ecs transactions

The Society's Newest Publication

This fall, ECS will begin its newest publication, *ECS Transactions* (ESCT), a new high-quality venue for authors and another excellent resource for researchers. This new title has been designed as an online database—with on-demand print editions and CD-ROMs—and will include full-text content that has been presented at ECS meetings and ECS sponsored meetings. The papers appearing in ECST will be reviewed to ensure that submissions meet generally-accepted scientific standards.

ECS Transactions will publish one volume each meeting; each volume will contain many issues; and each issue will include a collection of papers from a symposium. Users may view a table of contents for each issue, and a search engine will turn up desired papers from the entire database. The original abstracts, residing in the online *Meeting Abstracts* publication, will be linked to a full paper if it has been published in ECST. If an ECST paper goes on to be accepted in one of the ECS technical journals, ECST eventually will carry a "forward link" to that published article.

The papers will be available online—as individual articles or as part of an issue—to be downloaded by a user to a hard drive, CD-ROM, or other display device; or they can be placed by ECS on a CD-ROM at the customer's request. ECS will make "on-demand" book editions available as well.

ECS also offers conference and symposium organizers the ability to produce a first-run, case-bound edition of an issue. The first case-bound issues from ECST will be published in time for the ECS fall meeting in Los Angeles this October. Requests to publish these books will be reviewed by the ECST Editorial Board. After supplies of the first-run book have been exhausted, the material lives on in ECST online, where users may still purchase hard-media copies, on an "on-demand" basis.

The ECS Publication Committee and the ECST Steering Committee developed this new publication in response to the numerous problems related to publishing the meeting content in the ECS proceedings volume (PV) series. (The PV series will cease publication with the last books from the ECS spring 2005 meeting in Québec City.) "The PV model, a well-established one in the scholarly community, has been faced with a number of challenges over the past 5-10 years," said Mary Yess, ECS Deputy Executive Director. "The PV program was only nominally meeting the needs of authors and readers. Some of the challenges included the lack of connectivity with other online content, the demand from authors for faster publication and wider distribution, and the problem of reduced acquisitions by libraries because money is spent on serials and electronic resources." The Steering Committee is chaired by John Weidner and includes members Curt Holmes

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Division Officers Slates Announced

New officers for the 2005-2007 term have been nominated for the following Divisions, to be voted upon during the fall 2005 ECS meeting in Los Angeles, California.

Electrodeposition
Chair
Walther Schwarzacher
Vice-Chair
Gery Stafford
Secretary
Christian Bonhote
Members-at-Large
Hariklia Deligianni
Giovanni Zangari

High Temperature Materials
Chair
Eric Wachsman
Vice-Chair
Eric Wuchina
Jr. Vice-Chair
Enrico Traversa
Secretary–Treasurer
Jeffrey Fergus

Luminescence and Display Materials
Chair
Anant Setlur
Vice-Chair
Uwe Happek
Secretary–Treasurer
Kailash Mishra

Visa Help for ECS Meeting Attendees

Since September 11, 2001, new policies and procedures have been instituted for obtaining a U.S. visa, which include personal interviews at an embassy or consulate in one's country of citizenship. Consular officers base visa issuance on the totality of an applicant's eligibility, situation, and supporting documents. If the applicant has a scientific background and/or is attending a scientific conference, the process can take up to 90 days. Although such circumstances impel a higher level of scrutiny that cannot be circumvented, ECS has implemented a number of initiatives to facilitate the process for prospective foreign attendees.

All Society meetings held within the U.S. will be registered with the U.S. Department of State. The Visa Services Office posts an intranet listing of registered conferences where significant international attendance is expected. Department of State embassies and consulates worldwide can access this list to supplement information provided by a visa applicant.

Prospective meeting attendees can fill out an electronic form to request

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(also chair of the ECS Publication Committee), Paul Natishan, Bill O'Grady, and Mary Yess.

This new approach allows for much wider dissemination of the content at a much lower cost than the case-bound books alone. Papers that were not included in a PV and not submitted to the ECS journals had nowhere else to be published at ECS, resulting in lost content and a break in the cohesiveness of the content presented at ECS symposia.

ECS Transactions can also provide ECS Divisions with a source of revenue, which is used to fund awards, student memberships, travel grants, and honoraria for keynote speakers; and help to build the individual symposia.

Because an issue requires a minimum of one paper to be published online, ECST can provide smaller conferences and symposia, or those just getting off the ground, the opportunity to publish and promote their topic. ECST also enables authors the ability to publish their meeting content, regardless of whether or not a first-run, case-bound book is being produced. Authors and editors will have the advantage of an easy-to-use online submission system, enabling quick submission for authors and easy reviewing by editors.

Papers submitted to ECST will be embargoed until they are reviewed and accepted by the organizers of their respective symposia, and they will be officially published no earlier than the first day of the meeting or conference. The ECST Editorial Board places continual emphasis on the maintenance and enhancement of the quality of this publication.

When the first issues of ECST are published this October, they will be available in case-bound format. By April 2006, the electronic database will open to the public, and users will be able to purchase individual articles from the database, or purchase whole issues in electronic format at a discounted price. ECS members will receive further discounts on article and issue prices. Later in 2006, users will have the ability to put together their own special collections of papers from across the spectrum of ECS publications—from the ECS journals, ECST, proceedings volumes, *Interface* articles, and *Meeting Abstracts*—all through the ECS Digital Library.

With *ECS Transactions*, The Electrochemical Society brings another high-quality resource to the electrochemical and solid-state community. ■

AIP to Distribute ECS Journals

ECS and the American Institute of Physics (AIP) and have announced an agreement for AIP's Circulation and Fulfillment Division to provide fulfillment and customer service for the print editions of three ECS publications, *Electrochemical and Solid-State Letters* (ESL), the *Journal of The Electrochemical Society* (JES), and the ECS quarterly news magazine, *Interface*. AIP has hosted ESL and JES on its Scitation online platform since January 2001.

Mary Yess, ECS Deputy Executive Director explained, "We consider AIP Publishing Services not merely a fulfillment vendor, but a partner in serving our subscribers. As both a service provider with great systems and facilities and a not-for-profit society with scholarly publications of its own, AIP understands the issues ECS faces in working with individual scientists, libraries and consortia."

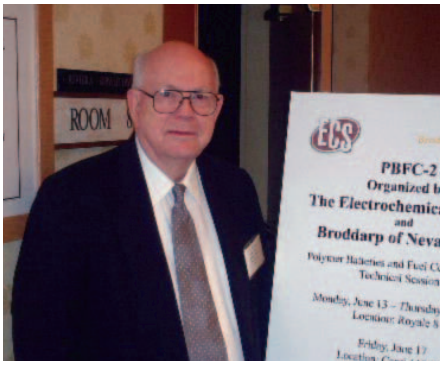
ECS joins the more than 150 scientific publications published by 15 societies for whom AIP's Circulation and Fulfillment Division now provides fulfillment services. AIP will provide a number of services for ECS, including issuing renewal invoices and processing payments; tracking and maintaining ECS subscribers; distributing and fulfilling print and online subscriptions; providing customized consortia processing; and providing reporting, statistics, and marketing tracking.

"ECS is well respected in the STM community for publishing the most authoritative research in its field," said AIP's Director of Circulation and Fulfillment Services Lori Carlin. "AIP's circulation experience will provide the high level of customer service and the timely, accurate fulfillment that ECS readers demand." ■

ECS Co-sponsored Event

PBFC-2

Second International Conference on Polymer Batteries and Fuel Cells



Ralph Brodd, chair of PBFC-2.

The Second International Conference on Polymer Batteries and Fuel Cells was held in Las Vegas NV, June 12-17, 2005 at the Riviera Hotel, organized by Broddarp of Nevada and The Electrochemical Society. Drs. Paul Stonehart and Stanley Whittingham gave the keynote lectures in fuel cell and battery materials respectively. The topics included structure of the cathode materials, ionic liquids, polymer electrolyte membrane composition, and structure. There were over 220 in attendance and194 papers and posters. A proceedings volume will be issued by the *Journal of Power Sources*. Dr. Bruno Scrosati will host the next conference in the series in 2007 in Italy.

The Electrochemical Society and Broddarp of Nevada express their appreciation to the sponsors of the PBFC-2 for their financial support: the Engineering Research Center for Energy Conversion and Storage at Seoul National University (Dr. Seungmo Oh), Timcal, and Varta Microbatterie. ■

ECS Forms Fuel Cells Coordinating Committee

Recent reports have identified the development of cost-effective, durable, and safe fuel cell systems as key research challenges in the 21st century. Furthermore, the Hydrogen Fuel Initiative has spurred extraordinary interest in fuel cells. These developments have been mirrored by intense fuel cell activity within ECS. Will this latest activity lead to commercialization and is ECS positioned to take a leading role? To answer these questions, ECS has established a fuel cell coordinating committee that reports to the Technical Affairs Committee. The charge of the committee is to coordinate fuel cell symposia for ECS and to promote ECS as the leading professional organization for the development of fuel cells. Tom Fuller (tom.fuller@gtri.gatech.edu), who chairs the committee, also represents the ECS Energy Technology Division. Other members and their ECS Divisional affiliations are as follows: Trung Van Nguyen (IE&EE, cptvn@ku.edu), Hubert A. Gasteiger (Battery, hubert.gasteiger@gm.com), Eric Wachsman (High Temperature Materials, ewach@mse.ufl.edu), Prashant Kamat (Fullerenes, Nanotubes, and Carbon Nanostructures, pkamat@nd.edu), Tom Zawodzinski (Physical and Analytical Electrochemistry, taz5@po.cwru.edu), and Dale Hall (Senior Advisor, dale.hall@nist.gov).

This past, June the committee organized a workshop on low-temperature fuel cells, which was cosponsored by the National Science Foundation. The objective of the workshop was to define basic science needs addressing challenges for low-temperature fuel cells. The workshop brought together an interdisciplinary group of scientists and engineers with expertise in low-temperature fuel cells. They explored gaps in fuel cell technologies and technical approaches to meet these critical research needs. An agenda for basic research in low-temperature fuel cells necessary to advance knowledge across several disciplines was recommended. These findings will be presented at the ECS Los Angeles meeting in October.

A Web page, linked to the ECS website, has been established. Jim Fenton has been working with ECS to offer basic technical information on fuel cells and to provide links to fuel cell activities, symposia, and publications through this website. Starting in Los Angeles, ECS will offer short courses in fuel cells at each ECS biannual meeting. Hubert Gasteiger is coordinating with the ECS Education Committee to find ways to reach out to student members through these courses.

This committee is responsible for coordinating fuel cell symposia. Plans for SOFC symposia are well established. For low-temperature PEM fuel cells, one large symposium is planned per year—the first in Los Angeles, followed by Cancun in fall 2006). One major change for the Cancun meeting is that the committee intends to have a first-run, case-bound issue of *ECS Transactions* from the symposium available at the meeting. This means that authors will need to submit an article at nearly the same time as their abstracts. There is plenty of time, but prospective authors must make a note and plan accordingly. The committee is also exploring jointly-sponsored symposia on fuel cells with other professional societies, particularly those that complement the strengths of ECS. Should you have any comments or thoughts on improving our efforts in fuel cells, please contact one of the members of the committee. ■

currents

Fuel Cells Receive Support in U.S. Energy Bill Conference

This past July, U.S. House and Senate conferees working on a comprehensive energy bill successfully approved two legislative titles that will significantly impact the U.S. government's involvement in aiding the development of fuel cell and hydrogen technologies.

Language in the hydrogen title and the vehicles and fuel cells sections of the bill establish new levels of research and development, demonstrations, and transition-to-market programs. Lawmakers also removed provisions of the bill that cause the programs to expire by 2015, a gesture that will ensure programs contained in the legislation do not sunset in ten years.

The conference report calls for spending in the amount of $2 billion for research and development for hydrogen supply and fuel cell programs within the Department of Energy over five years. Spending of $1.3 billion was authorized for hydrogen and fuel cell demonstrations that include vehicles, stationary, and portable applications, also over five years.

An amount of $38 million over five years was authorized to support the development of safety codes and standards relating to fuel cell vehicles, hydrogen energy systems, and stationary, portable and micro fuel cells, as well as educational efforts. Included in the vehicles and fuel cells title, $105 million was authorized for three years to encourage state and federal procurement of fuel cell vehicles. A provision of $450 million was approved for market transition programs for stationary, portable and micro fuel cells, as well as hydrogen energy systems. The bills also established $50 million over five years for a fuel cell bus demonstration program; as well as a three-year fuel cell school bus program, authorized at $75 million.

Another top priority for the fuel cell industry includes passage of tax incentives for stationary, portable, and backup fuel cell power systems. Conferees have not yet begun debating energy tax credits; however, both the House and Senate have similar investment tax credits to benefit the purchaser of a fuel cell unit. The House credit calls for $1,000 per kW or 15% of the cost of the unit. The Senate also stipulates a $1,000 per kW or 30% of the cost of the unit. The Senate version of the tax package also includes a production tax credit of 1.5 cents per kW hour. ■

ECS Visa Help
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that their formal letter of invitation from the Society be faxed to them or sent via e-mail in PDF format, thus avoiding postal delays. E-mail notifications to authors, informing them that their paper has been accepted, now include a link to this form.

The Society is educating prospective attendees about new visa requirements by providing a direct link from our website to the U.S. Department of State Visa Homepage (www.travel.state.gov/visa) so individuals can ascertain whether a visa is required, identify application requirements, locate an embassy, and start the application process.

To alleviate some of the logistical problems at arrival airports, the Society meetings staff communicates with airports and customs, notifying them of major arrival dates so they can be properly staffed and otherwise prepared for our delegates. ■

Brewer
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the transition metals[3]. He built on the Engel correlation between transition metal electron configuration and crystal structure. He drew on spectroscopic data for the metals in their gaseous states to determine available electron configurations. Using these data, he was able to predict the effect of alloying additions and pressure on alloy structures and stabilities with amazing accuracy. In analogy to Lewis acid-base interactions in aqueous solution, Brewer's theory predicts stable configurations between transition metals with appropriate electron configurations. These are a remarkably stable series of transition metal alloys, such as $ZrPt_3$, known as the Brewer-Engel compounds. Given the large number of metallic elements in the periodic table, Brewer's predictive tools are tremendously useful in predicting phase relationships and interactions for which there are no experimental data. This has found application in a wide range of fields including metallurgy, nuclear fuels, and catalysis.

Brewer's association with The Electrochemical Society goes back many years. He joined the Society in 1956 and he gave the Society's first plenary lecture in 1970 entitled "Electrons—The Universal Glue." He received the Olin Palladium Medal in 1971 and the Henry B. Linford Award for Distinguished Teaching in 1988. Brewer earned a long list of other significant honors, including election to the National Academy of Sciences in 1959, the E. O. Lawrence Award of the Atomic Energy Commission in 1961, and the Hume-Rothery Award of the American Metallurgical Society in 1982. His revision with K. S. Pitzer of the text on thermodynamics[4] by Lewis and Randall has been widely used in courses and is a standard reference for several generations of chemists.

Behind all these major contributions was a courageous, unpretentious gentleman of the highest integrity. He treated everyone with respect and dignity and to this day has set very high standards for the field of high temperature chemistry. He directed the research of forty graduate students and nearly two dozen post-doctoral associates. Among the many values he imparted to his students and associates were self-teaching and critical analysis of experimental data. His boundless energy and enthusiasm for the chemical sciences are recalled by all who knew him. Through his courses, articles, and active participation in professional societies, he instructed and inspired a countless number of students and scientists throughout the world. ■

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4. G. N. Lewis and M. Randall, *Thermodynamics*, Second Edition revised by K. S. Pitzer and L. Brewer, New York, McGraw-Hill, 1961.

This notice was prepared by Nathan Jacobson (nathan.s.jacobson@nasa.gov) with help from Alan Searcy, Gerd Rosenblatt, John Gibson, Milan Jaksic, Michael Cima, and Steve Visco.

Huff
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NASA and DARPA. During this period a major accomplishment was establishing the joint PEM program with General Motors and the growth of an on-site cooperative effort at LANL. Similarly he convinced Ballard Corp. of the validity of PEMFCs, which led to their entry into an R&D effort to develop fuel cell vehicle and stationary power plants.

Upon his retirement from LANL after 12 years, he joined Ballard Power Corp. as their U.S. representative and chief scientist responsible for technical overview of the fuel cell programs in the transportation and utility areas. He worked closely with representatives of the U.S. and Canadian governments to maintain critical funding for portable and military applications as well. The last six years of his career were devoted to consulting and the sharing of his broad and extensive knowledge and experience with others. Throughout his career he was active in The Electrochemical Society, which he joined in 1964, and he served on several ECS committees in the 1980s. He was active in other societies as well, and made frequent presentations at all the major conferences, seminars, and meetings devoted to energy conversion technology. Dr. Huff was truly a "Fuel Cell Pioneer" who has had a major impact on the development and commercialization of fuel cells. He will be sorely missed by the community. He is survived by his widow, Juliet, and three children. ■

This notice was submitted by John B. O'Sullivan.

Maurer
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industry and our country. Dr. Maurer was frequently requested to participate in many symposia conducted by NASA, USAF, and other government agencies. He held 26 patents and authored many technical papers. He retired from AT&T Bell Laboratories in 1996 and joined Loral Skynet.

An accomplished equestrian and a commercial hot air balloon pilot, Dr. Maurer also served on the Board of Directors of the Mid-Atlantic Aviation Coalition and the Great Eastern Balloon Association.

Dr. Maurer is survived by his wife, Diane, of Sunnyvale CA, and Watchung, NJ; and son Dorian and daughter-in-law Donna, both of Churchville, PA. Memorial services were held in Watchung, NJ, and in Mountain View, CA, by his fellow employees at Space Systems/Loral. Dean will be sorely missed by all of us. ■

This notice was submitted by George Methlie and Dave Pickett.