

ECS 2009 Summer Fellowship Winners

Each year ECS gives up to five 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 2009 Summer Fellowship recipients. The reports of the 2009 Summer Fellows will appear in the winter issue of *Interface*.



SHULEI CHOU is the recipient of the 2009 ECS Edward G. Weston Summer Fellowship. Mr. Chou is a PhD student under the supervision of Prof. Huakun Liu, Prof. Shixue Dou, and Dr. Jiazha Wang at the Institute for Superconducting & Electronic Materials (ISEM) and the ARC Centre of Excellence for Electromaterials Science (ACES), University of Wollongong, Australia. His PhD project is mainly focused on novel nanomaterials and composite materials fabrication, characterization, and electrochemical measurements and analysis. The novel materials, such as V_2O_5 nanomaterials, SnO_2 nanotubes, PPy-LiFePO₄ composites, and MnO_2 nanowires/CNT composites were used in Li-ion rechargeable batteries or supercapacitors showing enhanced performance. The successful results have been published or accepted in 12 papers and seven as first author in well-known international journals: *J. Electrochem. Soc.*, *Electrochem. Solid-State Lett.*, *Chem. Mater.*, *Electrochem. Commun.*, and *J. Power Sources*. This summer, Mr. Chou will continue his research work by visiting to Prof. Jeff Dahn's group in Dalhousie University, Canada.



HYEA KIM is the recipient of the 2009 ECS Colin Garfield Fink Summer Fellowship. Ms. Kim received her bachelor's degree in chemical engineering from Yonsei University in Korea in 2003. After graduation, she was employed as an engineer in the fuel cell division of the energy lab at Samsung SDI Corporate R&D Center. She was involved in optimizing the catalyst layers of proton exchange membrane electrodes. In 2006, she entered the PhD program at the Georgia Institute of Technology. Currently, she is a PhD candidate in chemical engineering at Georgia Tech under the supervision of Dr. Paul Kohl. Her research is focused on producing high energy density, inorganic membrane fuel cells for wireless applications.



HAIZHOU LIU is the recipient of the 2009 ECS Joseph W. Richards Summer Fellowship for 2009. He received his bachelor's degree from Sichuan University in China (2006) and master's degree from University of Washington, Seattle (2007), both majoring in environmental engineering. Haizhou is working toward a PhD in environmental science and engineering under the supervision of Profs. Gregory Korshin and John Ferguson at the University of Washington, Seattle. His research focuses on the lead release from drinking water distribution system with corroded pipes, specifically the mechanisms and kinetics of Pb(II) solid oxidation by chlorine and the interactions of Pb(II)/Pb(IV) solids with chloramine and natural organic matter in drinking water. He is currently applying advanced electrochemical methods to probe these environmental chemical processes. Mr. Liu has coauthored

several referred journal publications and received a graduate student paper award from American Chemical Society, division of environmental chemistry, in 2009.



STEVE RHIEU is the recipient of the 2009 ECS F. M. Becket Summer Fellowship. Mr. Rhieu graduated with a BS degree in bioengineering from the University of California at Berkeley in 2004. In fall 2005, he joined G. Tayhas R. Palmore's group at Brown University where he is currently finishing his PhD. During the first two years of his studies, he concentrated on studying laccase, a multi-copper oxidoreductase, which can be used as a biocatalyst in biofuel cells under benign physiological conditions. During the past two years, the main focus of his research has been the development of an electrochemical biosensor for vitamin D3 using an electrode coated with cytochrome P450 27B1 (CYP27B1), which selectively hydroxylates 25-hydroxycholecalciferol to give 1 α ,25-dihydroxycholecalciferol, the biologically active form of vitamin D3. Some of the other projects in which he has participated include the development of a method to measure molecular diffusion coefficients using nanofluidic channels and HPLC-GC/MS based vitamin D drugs metabolism. He is the recipient of the NASA Rhode Island Space Grant Fellowship (fall 2006-fall 2007) and the NSF GK-12 Graduate Teaching Fellowship (fall 2009-spring 2010).



VENKAT VISWANATHAN is the recipient of the 2009 ECS Herbert H. Uhlig Summer Fellowship. He is a PhD candidate in mechanical engineering at Stanford University. He graduated with a bachelor's and a master's degree in mechanical engineering from the Indian Institute of Technology, Madras. His research, under the guidance of Prof Heinz Pitsch and Prof Thomas Jaramillo, involves developing theoretical molecular methods for understanding electrochemical reactions on catalyst surfaces. The recent focus of his research has been on applying a combination of quantum calculations and Monte Carlo based methods to study electrocatalysis of reactions relevant to fuel cells, namely oxygen reduction reaction.

(continued on next page)

2009 Summer Fellowship Committee

Vimal Desai, Chair
New Mexico State University

Scott Lillard
Los Alamos National Laboratory

Kalpathy Sundaram
University of Central Florida

Enrico Traversa
University of Rome "Tor Vergata"

(continued from previous page)



Battery Division 2009 Student Research Award



NONLAK MEETHONG has been named the Battery Division's 2009 Student Research Award recipient. In 2000, Dr. Meethong was awarded a full scholarship from the Royal Thai Government to study in the United States. She received her BS degree in ceramic engineering from Alfred University, Alfred, NY in 2004 working with Prof. Doreen Edwards, and her PhD in materials science and engineering from Massachusetts Institute of Technology, Cambridge,

MA in June 2009, working with Professor Yet-Ming Chiang. Currently, she is a junior faculty member in the Department of Physics, Faculty of Science at Khon Kaen University, Thailand.

Her doctoral work at MIT was on understanding the correlation between particle size, composition (doping), phase behavior, and phase transformation kinetics, and their relation to practical properties for the LiMPO_4 olivine cathode compounds for Li-ion batteries. Her current research interests are in the fields of ceramic science, solid-state electrochemistry, and nanotechnology focusing on using nanomaterials for energy storage and environmental applications.

Dr. Meethong has co-authored eight scientific articles (*Science*, *Adv. Funct. Mater.*, *Chem. Mater.*, *Solid State Ionics*, *Electrochem. Solid-State Lett.*, *Mater. Res. Soc. Symp. Proc.*) and two world patents so far. Among other honors, she has won two travel grant awards from ECS (2007, 2008), the "Most Excellent Paper Award" at the International Meeting on Lithium Batteries, held June 2008 in Tianjin, China, and the "Best Poster Presentation Award" for "Nanoscale Olivine Compounds as High-Power Li-ion Battery Positive Electrodes for Transportation Applications" on Materials Day 2008 at MIT. She may be reached at nmpuye@alum.mit.edu.



Corrosion Division 2009 Morris Cohen Graduate Student Award



MARIANO IANNUZZI has been named the recipient of the Corrosion Division's 2009 Morris Cohen Graduate Student Award. Dr. Iannuzzi completed his BS degree in materials engineering in 2002. He joined the Fontana Corrosion Center (FCC) at The Ohio State University (OSU) in fall 2002, and obtained his PhD in materials science and engineering in the fall of 2006 with Professor Jerry Frankel as adviser. While at the FCC, Dr. Iannuzzi helped in the organization of both the NACE

and ECS student chapters. In October 2006 he joined the Corrosion and Materials Technology Laboratory (CAMT) at Det Norske Veritas (DNV)-Columbus. He has recently moved to Norway to work for the Materials and Sensors program at the DNV Research and Innovation (DNVRI) department, lead by Dr. Narasi Sridhar.

Dr. Iannuzzi's dissertation focused on the mechanisms of corrosion inhibition of high strength aluminum alloys by vanadates. His work provided a better understanding on the effects of metavanadate and decavanadate speciation on inhibition performance. While at DNV-Columbus, he worked in numerous materials compatibility issues with focus on the oil and gas industry. His current work includes corrosion and degradation issues in biofuels as well as materials compatibility in deep wells.

Dr. Iannuzzi's professional interest include materials issues in biofuel technologies, advanced coatings, and sensors for real-time localized corrosion detection. He is an active NACE and ECS member and is also the Vice-Chair of the NACE Biofuels Task Group (STG 035).

Start a Student Chapter!

ECS currently has 20 student chapters around the world, which provide students an opportunity to gain a greater understanding of electrochemical and solid-state science, to have a venue for meeting fellow students, and to receive recognition for their organized scholarly activities. Students interested in starting a student chapter may contact karla.stein@electrochem.org for details.

Looking for Student News

Send all correspondence to

65 South Main Street
Pennington, NJ 08534-2839, USA
Tel: 609.737.1902
Fax: 609.737.2743
E-mail: interface@electrochem.org

ECS takes an active interest in the affairs of its Student Members, and is always interested in hearing from you about your interests, activities, and accomplishments.

www.electrochem.org



The **ECS SUMMER FELLOWSHIPS** were established in 1928 to assist students during the summer months in pursuit of work in the field of interest to ECS. The next fellowships will be presented in 2010.

Nominations and supporting documents should be sent to Vimal H. Desai, New Mexico State University, Office of the VP for Research, MSC 3RES - Box 30001, Las Cruces, NM 88033-8001, USA, e-mail: vimalc@nmsu.edu. **Materials are due by January 1, 2010.**



The **STUDENT RESEARCH AWARD OF THE BATTERY DIVISION** was established in 1962 to recognize promising young engineers and scientists in the field of electrochemical power sources and consists of a scroll, a prize of \$1,000, and membership in the Battery Division as long as a Society member. The next award will be presented at the ECS fall meeting in Las Vegas, Nevada, October 10-15, 2010.

Nominations and supporting documents should be sent to Robert Kostecki, Lawrence Berkeley National Laboratory, 1 Cyclotron Rd., MS 70R0108B, Berkeley, CA 94720-8168, USA; tel. 510.486.6002, e-mail: r_kostecki@lbl.gov. **Materials are due by March 15, 2010.**



The **MORRIS COHEN GRADUATE STUDENT AWARD OF THE CORROSION DIVISION** was established in 1991 to recognize outstanding graduate research in the field of corrosion science and/or engineering. The award consists of a scroll, a prize of \$1,000, and travel assistance to the meeting where the award will be presented (up to \$1,000). The next award will be presented at the ECS fall meeting in Las Vegas, Nevada, October 10-15, 2010.

Nominations and supporting documents should be sent to Shinji Fujimoto, Osaka University Department MSP, 2-1 Yamada-oka, Suita, Osaka 565-0871 Japan; e-mail: fujimoto@mat.eng.osaka-u.ac.jp. **Materials are due by December 15, 2009.**

Travel Grants

Several of the Society's Divisions offer travel assistance to students and young faculty members presenting papers at ECS meetings. For details about travel grants for 217th ECS Meeting in Vancouver, Canada, (April 25-30, 2010), please see the Vancouver, Canada Call for Papers in the summer 2009 issue; or visit the ECS website: www.electrochem.org/student/travelgrants.htm. Please be sure to e-mail the student travel grant contact as each Division requires different materials for approval. **The deadline for submission for the spring 2010 travel grants is November 16, 2009.**

Awarded Student Memberships Available

ECS Divisions are offering Awarded Student Memberships to qualified full-time students. To be eligible, students must be in their final two years of an undergraduate program or enrolled in a graduate program in science, engineering, or education (with a science or engineering degree). Postdoctoral students are not eligible. Awarded memberships are renewable for up to four years; applicants must reapply each year. Memberships include article pack access to the *Journal of The Electrochemical Society* online, *Electrochemical and Solid-State Letters* online, *ECS Transactions* online, and a subscription to *Interface*. To apply for an Awarded Student Membership, use the application form on page 72 or refer to the ECS website at: www.electrochem.org/awards/student/student_awards.htm#a.

call for nominations

For details on each award—including a list of requirements for award nominees, and in some cases, a downloadable application form—please go to the ECS website (www.electrochem.org) and click on the “Awards” link. Awards are grouped in the following sub-categories: Society Awards, ECS Division Awards, Student Awards, and ECS Section Awards. Please see the individual award call for information about where nomination materials should be sent; or contact ECS headquarters.

Visit
www.electrochem.org
and click on “Awards” link.

Advertisers INDEX

Anton Paar	11
Bio-Logic	back cover
CSTIC	33
Florida Solar Energy Center	35
Gamry	2, 4
Koslow Scientific	35
Metrohm USA	6
Princeton Applied Research	1
Solartron Analytical	inside back cover
Scribner	8