

Recent Educational Impacts: Outreach to High (and Middle) Schools
Kit H. Bowen, Jr., Johns Hopkins University
Award # CHE-0211522

Visits to Our Laboratory Eight high school girls and their teacher from the AP Chemistry course at Roland Park Country School (RPCS) in Baltimore, MD visited our laboratory this fall. They had been studying mass spectrometry in their class. We gave them a short lecture on the photoelectric effect, anion photoelectron spectroscopy, and the operating principles of several types of mass spectrometers. Then, they went into the lab where two types of mass spectrometers (within their anion photoelectron spectrometers) were in operation. On one, the mass spectra of silver atomic anions were being recorded, showing the two isotopes of silver. On the other, the mass spectra of several anions produced from a nitrous oxide plasma were being measured. Some of the students adjusted source and ion optical conditions in order to see the mass spectral intensities change. (A few years ago, we also hosted the St. Pius X middle school's, math club in the lab.)



Recent Educational Impacts: Outreach to High (and Middle) Schools
Kit H. Bowen, Jr., Johns Hopkins University
Award # CHE-0211522

Senior Projects Molly Ryan, a senior at RPCS who plans to study physics at Cornell University next year, and Krista Romita, also a senior at RPCS who is interested in a career in science as well, are both going to do their senior projects in our lab next semester.

Internships Stefan Schaffer, who is now a senior at River Hill High School in Clarksville, MD, and who is interested in pursuing a career in chemistry and physics, worked with us doing research for most of this past summer (2004). During 2002, another high school student, Joseph Mickel from Potomac, MD worked with us one afternoon a week for a semester. Both Molly Ryan and Krista Romita are also planning to do summer internships with us next summer.

Judging Science Fairs Two members of my group judged science fairs in 2004. In February, Mike Nilles helped judge the science fair at Northwestern High School in Hyattsville, MD, and in May, Sarah Stokes judged the science fair at Forbush Middle and High Schools in Towson, MD.



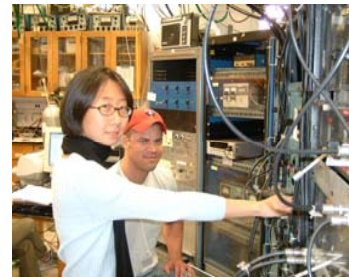
Research Participation by a Faculty Member from a Non-PhD-Granting Institution
Kit H. Bowen, Jr., Johns Hopkins University
Award # CHE-0211522

Dr. Tariq Gilani, an Assistant Professor in the Physics Department at Millersville University in Millersville, PA has started working with us this school year. Dr. Gilani earned his PhD in physics at Kyoto University. Thereafter, he did a postdoctoral fellowship in physics at Pennsylvania State University. Dr. Gilani is knowledgeable about a variety of the experimental techniques utilized in our laboratory. He is currently familiarizing himself with our group and its projects through all day stays here every Wednesday. It is his and our desire and expectation that he will become an integral part of our research group.



Recent Educational Impacts: Undergraduate Research
Kit H. Bowen, Jr. NSF CHE-0211522

Hopkins Undergraduates Two Johns Hopkins University undergraduates are presently doing research with us. They are Cynthia Khoo, who is majoring in chemistry and psychology and Stacy Chang, who is majoring in behavioral biology. Cynthia was honored by the Maryland Section of the ACS last year as one of Maryland's top chemistry students and will be entering a MDPHD program this coming fall. Stacy will spend a year doing research at Columbia Medical Center in the area of psychology before attending medical school. They have both worked in our lab for three years. We typically have two or three undergraduates working with us during the school year. In the past, undergraduate researchers in our group have gone on to graduate school in chemistry at MIT, Cal Tech, Illinois, Syracuse, and Berkeley as well as in physics at Penn.



Top right: Cynthia and Soren tune-up cluster anion signals.

Bottom right: Stacy and Andrej solder cables together.



Recent Educational Impacts: Undergraduate Research
Kit H. Bowen, Jr., Johns Hopkins University
Award # CHE-0211522

Non-Hopkins Undergraduates This past summer, Ira Khanna, a rising senior at Virginia Commonwealth University, who is majoring in biomedical engineering, did a research internship with us for six weeks. During the previous summer (2003), Justin Moreo, an undergraduate from East Carolina University, did research with us for about a month.



Ira and Andrej work together on the pulsed machine