated Polycyclic Aromatics

Bai Xue, Ph.D.
Professor Ilja Siepmann, adviser
Monte Carlo Studies of Microheterogeneous Fluids and Solvation Environments
Fazel Zare Bidoky, Ph.D.
Professor C. Daniel Frisbie, adviser

Yao Zhang, Ph.D.
Professors Philippe Buhlmann and Steven Koester, advisers
Functionalized Graphene Devices for Wireless Biomedical Sensing Applications

Yi Zhang, Ph.D.
Professor Mark Distefano, adviser
Application of Enzymatic Protein Labeling by Protein Farnesyltransferase Towards Dual-protein Modification and Construction of Targeted Delivery Systems

Zhuoran Zhang, Ph.D.
Professor Christopher Douglas, adviser
A Systematic Study of Acene Derivatives: Synthesis, Crystal Structures, Optical and Electrochemical Characterizations