

**Undergraduate Research Topics
Bennett Department of Chemistry
West Virginia University**

Faculty Member	Research Topics
Suzanne Bell	Forensic Chemistry
Jonathan Boyd	Toxicity of Kinase Inhibitors Fluorescent Indicators for Monitoring Cell Signaling Mechanisms of Superoxide Toxicity
Harry Finklea	Electrochemistry of Redox Molecules Attached to Electrodes
Fabien Goulay	Laser Applied to Gas-Phase Chemistry Isomer Resolved Product Detection of Combustion Related Reactions Gas Phase Synthesis of Ketene, Methylketene and Dimethylketene
Lisa Holland	Modular Capillary Electrophoresis and Capillary Liquid Chromatography Bioanalytical Separations Biochemical Markers of Cardiovascular Disease Small Molecule Indicative of DNA Damage
Jessica Hoover	Organic and Inorganic Synthesis Organometallic Catalysis Developing New C-C Bond Forming Reactions Using Transition Metal Catalysts
Charles Jaffe	Theoretical Studies of Reaction Dynamics Transport in Molecular, Atomic, and Celestial Systems Development of Computer Algorithms for Pattern Recognition Fractal Analysis of Nucleotides Sequences in DNA
Fred King	Mass Spectrometric Investigations of Metal-Peptide Energetics Novel Methods of Ionization for Molecular Mass Spectrometry Determination of Energy Transfer Processes In Glow Discharge Plasmas Spectrometric Determination of Trace Elements in Polymers
Justin Legleiter	Understanding How Biological Surfaces Modulate Protein Aggregation Associated with Neurodegenerative Diseases – Alzheimer's and Huntington's Disease Application of Atomic Force Microscopy
Blake Mertz	Computational Biophysics of Membrane Proteins Molecular Docking to Facilitate Drug Development
Jeff Petersen	Synthesis and Reactivity Studies of Early Transition Metal Complexes Application of X-ray Diffraction for Molecular Structure Determination
Brian Popp	Organic and Bioorganic Synthesis Organometallic Catalysis

	Enantioselective Catalysis and Functional Materials relying on Supramolecular Principles
Michelle Richards-Babb	Novel Experiments for Large Enrollment General Chemistry Classes
Michael Shi	Developing Chiral Nucleophilic Catalysts and Their Application in Asymmetric Synthesis Biological Targets Recognition through Self-Assembly of Small Molecules
Ronald Smart	Environment Chemistry Trace Element Speciation Electrochemistry of Boron-Doped Diamond Electrodes
Björn Söderberg	Organic Synthesis
Alan Stolzenberg	Organic and Inorganic Synthesis Synthesis and Reactivity of Metalloporphyrins, the Pigments of Life Synthesis and Reactions of Transition Metal Main Group Metal Bonded Complexes