Undergraduate Research in the Chemistry Department – Academic Year 2019-2020

Undergraduate scientific research is an activity that has many benefits: You gain experience that may be useful to you in future study or your career. You form a professional relationship with your supervisor that can serve as the basis for a letter of recommendation. You get course credit and may even get paid! But perhaps the most important benefit is the understanding you gain as to how scientific information is accumulated and ideas developed, and how you fit into the picture - is this what you want to spend your life doing? In fact, your participation in research may turn out to be the most important aspect of your college experience.

The following is a list of professors who have expressed particular interest in including undergraduates in their research groups this year. There are other professors who did not have the opportunity to be included on this list and would be glad to meet you. Check the departmental web pages at http://www.stonybrook.edu/chemistry, which provide more complete information. Then speak to professors whose class you have enjoyed and who you think might be interesting to work for. If you have any other questions regarding undergraduate research in the Chemistry Department, you may contact the Director of Undergraduate Studies. Note that registration in CHE 487 or 495-6 can be done only through the Department office.

All rooms given below are in the Chemistry Building, unless otherwise specified. You should try to arrange all research opportunities well in advance of the semester you wish to begin research.

Last Name	Area or Research Topic	Room	Phone
Allison	**Ultrafast Spectroscopy**	**576**	**632-8199**
Aubrecht	**Green and Sustainable Chemistry; Chemistry Education Research**	**409**	**632-7901**
Bhatia	**Polymer Gels for Drug Delivery and Biomaterials, Nanoparticle Assembly, Scattering Studies and Physical Chemistry of Polymers and Biomacromolecules**	**441**	**632-7788**
Boon	**Nitric Oxide Sensing & Signaling in Bacteria & The Molecular Mechanisms of Biofilm Formation & Quorum Sensing**	**547**	**632-7945**
Boros	**Metal Complexes as Molecular Imaging Tools for Cancer and Infection**	**567**	**632-8572**
Carrico	**Protein Engineering and Chemical Biology**	**533**	**632-7935**
Chiu	**Development of Methods for Synthesizing & Characterizing Organic Materials**	**669**	**632-9548**
Drueckhammer	**Organic Synthesis, Molecular Recognition, Computer-guided Design**	**741**	**632-7923**
Goroff	**Novel Organic Compounds & their Properties/Organic Materials**	**779**	**632-8356**
Grubbs	**Polymer & Nanomaterial Synthesis**	**749**	**632-7911**
Honda	**Development of Novel & Highly Bioactive Michael Acceptors.**	**743**	**632-7162**
Hsiao	**Nanocellulose Chemistry for Water Purification**	**479**	**632-7793**
Jia	**Nuclear Chemistry & Relativistic Heavy-ion Collisions**	**461**	**632-7905**
Johnson, C.	**Chemistry at the Surface of Particles from Nanoscience to the Atmosphere**	**521**	**632-7577**
Johnson, F.	**New Drugs from Ethnobotanicals & Chemistry, Toxicology & Repair of DNA Adducts**	**607**	**632-8866**
Khalifah	**Solid State Chemistry; Battery Materials; Material Genomics; Synthesis Science X-ray and Neutron Diffraction; Crystal Growth; Computational Modeling**	**447**	**632-7796**
Koch	**Inorganic & Organic Synthesis**	**679**	**632-7944**
Koga*	**Green Nanomanufacturing of Functional Polymeric Surfaces Using Advanced X-ray & Neutron Scattering Techniques**	**O. Eng 318**	**632-8485**
Lacey	**Nuclear Chemistry & Physics**	**459**	**632-7955**
Laughlin	**Chemical Neuroscience: Chemical Approaches to Controlling & Visualizing the Brain's Neural Circuit**	**529**	**632-2642**
Lauher	**Development of Web-Based Chemistry Applications and Content for the OSCER Course Management System**	**759**	**632-7925**

Last Name	Area or Research Topic	Room	Phone
Liu, Ping*	Theoretical Modeling in Heterogeneous Catalysis and Electrocatalysis	BNL	632-5970
London	Biomembrane Structure	LSB 420	632-8564
Marschilok	Electrochemistry & Engineering of Composite Electrodes Associated with the Oxygen Reduction Reaction & Lithium-Air Batteries	667	632-7909
Mayr	Inorganic & Organometallic Chemistry	721	632-7951
Miller*	Development & Application of Chemical Imaging for the Study of Biological Cells & Tissues	BNL	344-2091
Nagan	Computational Studies of Ribonucleic Acid Recognition	509	632-5793
Ngai	Visible Light Artificial Photosynthesis of Functional Organic Molecules for Biomedical, Biomedical, Agrochemical, and Material Applications	767	632-2641
Ojima	Synthetic Organic & Medicinal Chemistry at the Biomedical Interface	717	632-7890
Orlov	Materials Science and Chemical Engineering Applications of Novel Nanomaterials	Hvy Eng 216	632-9978
Parise	Synthetic Solid State Chemistry & In Situ X-Ray Diffraction, Chemistry at High Pressure	ESS 238	632-8196
Parker	Total Synthesis, Synthetic Methods, Organic Chemistry for Biomedical Applications	707	632-7851
Patterson	Mechanistic Computational Chemistry	465	632-7449
Raleigh	Protein Folding & Misfolding in Human Disease	647	632-9547
Raineri	Influence of Solvation on the Rates of Electron Transfer Reactions	437	632-7898
Rizzo	Computational Biology	MAT 101	632-9340
Rodriguez*	Catalysis and Surface Chemistry	BNL	344-2246
Rudick	Soft Materials Synthesis using Organic & Supramolecular Chemistry	775	632-7630
Sampson	Chemical Biology of Fertilization, Polymer Synthesis & M. tuberculosis Catalyzed Sterol Oxidation	659	632-7952
Sears	Precision Spectroscopy of Small Molecules	559	632-1144
Seeliger	Molecular Mechanisms by which Bacteria Make & Modify Lipid Membranes, Focusing on Pathogenic Bacteria such as Mycobacterium Tuberculosis, which Causes Tuberculosis	CMM 448	632-1674
Simmerling	Using Supercomputers to Study Structural Biology, DNA Repair & Drug Resistance	Laufer Ctr.	632-5424
Takeuchi, E.	Chemistry, Electrochemistry & Engineering Associated with all Aspects of Energy Storage(Battery) Technologies	667	632-7922
Takeuchi, K.	Chemistry & Electrochemistry of Nano-structured Redox Active Inorganic Materials with Application towards Energy Storage	547	632-7922
Tonge	Chemical Biology, Pharmacology, Mechanism of Drug Action, Anticancer and Antibacterial Drug Discovery, Positron Emission Tomography (PET) Imaging	633	632-7907
Wang	Landscape Theory of Biomolecular Interactions & Networks	433	632-1185
White	Surface Chemistry & Dynamics	541	632-1722
Wong	Physical, Biological, and Chemical Applications of Nanoscience & Nanotechnology	415	632-1703
Zhu*	Electron Microscopy, Solid-state Physics; Nanoscale Materials Science & Engineering	BNL	344-3057

*These faculty members or affiliates are located at BNL.