

ECS Summer Fellowship Winners

Each year ECS gives up to four Summer Research Fellowships to assist students in continuing their graduate work during the summer months in a field of interest to the Society. Congratulations to the 2005 Summer Fellowship recipients.



The recipient of the Society's Edward G. Weston Summer Research Fellowship, **EMEK BLAIR**, received his bachelor's degree in chemistry from Occidental College in 2001. His undergraduate research, under C. David West, involved heavy metal analysis of river sediment and, under David Nikles at University of Alabama, Tuscaloosa, synthesizing small molecules as models for polymer interactions with metal surfaces.

In November of 2001, he joined Patrick Farmer's group at the University of California, Irvine where he is currently finishing his PhD. He is the recipient of the GAAN Fellowship (fall 2001-summer 2002) and the UC Toxic Substances Research and Teaching Fellowship (summer 2003-spring 2005).

Blair's research focuses on direct electrochemical examination of protein electron transfer for structural and catalytic analysis. Some of the projects include P450 dehalogenation of chlorinated organics, putidaredoxin structure/redox properties, heme protein NO_x reduction, and surfactant film structures.



The recipient of the Society's Colin Garfield Fink Summer Fellowship, **GEORGETA LICA** received her bachelor's degree from the University of Bucharest, Romania. Her undergraduate research concentrated on the study of the electrochemical behavior of E vitamins. In fall 1999, she started the master's program in analytical chemistry at the same university. During the two years of studies, she has continued her research about electrode processes through cyclic voltammetry and digital simulations. During both undergraduate and graduate years at the University of Bucharest, she was the recipient of a performance scholarship.

Currently a PhD candidate at Georgetown University, her doctoral studies started in fall 2001 under the direction of Yu Ye Tong, involving research toward the elucidation of electronic and interfacial properties of quantum metal clusters. It includes a combined electrochemical, spectrophotometric, IR, and NMR investigative approach of metal nanoparticles, of fundamental importance for their potential applications in fields such as DNA detection, catalysis, or nano-devices. Her work so far has been disseminated in over eight conference and journal papers. These include two presentations at ECS meetings, the first one being awarded with a General Society Student Poster Session Award (Honorable Mention, Orlando, Florida, 2003).



The recipient of the Society's Joseph W. Richards Summer Fellowship, **KHALID SALAITA**, was born in Amman, Jordan in 1979. He was awarded an International Dominion Scholarship to pursue his undergraduate studies at Old Dominion University (Norfolk, Virginia) where he graduated cum laude with a BS degree in chemistry and a minor in mathematics (December 2000). His undergraduate research was supported by a grant from the Honors College under the guidance of Nancy Xu. Salaita then joined Chad A. Mirkin's research group in pursuit of PhD in inorganic chemistry and materials science at Northwestern University. He is a National Science and Engineering Center (NSEC) fellow, has coauthored nine publications, and currently holds one patent. His current research interests include finding novel lithographic strategies for generating nanoscale structures on metallic and semi-conducting surfaces, and subsequently probing their physical and chemical properties using electrochemistry and a variety of scanning probe techniques.



The recipient of the Society's F. M. Becket Summer Fellowship, **SCOTT HARRISON**, graduated summa cum laude with a BS degree in chemical engineering from Rice University in May 2001. He then began graduate studies in chemical engineering at the University of Texas at Austin in August 2001, where he is currently a PhD candidate under the direction of Gyeong S. Hwang and Thomas F. Edgar. He received a National Science Foundation Graduate Research Fellowship to help support his initial years of graduate research.

His thesis research involves first principles modeling of the interaction of arsenic dopants and silicon defects during the formation of ultrashallow junctions for the source-drain in extensions in CMOS (Complementary Metal Oxide Semiconductor) devices. As CMOS devices scale down, achieving shallow junction depths with high active dopant concentrations becomes critical. His studies aim to develop a fundamental understanding of arsenic transient enhanced diffusion and clustering that limit the achievement of ultrashallow junction formation with the goal of developing a predictive model of the junction formation process.