

Cleveland Section

The ECS Cleveland Section held its annual spring symposium on March 15, 2013 at Case Western Reserve University (CWRU), Cleveland, OH. The event was organized in honor of Gerald Frankel, recipient of the 2012 Ernest B. Yeager Award of the ECS Cleveland Section. The Yeager Electrochemistry Award of the Cleveland Section is awarded once every two years (on even years) to an individual in recognition of significant contributions to the advancement of electrochemistry in the U.S. Midwest and Great Lakes region. This year's winner, Jerry Frankel, is a professor of Materials Science and Engineering and Director of the Fontana Corrosion Center at The Ohio State University.

The full day event focused on corrosion studies and combined seven invited talks from the leading academic and industrial corrosion experts, with a student poster session. The symposium started with the award ceremony. The initial tribute to the award winner and presentation was given by Rudy Buchheit (The Ohio State University) who discussed "The Application of Microelectrochemical Methods for Understanding Localized Corrosion Behavior of Aluminum Alloys." Heather Allen, also of The Ohio State University, then presented a talk about "Ions, Water, and Electric Fields at Aqueous Surfaces." Narasi Sridhar, Director of the Materials Program at Det Norske Veritas Inc. (DNV) focused on "Corrosion Assessment of Complex Systems."

After lunch, Mariano Iannuzzi (Dept. of Chemical and Biomolecular Engineering, University of Akron) talked about "Corrosion



Jerry Frankel with symposium speakers and officers of the ECS Cleveland Section. From left to right are: ANNE CO, DANIEL SCHERSON, JIM WU, HEIDI MARTIN, HEATHER ALLEN, MEKKI BAYACHOU, MARIANO IANNUZZI, JERRY FRANKEL, RUDY BUCHHEIT, Irina Serebrennikova, RAMGOPAL THODLA, and SHRIDAR NARASI.

Inhibition of Aluminum Alloy 2024T3 by Vanadates." A fascinating presentation on the "Design of Electrocatalytic Surfaces" was given by Daniel Scherson (Dept. of Chemistry, CWRU, the head of the Yeager Center of Electrochemical Sciences). Ramgopal Thodla (DNV/CC Technologies) then described the role of water on pit growth and repassivation in organic solvents. The last presentation from DNV concentrated on "Electrochemical Conversion of CO₂."

The symposium attracted over 70 participants from the Northeast and Central

Ohio areas. Participants hailed from Energizer, NASA Glenn Research Center, Det Norske Veritas (DNV), Honda, and a wide range of academic institutions (CWRU, Cleveland State University, University of Akron, and The Ohio State University). Detailed information about the symposium and past winners of the Yeager award can be found at <https://filer.case.edu/hbm/ecs/ecslocal.html>. The event was co-sponsored by the Yeager Center of Electrochemical Sciences, the Joint ECS/Yeager Center Student Chapter, and Case Western Reserve University.



Attendees at the 2012 E. B. Yeager Award Symposium of the ECS CLEVELAND SECTION.

Korea Section

The Korea section symposium was held on April 11, 2013 at the Changwon Convention Center in Changwon, Korea. The symposium was organized by Yung-Eun Sung (Section Chair) and Soo-Kil Kim (Section Secretary). It was composed of six talks on battery, corrosion, electroless deposition, solar cells, and metal-organic frameworks. At the end of the symposium, Seong Min Bak received 7th Student Award of the Korea Section with a cash prize of \$500. During the symposium, he also presented his recent work entitled, "Correlating Structural Changes and Gas Evolution During the Thermal Decomposition of Charged Cathode Materials" Mr. Seong Min Bak is a PhD candidate in the Department of Materials Science and Engineering at Yonsei University in Korea. He received his BS degree from the same university in 2007. His current research interest is in the area of electrode materials for lithium ion batteries. He is the author of many papers in the *Journal of Materials Chemistry*, *Chemistry of Materials*, *Advanced Functional Materials*, *Electrochemical Communications*, and more. The next award will be presented at the spring symposium of the Section in 2014.



SEONG MIN BAK (left) received the 7th Student Award of the Korea Section.

San Francisco Section

It's been an exciting year for the ECS San Francisco Section with two renowned international speakers at the monthly seminars. Stefano Passerini from University of Muenster (Germany) gave a talk about ionic liquids in battery electrolytes and another talk was given by Sorin Roșca from the Technical University of Bucharest (Romania). The latter event was organized together with the California Section of the American Chemical Society, and attracted a particularly large audience. The talk entitled, "Chromatographic and Spectroscopic Authentication of Romanian Wines," was

very well received as it was presented in a close neighborhood of California's Napa Valley and was part of the theme of a recent ACS meeting focused on "Chemistry of Energy and Food."

A mixed ECS-ACS audience was able to enjoy the talk and a tour of the battery laboratories of the Environmental Energy Technologies Division of Lawrence Berkeley National Laboratory. The Section has also toured Advanced Light Source, a world-class synchrotron facility engaged in multiple projects related to the mission of ECS, ranging from the characterization of battery materials and energy conversion systems to deep UV lithography of semiconductors.

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Gathered at the San Francisco Section seminar in April section seminar were (from left to right): **JAROSLAW SYZDEK**, ECS SF Section Chair; **SORIN ROSCA**, Bucharest Technical University; **OANA LEONTE**, ECS SF Section Treasurer; and **DINU LEONTE**, ECS SF Section member.



On a tour for the SF Section were (from left to right): **DINU LEONTE** (ECS SF Section guest), **OANA LEONTE** (ECS SF Section Treasurer), **MARK FRISHBERG** (ACS California Chair Elect), **SORIN ROSCA** (Romanian Chemical Society President), **MIRCEA GHEORGHIU** (ACS California Section member), **ANA RACOVEANU** (ACS California Section member), **CORNELIU RADU** (Romanian Chemical Society President), **ALEX MADONIK** (ACS California Section member), and **TERASA SOWINSKI** (ACS California Section member).

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Indeed, given that the SF Section Chair is an LBNL employee, this season the integration between ECS and LBNL has been particularly strong. Three section seminars—two mentioned before and another one, given by Jarosław Syzdek (the SF Section Chair)—were hosted by LBNL. This reflects the trend of LBNL, a DOE-funded facility, to be more open to the public and to seek opportunities to collaborate with industrial partners on solving the burning problems of the nation's energy and environment-related issues.

Last but not least, the Section recently presented the Daniel Cubicciotti Student Award to Northern California students working in fields related to ECS mission. This year the ceremony was held in Sutardja-Dai Hall at University of California, Berkeley (UCB). The winner was Daniel Cohen,

advised by Michel Maharbiz from UCB. Daniel Cohen gave a very inspirational talk about bio-electricity, starting from the early days of electrochemistry, ending at his recent findings of collective responses of cells to electric fields and how that can be applied to treating injuries. The Section also awarded two honorable mentions: to Mallory Hammock, advised by Zhenan Bao (Stanford University), who talked about organic semiconductors and sensors; and Anthony Ferrese, advised by John Newman (UCB), who talked about mechanical response of Li-metal electrode in non-uniform electric fields. All the awardees showed amazing capabilities in science as well as outstanding integrity and healthy work-life balance.

The ECS SF section is excited to have the next ECS meeting in San Francisco. The Section knows it will be a very successful meeting for all attendees.



The San Francisco Section presented the Daniel Cubicciotti Award in May. From left to right are: **ANTHONY FERRESE**, UC Berkeley (Honorable Mention); **JAROSŁAW SYZDEK**, Lawrence Berkeley National Laboratory (ECS SF Section Chair); **DANIEL COHEN**, UC Berkeley (Award winner); **GEORGE LICINA** (Structural Integrity Associates Inc.); **MALLORY HAMMOCK**, Stanford University (Honorable Mention); and **MARK BAILEY**, Kinestral Technologies Inc. (award jury member).

Twin Cities Section

The ECS Twin Cities Section held their annual spring symposium on April 18 on the campus of the University of Minnesota. In addition to the University the Section is home to technology companies such as Medtronic, Boston-Scientific, St. Jude, and 3M Company, as well as other industrial organizations and academic institutions engaged in electrochemical or chemical physics research and development. Attendance at the symposium was generally good with approximately 60 people given that the weather did not cooperate. By late in the day heavy snow started to fall.

Lili Deligianni, ECS Secretary, attended the symposium and kicked off the day with an update from ECS. The opportunities and advantages of ECS membership were well articulated by Dr. Deligianni. Speakers at the symposium were from the University of Minnesota, 3M Company, Medtronic, and Boston-Scientific. Dr. Deligianni followed her ECS introduction with a seminar on her work at IBM on the electrodeposition of photovoltaic materials. She was followed by Vincent Chevrier (3M) who described the company's work on lithium ion battery materials. From the University of MN, Andreas Stein spoke of his work on structured nanomaterials for energy storage and Eray Aydil updated the attendees on his work in synthesis and characterization of photovoltaic materials. The symposium also included seminars on cardiac disease management and device intervention from Gregg Sherwood (Boston Sci.) and Gonzolo Martinez (Medtronic).

Thanks to all the speakers and Section officers for making this an entertaining, educational, and successful spring symposium.

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