

Highlights of the 14th INTERNATIONAL CONFERENCE ON SOLID STATE IONICS

The 14th International Conference on Solid State Ionics (SSI-14) was held with great success June 22-27, 2003 at the Asilomar Conference Center in Monterey, California under the auspices of the International Society for Solid State Ionics (ISSI), and cosponsored by ECS. The SSI conference series, held every two years and rotating among three continents, provide an international forum for scientists, engineers, and technologists to further their understanding of ionic transport in condensed phases that underpins the development of efficient and environmentally sustainable advanced technologies for energy conversion and storage. The conference organizers and chairmen were Turgut M. Gür of Stanford University, Steven J. Visco of Lawrence Berkeley Lab, Marca M. Doeff of Lawrence Berkeley Lab, Sossina M. Haille of the California Institute of Technology, and Joop Schoonman of the Delft University of Technology.



Participants at the SSI-14 Conference were treated to a beach barbecue on the Asilomar grounds. At the front table are, moving counter-clockwise from the front: Joop Schoonman, ISSI President and conference co-chair; Marina van Geenhuizen; Johanna Boukamp; Turgut M. Gür, ISSI Treasurer and conference co-chair; Boryann Liaw; Werner Sitte; and Bernard Boukamp.

Nearly 350 participants from 26 countries attended SSI-14 and contributed to the conference scientific program with presentations of technical papers and technical posters. It was regrettable, however, that despite intense efforts up until the eleventh hour, many scientists from several countries were unable to secure visas and, therefore, were unfortunately not able to attend SSI-14. On a positive note, conference attendance by students and postdocs made up nearly one-third of the total. Promoting visibility and the participation of young scientists and future leaders in the field of solid state ionics was one of the goals for the conference organizers and this significant increase in attendance by young scientists speaks well for their efforts.

The theme for SSI-14 was "Materials for Energy Conversion and the Environment," reflecting the renewed interest in efficient and environmentally friendly energy conversion materials, processes, and systems. Accordingly, the program involved eleven technical symposia, namely, Solid Oxide Fuel Cells, Batteries, Ionic and Mixed Conductors, Protonic Conductors, Electrochemical Devices, Glasses, Conductive Polymers, Theory and Modeling, PEM Fuel Cells, Electrochemical Reactors, and Nanostructured Materials.

Each day, the conference started out with a plenary session in the morning and broke out into four parallel technical sessions for the remaining of the day. The five plenary lectures were given by Gerbrand Ceder of Massachusetts Institute of Technology on "Ion Mobility, Transport, and Thermodynamic

Stability in Li-Intercalation Compounds;" Ray Gorte of the University of Pennsylvania on "Recent Developments on Anodes for Direct Fuel Utilization in SOFC;" Ellen Ivers-Tiffée of the University of Karlsruhe on "Solid Oxide Electrolytes in Oxygen Sensor and Fuel Cell Application;" Joachim Maier of the Max Planck Institute, Stuttgart, on "Ionic Transport in Nano-sized Systems;" and Masahiro Tatsumisago of Osaka Prefecture University on "Glassy Materials Based on Li_2S and Their Application to All-Solid-State Lithium Secondary Batteries."

The conference opened on Sunday, June 22 with a reception at the Asilomar Conference Center. The technical sessions began on Monday and continued through Friday, June 27, with a series of 28 keynote talks presented mostly by invited young experts, 212 oral presentations, and 191 poster presentations in the evening poster sessions. Participants were also treated to a beach barbecue at

Asilomar, a wine tasting excursion to Chateau Julien Wine Estate in Carmel Valley, and an evening banquet at the world famous Monterey Bay Aquarium. At the Aquarium, attendees had the opportunity to visit and learn about the unique geoscientific environment of the Monterey Bay while having an elegant dinner among the colorful and breathtaking exhibits of the aquarium.

Many companies, institutions, and agencies sponsored and funded SSI-14. Foremost is PolyPlus Battery Company, Inc. of Berkeley, California, which provided invaluable logistic, in-kind, and administrative support. Other organizations that provided support included: U.S. Department of Energy, Fossil Energy (National Energy Technology Laboratory and Pacific Northwest National Laboratory); U.S. Department of Energy, Office of Hydrogen, Fuel Cells; Infrastructure Technologies (Lawrence Berkeley National Laboratory); U.S. Department of Energy, Argonne National Laboratory; U.S. Office of Naval Research, Electrochemical Science and Technology; PowerAvenue Corporation; Altran Technologies Netherlands BV, Skill Center Sustainable Energy; The Electrochemical Society/High Temperature Materials Division; Elsevier Science BV; Ceramtec; and Energizer. The administrative support from the staff and leadership of The Electrochemical Society and the Asilomar Conference Center was also invaluable.

The next SSI Conference (SSI-15) is scheduled for July 17-22, 2005, in Baden-Baden, Germany. ■

Division News—Nominated for Office

New officers for the 2003-2005 term have been nominated for the following Divisions, to be voted upon during the Divisional business meetings held during the fall 2003 meeting in Orlando, Florida.



Electrodeposition

Chairman

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Vice-Chairman

Walther Schwarzacher

Secretary

Gery Stafford

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Eric Wachsman

Vice-Chairman

Eric Wuchina

Secretary/Treasurer

Enrico Traversa



Luminescence and Display Materials

Chairman

Lauren Shea-Rohwer

Vice-Chairman


Anant Setlur

Secretary/Treasurer

Uwe Happek



Electrochemical
and Solid-State
Letters



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* The 2002 impact factors were 2.330 for the Journal and 2.505 for Letters.

the society for solid-state
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ECS Vice-President Mark Allendorf (third from left) presents a Leadership Circle Award (Silver Level) to Matsushita Battery International. Present at the ceremony were (from left to right): K. Yuasa, M. Ikoma, (Allendorf), and M. Konda.

Contributing Member News

ECS Contributing Members 3M and MEDTRONIC were awarded Leadership Circle Awards by ECS Director of Development, Troy M. Miller, during a recent visit through the Midwest.

Mark Debe, initiator of the 3M PEMFC program, along with Mike Hicks and Radoslav Atanasoski (all active ECS members), from 3M of Saint Paul were awarded the Silver Level Leadership Circle Award for 15 years of consecutive membership. Gil Holmes, VP and GM of Medtronic Energy and Component Center in Minneapolis accepted the Silver Level Leadership Circle Award for 24 years of consecutive membership.

In a separate ceremony in Cupertino, California, ECS Vice-President Mark Allendorf presented Dr. Ikomo, Director of MATSUSHITA BATTERY INTERNATIONAL (MBI) Product Engineering Development Center, a Silver Level Leadership Circle Award for Matsushita Battery's 10 years of consecutive membership. Also present were MBI Chief Technology Officer Mr. Kondo; Kurt Kelty, Director of Battery Research and Development Center for Panasonic; and Mr. Yuasa, engineer. Matsushita Battery is located in Osaka, Japan.

Contributing Membership enables all concerned with the science and technology of electrochemistry and solid-state science to support the activities of the Society. This support helps ECS meet its objectives of advancing the theory and practice of electrochemistry and solid-state science, encouraging research and dissemination of knowledge in these fields, and assuring the availability of adequate training and education of fundamental and applied scientists and engineers in these fields. In recognition of the generous contributions of these members, organizations are provided a benefits package that includes special recognition, marketing, and online technical content access.

For more information on how your company can become a contributing member, take advantage of the benefits package, and be eligible for the Leadership Circle Award, please contact Troy M. Miller at the ECS headquarters office. Also, be on the lookout for a special announcement concerning the Contributing Membership program in the next issue of *Interface*. ■

Peer X-Press Ushers in “Paperless Era” for ECS Journals

by Mary E. Yess

“It would appear that we have reached the limits of what it is possible to achieve with computer technology, although one should be careful with such statements, as they tend to sound pretty silly in 5 years.”

— John von Neumann (ca. 1949)

About 25 years after von Neumann’s statement, the prognosticators had a somewhat revised view of what computers could do, and said these wonder machines would usher in a new paperless era. Another 25 years later, desirable electronic books are a long way off and everyone’s filing cabinets are still full of paper, but The Electrochemical Society has taken another step in its five-year plan to move its journals to all-electronic production. “All-electronic” has come to mean more than just being handled by computers, it now means taking advantage of all the speed and efficiency of the Internet as well.

This past July, the Society launched Peer X-Press (PXP) at <http://esl.peerx-press.org> for online submissions to *Electrochemical and Solid-State Letters*. *Letters* now only accepts manuscript submissions via its online tool, but all authors now have access to the fastest submission ever. (The *Journal of The Electrochemical Society* is scheduled to begin accepting online submissions beginning this fall.)

PXP is a tightly-integrated Web-based system provided by the American Institute of Physics (AIP). It enables online manuscript submissions, editorial process tracking, and peer-review workflow management. Authors, reviewers, and editors can now take advantage of the system’s many features, including manuscript submission and viewing, and Web access to pertinent editorial-process tracking data; and the ECS staff can use the system to transfer manuscripts directly into the production process at AIP. PXP is securely hosted on AIP platforms and accessible at all times via a Web browser. The system is based on the EJPress software licensed from eJournalPress.com.

ECS is a publishing partner of AIP and uses AIP’s composition and production services, which includes the more traditional aspects of typesetting and proofreading, but also includes special coding services that are used to produce HTML and PDF versions for the Web and enable the very valuable online linking between journal articles. AIP also does all the abstracting

and indexing on the ECS journals and submits this information for ECS to the major science databases such as the Institute for Scientific Information (ISI) and Chemical Abstracts Service (CAS).

For enabling the Society’s first steps in computerization, the Society owes a great deal to ECS past president and Fellow, Paul Milner. In the 1990s, Dr. Milner developed a manuscript tracking system for *Journal* papers.

The database provided instant retrieval of manuscript information and the editors were able to access the system by dial-up modem. Among other things, the system produced a monthly publication schedule and a monthly table of contents for *Journal* articles. It also produced month-by-month reports of papers eligible for the Norman Hackerman Young Author Awards. These features were valuable innovations for the times and were very welcome time-savers for the ECS Editorial Board and publications staff. Dr. Milner continued to provide updates and improvements to the system for over 20 years and assisted in the transition to the PXP system.

The Society is always working to deliver its services in the quickest, most cost-effective way possible, with the greatest benefits for its members, authors, and other customers. The PXP system will certainly save money in mailing costs for both the Society and authors, but most importantly, the system will provide for fast peer-review and acceptance decisions for authors anywhere in the world. For two years running, *Electrochemical and Solid-State Letters* has been the highest ranked peer-reviewed journal (followed by the *Journal of The Electrochemical Society*)¹ to publish leading edge research and development in the fields of electrochemical and solid-state science and technology. With PXP, the ECS journals will continue to be leaders in the field. ■



Mary Yess is the ECS Director of Publications.

1. According to the ISI Science Citation Index rankings for 2002, *Letters* had an impact factor of 2.505 and the *Journal* had an impact factor of 2.330.