

ECS 2012 Summer Fellowship Winners

Each year ECS awards Summer Fellowships to assist students in continuing their graduate work during the summer months in a field of interest to the Society. Congratulations to the following five Summer Fellowship recipients in 2012. The Society thanks the Summer Fellowship Committee for their work in reviewing the applications and selecting the five excellent recipients. Applications for the 2013 Summer Fellows are due January 15, 2013 (see www.electrochem.org/awards/student/student_awards.htm#n). The reports of the 2012 Summer Fellows appear on the following pages.



SUJAT SEN is the recipient of the 2012 ECS Edward G. Weston Summer Fellowship. He is a PhD candidate in chemistry at Brown University, working under the guidance of G. Tayhas R. Palmore. Mr. Sen graduated with a bachelor's degree in chemistry from St. Stephen's College, New Delhi, in 2007. He was awarded the Felix Scholarship in 2007 to pursue a research master's at the University of Reading, UK, working on the processing and electrospinning of conducting polymers under

the guidance of Fred Davis. His PhD thesis focuses on the design, synthesis, and characterization of conducting polymers, primarily for energy storage applications. The most recent focus of his research has been the measurement of stress evolution and other mechanical properties of polymeric materials to optimize their performance and lifetime in various devices.



DEVIKA SIL is the recipient of 2012 ECS Colin Garfield Fink Summer Fellowship. Born in Kolkata, India, she finished her Bachelor of Technology in chemical engineering from West Bengal University of Technology in 2006, and her Master of Technology in chemical engineering from the University of Calcutta in 2008. As a master's student, Sil carried out research in photocatalysis, leading to several international and national (Indian) publications in journals and conferences. Ms.

Sil received a Junior Research Fellowship (JRF) from the Department of Science and Technology, India, in 2008. As a JRF she developed thin films for planar waveguide type optical sensors at the Sol Gel Division of the Central Glass and Ceramic Research Institute, India.

In 2010, Ms. Sil joined the Department of Chemistry at Temple University in Philadelphia to pursue a PhD in physical chemistry. Her research interests focus on interfacial chemistry and material science. She is developing a novel surface-sensitive vibrational spectroscopic technique for detecting high-frequency, vibrational overtone and combination bands from mineral aqueous interfaces. In addition, she leads the sensor research team in the Borguet group, exploring thin films on surface acoustic wave (SAW) devices for the detection of chemical agents.



BALÁZS B. BERKES is the recipient of the 2012 ECS Joseph W. Richards Summer Fellowship. He was born in 1986 in Hungary. He earned his master's degree in chemistry with honors from the Eötvös Loránd University, Budapest in 2010. During his studies he received the Fellowship of the Republic of Hungary and was an Excellent Student of the Faculty of Natural Sciences. He is currently a PhD student under the supervision of György Inzelt at the same university. He studied in Bochum,

Germany under the supervision of Wolfgang Schuhmann and Alexander Bondarenko within the frame of a DAAD fellowship in 2010/2011. He also spent a month in Alicante in the laboratory of Juan M. Feliu. His research interest includes underpotential deposition, cationic adsorption, conducting polymers, and investigation of platinum catalysts for fuel cell applications. He is author or co-author of 10 publications in international journals.



CELESTE MORRIS is the recipient of the 2012 ECS F. M. Becket Summer Fellowship. She studied chemistry at Northern Kentucky University and obtained her BS in 2008. She is currently conducting doctoral research at Indiana University, Bloomington. Her undergraduate research, under direction of Keith Walters, involved development of supramolecular systems for solar cell applications. To this end, she synthesized linear conjugated polymers with metal

subunits incorporated directly into the polymer for enhanced electron transfer properties. Ms. Morris is currently performing doctoral research under the guidance of Lane Baker. Her research focus is to develop and enhance chemically-sensitive scanning probes for scanning ion conductance microscopy (SICM)—an effort driven by the desire to increase the auxiliary information and analytical applications of SICM. Several avenues, including the development of ion-selective electrodes for SICM and bulk fabrication of parylene C insulated Au and pyrolyzed parylene C electrodes, are being investigated. Electrode/nanopipettes are applied for studies of ion transport found in synthetic and biological materials, such as nanoporous polymer membranes, ion channels, and intercellular tight junctions.



JULIA VAN DRUNEN is the recipient of the 2012 ECS H. H. Uhlig Summer Fellowship. She received her BSc Honours Degree in chemistry with a minor in geological sciences in 2008 from Queen's University in Canada. The following year she began her MSc under the supervision of Gregory Jerkiewicz at Queen's University and subsequently transferred to the PhD program in 2009. During her PhD studies, Ms. van Drunen has participated in collaborative research

exchanges with the *Institut de chimie des milieux et des matériaux* at the University of Poitiers (France) under the supervision of Teko W. Napporn and at 4D LABS at Simon Fraser University (Canada) under the supervision of Byron D. Gates. Her PhD research focuses on the characterization and modification of nickel-based foam materials, as well as their applications as electrocatalysts. Ms. van Drunen's research interests include catalyst design, micro-porous materials, electrodeposition, base metal electrochemistry, electrocatalysis, electron microscopy and micro-machining. She will complete her PhD in the summer of 2013.

2012 Summer Fellowship Committee

Vimal Chaitanya, Chair
New Mexico State University

Jeffrey W. Fergus
Auburn University

Christopher A. Applett
Sandia National Laboratories

Randolph A. Leising

Bryan Chin
Auburn University

Jeffrey W. Long
Naval Research Lab

Kalpathy B. Sundaram
University of Central Florida