

ECS 2008 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 2008 Summer Fellowship recipients. The reports of the 2008 Summer Fellows will appear in the winter issue of *Interface*.



MATTHEW J. BANHOLZER is the recipient of the ECS Edward G. Weston Summer Fellowship. Mr. Banholzer was born in Niskayuna, NY and grew up in various cities in New York and Ohio. In 2006, he earned a BA in chemistry from Cornell University where he worked on nanoparticle ligand design with Profs. Francis DiSalvo and Ulrich Wiesner. He is currently working toward a PhD in materials chemistry under the supervision of Chad A. Mirkin at Northwestern University in the research areas of nanoplasmatics and catalysis.



SAU YEN CHEW is the recipient of the ECS Colin Garfield Fink Summer Fellowship. Sau Yen (Sophie) Chew is currently a PhD candidate working on a lithium-ion battery project with the ARC Centre for Electromaterials Science (ACES) and the Institute for Superconducting and Electronic Materials (ISEM), under the supervision of Hua Kun Liu and Jiazhao Wang, both from the University of Wollongong (UoW), Australia. She obtained her bachelor's degree in chemical-polymer engineering at the University of Technology of Malaysia in 2001. She was offered a Research Scholarship to undertake her master's degree in polymer engineering at the same university and completed the degree in 2003. She was then offered a computer-aided engineering (CAE) cum mechanical design engineer position in a company in Malaysia for three years. In February 2006, she successfully secured two scholarships from UoW, including the ISEM/ACES PhD Scholarship.

She is currently a visiting scientist at the Electrochemistry Laboratory (ECL), Paul Scherrer Institute (PSI), Switzerland (August 2007-October 2008) under the supervision of Petr Novák (Head of Battery Group) focusing on thin film electrodes fabrication and characterization for use in lithium-ion batteries. Since 2006, she has been actively involved in materials synthesis for electrochemical and lithium-ion battery applications. Her work so far has been disseminated in over 14 international refereed journal papers.



MENG JIANG is the recipient of the ECS Joseph W. Richards Summer Fellowship. She received her bachelor's degree in chemistry from Peking University in China in 2002. After that, she joined the Chemistry Department at SUNY, Stony Brook to pursue her PhD under the direction of Clare P. Grey. Her research has focused on the structural and electrochemical study of positive electrode materials for Li ion batteries by combining a variety of characterization techniques such as solid state NMR, X-ray diffraction, neutron diffraction, and X-ray absorption spectroscopy. She is trying to probe the structural change in both the short and long range during the electrochemical process.



MARCOS J. L. SANTOS is the recipient of the ECS F. M. Becket Summer Fellowship. In 2003, he obtained his BS degree in chemistry from the Universidade Estadual de Maringá (State University of Maringá) in Brazil. Upon graduating, he won a scholarship from the Coordination of Improvement of Higher Learning (CAPES, Brazil), and started his master's degree in chemistry at the State University of Maringá, under the supervision of Emerson M. Girotto, graduating in 2005. His master's degree research focused on the study of hybrid films of conducting polymers and nanoparticles for application in photoelectrochemical devices. He also studied hybrid films of conducting polymers and fullerene derivatives for application in photoelectrochemical devices.

Immediately after his graduation he worked as an infrared specialist in Klabin (pulp and paper mills, Brazil). In July of 2005, he won a PhD scholarship from CAPES, and started his PhD program at the State University of Maringá. In 2007, he won a scholarship from the Organization of American States (OAS), and started part of his PhD at the University of Victoria working in the group of Alexandre G. Brolo. Currently he is doing research on electron transfer processes, controlling the photoluminescence from a laser dye through the oxidation level of polypyrrole. He is also studying the application of surface plasmon for the enhancement of solar cells efficiency. To date, he has authored eight journal publications.



NATALIA SHUSTOVA is the recipient of the ECS Herbert H. Uhlig Summer Fellowship. She received her bachelor's (2002) and master's degrees (2004) in materials science from Moscow State University, Russia (MSU). She earned her Candidate Diploma in physical chemistry at MSU in 2005. Her international research activities include work in the laboratories of Konrad Seppelt at the Free University, Berlin, Germany, and Erhard Kemnitz at Humboldt University, Berlin, Germany. She is currently a PhD candidate in the laboratory of Steven H. Strauss and Olga V. Boltalina in the Department of Chemistry at Colorado State University, Fort Collins, CO (CSU). Her research involves the synthesis, characterization, and applications of fullerene and metallofullerene derivatives with strong electron-acceptor properties, and she has recently become an accomplished X-ray crystallographer under the guidance of Oren P. Anderson at CSU. Her research has been published in 25 peer-reviewed papers. In 2007, she was invited to attend the National School on Neutron and X-Ray Scattering at Argonne National Laboratory, Argonne, IL; and in 2008 she received an Association of Women in Science Educational Foundation Citation of Merit.

2008 Summer Fellowship Committee

Vimal Desai, Chair
New Mexico State University

Enrico Traversa
University of Rome "Tor Vergata"

Kalpathy Sundaram
University of Central Florida

Scott Lillard
Los Alamos National Laboratory



Christopher D. Taylor Receives Corrosion Division Morris Cohen Award



CHRISTOPHER D. TAYLOR received his BSc (Hons) in chemistry at the University of Western Australia (UWA) in 1999. His thesis work, performed with Professor Jayatilaka, investigated Roby population analysis, a means of converting results of quantum chemical calculations into "traditional" concepts, such as atomic charge, bond-strength, and oxidation state. Taylor was awarded the Faculty of Science Medal from UWA in 1999. In 2000, he traveled to the

U.S. to begin graduate studies as a Van Vleet fellow with Professor Cundari at the University of Memphis, working on theoretical problems in catalysis and artificial intelligence. Mr. Taylor received his MS in chemistry in 2002. His PhD work was performed in engineering physics at the University of Virginia (UVA), working with Professors Kelly and Neurock to develop electronic structure-based approaches to electrochemistry, catalysis, and corrosion. As a result, the electrochemistry of water over several metal surfaces was deduced *ab initio*, including reactivity to form H, OH, and O adlayers on the surface, probing topology and vibrational states, temperature sensitivity, and phase-state in terms of an electrochemical surface Pourbaix diagram. The results of the theoretical calculations were consistent with available high-resolution surface experiments. This work has since been extended to the study of promoter effects in hydrogen embrittlement on nickel, the corrosion of nanoparticles, kinetics of the oxygen reduction reaction, and metal-atom dissolution. Taylor received the Gwathmey Award for graduate research at UVA in 2006. He is now employed as a Seaborg post-doctoral research associate at Los Alamos National Laboratory.

New Student Chapters

At the ECS Meeting in Phoenix in May, the ECS Board of Directors welcomed three brand new student chapters into the society, bringing the total number of student chapters to fifteen.

The **ATLANTA STUDENT CHAPTER** was initiated at the Georgia Institute of Technology, where advisor Peter Hesketh will help guide President Shruti Prakash, Vice-President Zhengchun Peng, Secretary Balamurali Balu, and Treasurer Serdar Ozdemir through the year's planned activities. In addition to working within the Georgia Institute of Technology, a partnership is planned with the Georgia Tech Research Institute (GTRI). This year's plans include holding open houses throughout the school and hosting a judged student poster competition.

Joining ECS from abroad will be the **LAHORE, PAKISTAN STUDENT CHAPTER**, based out of the University of Engineering and Technology, Lahore, Pakistan. Under the guidance of the chapter advisor Inam-ul-Haque, the chapter plans on hosting quarterly guest speakers and engaging other technical universities and programs in the area. It is hoped that the Lahore, Pakistan section will prove to be a model for other international student chapters to follow in the future.

In Champaign, Illinois, the **CENTRAL ILLINOIS STUDENT CHAPTER** will endeavor to expand the horizons of its members through hosting cross-departmental seminars in various topics. Formed due to the diligence of chapter leader Edward Chainani under the guidance of chapter advisor Andrzej Wiekowski, the group hopes to expand out from its base at the University of Illinois, Urbana-Champaign, to include other nearby schools and programs. Other plans for the year include promoting exchanges with Argonne National Lab and hosting invited speakers.

To get more information about forming a student chapter at your own University or location, please contact the Assistant Director of Membership and Development, Tim Fest, at tim.fest@electrochem.org or 609.737.1902, extension 126.



THE ELECTROCHEMICAL SOCIETY SUMMER FELLOWSHIPS were established in 1928 to assist students during the summer months in pursuit of work in the field of interest to ECS. Each fellowship is in the amount of \$5,000. The next fellowships will be presented in 2009.

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, 2009.**



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 Vienna, Austria October 4-9, 2009.

Nominations and supporting documents should be sent to Robert Kostecki, Lawrence Berkeley National Laboratory, 1 Cyclotron Rd #62-203, Berkeley, CA 94720-8028, USA; tel. 510.486.6002, e-mail: r_kostecki@lbl.gov. **Materials are due by March 15, 2009.**



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 216th ECS Meeting in Vienna, Austria, October 4-9, 2009.

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, 2008.**

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.

Call
for
nominations

Awarded Student Memberships Available

The **STUDENT AWARD OF THE CANADIAN SECTION** was established in 1987 for a student pursuing, at a Canadian University, an advanced degree in any area of science or engineering in which electrochemistry is the central consideration, and consists of an amount determined by the Executive Committee of the Canadian Section not to exceed \$1,500. The next award will be presented at an upcoming section meeting.

Nominations and supporting documents should be sent to James J. Noël, University of Western Ontario, RR #1, Grand Bend, ON, N0M 1T0, Canada; tel. 519.661.2111, e-mail: jjnoel@uwo.ca. **Materials are due by February 28, 2009.**

Student Travel Grants

Several of the Society's Divisions offer travel assistance to students presenting papers at ECS meetings. For details about travel grants for 215th ECS Meeting in San Francisco, California (May 24-29, 2009), please see the summer 2008 issue of *Interface* (page 100); 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 2009 travel grants is December 15, 2008.**

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 subscriptions to the *Journal of The Electrochemical Society* online, *Electrochemical and Solid-State Letters* online, and *Interface*. To apply for an Awarded Student Membership, use the application form below or refer to the ECS website at: www.electrochem.org/awards/student/student_awards.htm#a.

Erratum

The 2007 Annual Report in the summer 2008 issue of *Interface* omitted the following names from the Honor Roll section on page 82. **N. JALANI** received the 2006 Industrial Electrochemistry and Electrochemical Engineering Division H. H. Dow Memorial Student Achievement Award; and **V. SETHURAMAN** received the 2006 Industrial Electrochemistry and Electrochemical Engineering Division Student Achievement Award.

Benefits of ECS Student Membership
Annual Student Membership Dues Are Only \$18

Student Grants and Awards

Student awards and support for travel available from ECS Divisions

Student Poster Sessions

Present papers and participate in student poster sessions at ECS meetings

Journal of The Electrochemical Society (JES)

The peer-reviewed leader in the field (electronic edition included with membership)

Interface - Members Magazine

Contains topical issues, news, and events

Electrochemical and Solid-State Letters (ESL)

A rapid-publication, peer-reviewed journal (electronic edition included with membership)

Discounts on Proceedings Volumes, Monographs, and ECS Transactions

ECS publications are a valuable resource for students

ECS is an international, educational organization with more than 8,000 scientists and engineers in over 70 countries, engaged in a broad range of technical interests including: Batteries, Corrosion, Dielectric Science & Technology, Electrodeposition, Electronics & Photonics, Energy Technology, Fullerenes, Nanotubes, and Carbon Nanostructures, High Temperature Materials, Industrial Electrochemistry & Electrochemical Engineering, Luminescence & Display Materials, Organic & Biological Electrochemistry, Physical and Analytical Electrochemistry, and Sensors.

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