

Virginia Commonwealth University

"Practices and Perspectives"

A research experience for undergraduates in chemistry

The Department of Chemistry at Virginia Commonwealth University invites applications for participation in the Research Experience for Undergraduates for the summer of 2008. The "Practices and Perspectives" program, funded by the National Science Foundation, is designed to provide an experience that combines practical training in specific research techniques (practices) with activities designed to put the research into the context of larger goals of modern science and technology (perspectives). The program will also provide career planning and management components. Available research projects are summarized below.

Project Title	Area
Atomic Force Microscopy Studies of Semiconductor Films	Chemical physics, materials
Atomic Engineering of Nanoparticles	Inorganic, materials
Detection of Biomembrane Activity by Macrocyclic Receptors for Fluorescent Dyes	Organic
Platinum-DNA Interactions	Bioinorganic
Electrochemiluminescence in Templated Sol-Gel Derived Materials	Analytical, materials
Synthesis and Characterization of Nanoparticle Catalysts	Materials
Metal Ion Solvation in Clusters	Physical chemistry
Chromatography and Chemometrics	Analytical
Synthesis of Polyimidazole-Polypyrrole Amides as a DNA Minor Groove Binder	Organic, bioorganic
Detection of Bioanalytical Probes Using Streaming Potentials in Microfluidic Sensors	Bioanalytical, materials
Optical Characterization Studies of Semiconductor Materials and Devices	Chemical physics, materials
Gas Phase Studies of Reaction Mechanisms	Organic
Nanoscale Reactors Based on Self-Recognizing Liposomes	Organic, biophysical
Novel Polymer Surface Science	Organic, chemical engineering
Microwave Synthesis of Nanorods and Nanowires	Materials
Synthesis and Testing of Small Molecule Reagents for Peptide Cyclization	Organic, chemical biology
Preparation of Complex DNA Libraries	Biochemistry, chemical biology

This program is ten and a half weeks long and will run from May 28 until August 8, 2008. During this time, participants will receive a stipend of \$3500. In addition, the program will pay dormitory fees, health service fee and limited travel assistance will be available.

Students who apply to the program must have completed one year of general chemistry and one year of organic chemistry, for applicants in chemistry. Chemical engineering and chemical physics applicants must have completed one year of general chemistry. To be eligible, students must be US citizens or permanent residents, and not have graduated prior to June 2008. Completed applications, including transcripts, two letters of recommendation and one page narrative statement are due no later than March 1, 2008. Application materials may be obtained online at <http://www.has.vcu.edu/che/research/nsf.html>, or by contacting the REU program coordinator at the location below.

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