

# ECS ANNUAL REPORT



## 2014

## Innovations for More, Better, and Faster Research Dissemination

In many ways, 2014 was a successful year for ECS, and it was a year that was characterized by significant transition and progress. The dramatic changes in the discovery and dissemination of published research have had an enormous influence on ECS and have driven substantial program innovations. Progress both in digital information technologies and in the Society's core research areas stimulated some initial transitions. More recently, the adoption of open access publishing has facilitated a great opportunity to improve our capability in research dissemination, which is the Society's primary purpose. These influences have driven a great deal of change in ECS and sparked more innovation in our programs in 2014 than any other year in our 113-year history.

As the leading professional society in electrochemical and solid state science and technology, ECS focuses on our mission to disseminate research as broadly as possible to advance the scientific discipline and the community that we serve. The ECS mission continues to be the compass providing direction in a changing environment; so innovation at ECS is directed by our mission-based goal to increase the acquisition and dissemination of research in our discipline; or more simply stated... to

provide better, faster, and now more of the research in our field.

The ECS Board of Directors committed to an Open Access (OA) plan in 2013 to enable opportunities for our journal authors to publish in an open publications platform. We successfully implemented that OA plan in 2014, which is described in the publications section of this report. It attracted 25% of our journals authors who opted for open access publishing of their manuscripts.

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Those articles that we publish in the ECS Digital Library will be open and available, without cost or barriers, to anyone in our community in perpetuity. The obvious opportunity this creates for broader dissemination should lead to more and better content in the ECS journals.

The other consideration driving broader dissemination involves the relevancy of the content both from inside our community and externally to the public at large. Electrochemical processes are the key to progress in renewable energy and water sanitation, and the potential for solutions to these important world challenges drive research decisions in our field. We have leveraged this increasing relevance by introducing programming at ECS meetings that connects our science to these global challenges. In 2014, at our fall meeting in Cancun, we took it a step further and introduced “Science for Solving Society’s Problems Challenge,” which enabled meeting attendees to collaborate on, propose solutions to, and receive funding for water sanitation problems in real-time during the meeting. We also changed the format for publishing meeting proceedings in *ECS Transactions*, which will create better publishing opportunities and improve the distribution.

These innovations have begun to move ECS in brave new directions that support our mission, but many questions still remain about where this will ultimately lead the organization. In view of the difficulty in predicting the outcome of these new influences on scientific publishing, we chartered a committee composed of our most accomplished luminaries to scan the environment, evaluate our situation, and offer their perspective on our publishing future. This Committee

on the Free Dissemination of Research was appointed in January 2014 and concluded their work at year end with a report that provided a deep perspective on our publishing future. The report concluded with a strong statement in support of the Society’s position in embracing open access publishing as an opportunity for increasing dissemination.

We are very pleased with the initial steps and confident in the new directions. ECS is operating from a position of both financial and programmatic strength, and we are improving engagement of both our member and nonmember international constituencies. The 2014 Annual Report provides a clear demonstration of these strengths and our engagement through publications and meetings—all signs of more innovation and broader dissemination of research—to further advance electrochemical and solid state science and technology.



A handwritten signature in black ink that reads "P. Kohl".

**Paul A. Kohl**  
ECS President



A handwritten signature in black ink that reads "Roque J. Calvo".

**Roque Calvo**  
ECS Executive Director

## Report from the Committee on the Free Dissemination of Research

Many society publishers have been increasingly under pressure from large commercial publishers, who have used aggressive strategies to increase their market shares. ECS has not been immune; and while publications from other smaller scientific societies have become casualties as a result of this pressure, ECS has remained successful in its publications enterprise, but at great cost to our authors and volunteers.

In the spring of 2013, the ECS leadership concluded that the Society's publications future would be best secured through an Open Access plan that would begin with a hybrid model, and lead ultimately to what we call Platinum Open Access, where there would be neither subscription fees nor article processing charges (APCs) to authors. The Society launched the hybrid stage of its Open Access plan in February 2014 with Author Choice Open Access—authors choose whether or not to publish their papers Open Access. The opening stage of the ECS Open access plan has been a resounding success, clearly indicating that authors submitting to ECS journals value Open Access options.

The Committee on the Free Dissemination of Research (CFDR) was appointed to review the Society's publications plans, but specifically to look at the Open Access commitment made by the Board of Directors in spring 2013. The CFDR was charged to look broadly at publishing realities and examine all options available to small or mid-size nonprofit publishers of scientific research.

The CFDR concluded that the main purpose of a scientific society is to enhance the quality and efficiency of scientific communication, and that publications remain central to this purpose: "they are permanent, they define scientific quality to a much greater extent than meeting presentations, and they greatly broaden the audience for authors." CFDR agreed that although "ECS publications have been ably managed," "a new course, clearly aimed at a strongly improved strategic position, should be adopted."

The CFDR found no position as attractive as open access because it gives the greatest benefit to authors (unrestricted distribution of their scholarly works), to readers (unrestricted access to publications without a pay barrier), and to sponsors (sponsored research is truly *publicly* available). Thus, the CFDR endorsed the decisions and steps taken by ECS to date. In 2015 and forward, the Society will creatively explore every promising avenue for making ECS journals the publications of choice for authors of the most important literature.

### Members of the Committee on Free Dissemination of Research

**Larry R. Faulkner (Chair), University of Texas at Austin**

**Allen J. Bard, University of Texas at Austin**

**William D. Brown, University of Arkansas**

**Roque J. Calvo, ECS**

**Cor Claeys, IMEC**

**Akira Fujishima, Tokyo University of Science**

**Paul Kohl, Georgia Institute of Technology**

**Tetsuya Osaka, Waseda University**

**Esther S. Takeuchi, Brookhaven National Laboratory, State University of New York at Stony Brook**

**Isao Taniguchi, Kumamoto University**

**Masayoshi Watanabe, Yokohama National University**

**Martin Winter, Münster University**

**Mark S. Wrighton, Washington University in St. Louis**

## Publications

Acquiring and developing content is the major role played by our authors, editorial boards, reviewers, symposium organizers, technical committees, and staff. As a result of diligent work in many areas, the impact factor for the *Journal of The Electrochemical Society* rose to its highest-ever number: 2.859. This is the third year in a row that JES's impact factor has risen. This last increment represents a 10% increase over the prior year and placed JES back in the top ten electrochemistry journals and as the 3rd most cited journal in electrochemistry.

Disseminating our science as widely as possible is our organizational imperative. The ultimate objective is to make all of our Digital Library content free to everyone. To close in on that goal, in 2014, ECS took its first steps on the Open Access road, with the launch of Author Choice Open Access. The program was so successful that the journals ended the year with 24% OA publication rate.



Not only is the Society committed to make our content barrier-free, it is also committed to making the work of our authors as high profile as possible. To that end, ECS introduced ORCID (unique identifiers for researchers, <http://orcid.org/>) to enable users to easily find all work from a given author; and introduced Altmetrics (<http://www.altmetric.com/>) to showcase the impact of author publications.

Several special “focus” issues of the *Journal of The Electrochemical Society* (JES) and the *ECS Journal of Solid State Science and Technology* (JSS) were published in 2014. These issues highlight scientific and technological areas of current interest and future promise that are expanding rapidly or have taken a new direction. The focus issues are handled by prestigious guest editors who work closely with the journal Technical Editors to carry out the same rigorous peer review process that all ECS journal submissions undergo. The following focus issues were published in 2014:

- Semiconductor Surface Cleaning and Conditioning (JSS)
- Microfluidics, MEM/NEMS, Sensors and Devices (JES)
- Electrochemical Processing and Materials Tailoring for Advanced Energy Technology (JES)
- Mathematical Modeling of Electrochemical Systems at Multiple Scales (JES)
- Oxide Thin Film Transistors (JSS)
- Mechano-Electro-Chemical Coupling in Energy Related Materials and Devices (JES)
- In Recognition of Adam Heller and His Enduring Contributions to Electrochemistry (JES)

The journal Technical Editors continued their efforts in 2014 to reduce the lag time from submission to first decision. For JES and JSS, the average lag time was just under four weeks. For the letters journals [*ECS Electrochemistry Letters* (EEL) and *ECS Solid State Letters* (SSL)] the lag time was 3 weeks. The lag times from acceptance to publication (not a preprint or preliminary version) averaged 10 days for JES and JSS and 9 days for EEL and SSL.

The **Norman Hackerman Young Author Award** presented in 2014 went to Rahul Malik and Aziz Abdellahi for “A Critical Review of the Li Insertion Mechanisms in  $\text{LiFePO}_4$  Electrodes,” (JES, Vol. 160, No. 5, p. A3179).

ECS presented the first-ever **Bruce Deal & Andy Grove Young Author Award** in 2014. The award was given for the best paper published in JSS by a young author or co-authors for the volume year preceding the award. The award went to Konstantinos Spyrou for “Hydrogen Storage in Graphene-Based Materials: Efforts Towards Enhanced Hydrogen Absorption,” (JSS, Vol. 2, No. 10, p. M3160). The award, established in 2014, is named after Bruce Deal and Andy Grove, co-authors on what is considered by many to be a seminal paper published by ECS on the semiconductor technology industry.

Special note should be given to several members of the ECS editorial boards who received awards in 2014. Dennis Hess was awarded the Henry B. Linford Award for Distinguished Teaching. Prof. Hess is currently Editor of JSS and SSL. Paul Natishan, Associate Editor of JES and EEL, was awarded the Corrosion Division H. H. Uhlig Award. Charles Hussey, Technical Editor of JES and EEL, was awarded the PAED Max Bredig Award.



DENNIS HESS (left) received the Henry B. Linford Award for Distinguished Teaching from ECS President TETSUYA OSAKA (right).

*ECS Transactions* (ECST) grew with the addition of content from not only ECS biannual meetings, but also an ECS satellite meeting plus several sponsored meetings. In 2014, a total of 91 issues of ECST, from seven different meetings, were published. Outside meetings and conferences continue to seek responsible, cost-effective publishers, and ECST has become home to many conferences, including the Fuel Cell Seminar & Energy Exposition 2014, the 17<sup>th</sup> International Conference on Advanced Batteries, Accumulators and Fuel Cells, and the China Semiconductor Technology International Conference 2014.

*Interface*, the Society's quarterly magazine that presents news and technical articles, marked a first in 2014: Co-Editors. ECS was fortunate to have been able to recruit two people to handle the





VIJAY RAMANI



PETR VANÝŠEK

Batteries (IMLB) that was held in Como, Italy, considered by many as the birthplace of electrochemistry given that it is the birthplace

growing *Interface* content: Vijay Ramani and Petr Vanýšek. The spring issue, their first, was a special issue titled, "Interfacial Electrochemistry of Ionic Liquids," and was guest edited by Andreas Bund and Frank Enders. The cover of the issue included photographs of Allen Bard and John Goodenough, recognizing them as the newest ECS Honorary members. The summer 2014 issue featured the Physical and Analytical Electrochemistry Division and was titled, "25 Years of Scanning Electrochemical Microscopy," and was guest edited by David E. Cliffel and Robert L. Calhoun. In his "From the Editor" column, Petr Vanýšek wrote about improving the image of chemistry, ending on a positive note that, "Chemistry is better than geology. There is more stuff!" The fall 2014 issue was a special issue on "Electrochemical Manufacturing in the 21<sup>st</sup> Century," and was guest edited by Dennie T. Mah. Roque Calvo wrote about 17<sup>th</sup> International Meeting on Lithium

of Alessandro Volta, inventor of the first battery. The issue included an ECS Classics piece on Ernie Yeager who established the Case Western Center for Electrochemical Studies that is now known as the Yeager Center for Electrochemical Studies. The winter 2014 issue featured the Corrosion Division and was titled, "Numerical Modeling for Corrosion." It was guest edited by Shinji Fujimoto.

### Volta Medal



Alessandro Volta



Electric Pile

## Meetings



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# ECS 225<sup>th</sup> ECS Meeting Highlights

**ORLANDO, FL**  
**May 11-15, 2014**  
Hilton Orlando Bonnet Creek

Over 1,700 people attended the 225th ECS Meeting in Orlando, FL. This was ECS's first return visit to Orlando since 2003. Participants could choose among 1,672 presentations in 59 symposia.

There was a great opportunity for continuing education at this meeting as four well-attended short courses were held on Sunday of the meeting: Advanced Impedance Spectroscopy, Fundamentals of Electrochemistry - Basic Theory and Thermodynamic Methods, Grid-Scale Energy Storage, and More-than-Moore Technologies: Device, Circuit and System Perspectives.

The ECS Lecture was given by Charles M. Lieber, "Nanowires: From Nanocomputing to Nano-Bioelectronics". He highlighted the power of semiconductor nanowires as a platform material for exploring new science and technology. Professor Lieber emphasized the prospects for blurring the distinction between nanoelectronic circuitry, computation and living systems in the future.

The Vittorio de Nora Award was presented to Chad Mirkin. Professor Mirkin is a chemist and a nanoscience expert, who has authored over 550 manuscripts and holds over 900 patents worldwide.

Professor Mirkin has won over 80 national and international awards, and is a Member of the President's Council of Advisors on Science & Technology.

Krishnan Rajeshwar ("Raj") was recognized for his exceptional leadership in pioneering the ECS magazine *Interface* as editor from 1999 to 2013.

The student poster session attracted 84 entrants. Awards were handed out by ECS President, Tetsuya Osaka and Kalpathy B. Sundaram, professor at the University of Central Florida. The winners were:

First Place, Electrochemical Science & Technology - "Regeneration of Enzymatic Layer on Layer-by-layer Assembled Biosensor Interfaces," Yuanyuan Zhang, Auburn University.

Second Place, Electrochemical Science & Technology - "Detection of H<sub>2</sub>O<sub>2</sub> Using Redox Active Nanoparticles Immobilized on Highly Ordered Polymer Nanopillars," Swetha Barkam, University of Central Florida.

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**CHARLES M. LIEBER** delivered The ECS Lecture, entitled, “Nanowires; From Nanocomputing to Nano-Bioelectronics,” at the plenary session of the 225<sup>th</sup> ECS Meeting. Prof. Lieber is from the Harvard School of Engineering and Applied Sciences.



**CHAD MIRKIN** (left) received the Vittorio de Nora Award from ECS President **TETSUYA OSAKA** (right)



**KRISHNAN RAJESHWAR** (“Raj”) (left) was recognized by ECS President **TETSUYA OSAKA** for his exceptional leadership in advancing the ECS magazine *Interface* as editor from 1999 to 2013.

First Place, Solid State Science & Technology - “Room Temperature Hydrogen Detection with the Use of Engineered Nanostructured Tin Oxide Array,” Rameech McCormack, University of Central Florida.

Second Place, Solid State Science & Technology - “Multifunctional CNT-Polymer Composites for Ultra-tough Structural Supercapacitors and Desalination Devices,” James Benson, Georgia Institute of Technology.

Honorable Mention – “Growth and Transfer of Nanowires with High Density and Aspect-ratio Onto Flexible Substrates,” Cheng Xu, University of Florida at Gainesville.

More than 200 students attended a mixer Monday night thanks to the generous support of Gelest.

Special thanks goes to all of the meeting sponsors and 26 exhibitors, who showcased the tools and equipment so critical to scientific research.

## Electrochemical Conference on Energy & the Environment, ECEE 2014



The international scientific conference and joint meeting of The Electrochemical Society (ECS) and the Chinese Society of Electrochemistry (CSE) covered a unique blend of topics



pertaining to energy and the environment.

ECEE 2014 served as a major forum for the discussion of interdisciplinary research from around the world through a variety of formats, such as invited and keynote oral presentations, poster sessions, and exhibits.

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The Student Poster Session award winners in Orlando received their awards and congratulations from organizers **KALPATHY SUNDARAM** (far left) and **OANA LEONTE** (second from right), and ECS President **TETSUYA OSAKA**. From left to right the award winners are **JAMES BENSON**, **RAMEECH MCCORMACK**, **SWETHA BARKAM**, and **CHENG XU**.



Students and supporters at the Student Mixer in Orlando.

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More than 500 scientists, the majority of whom were from Asia explored 4 main symposia topics:

- Electrochemical Energy Storage
- Electrochemical Energy Conversion
- Electrochemical Fundamentals
- Environmental Electrochemistry

There were two plenary speakers. Yongfang Li, professor of Chemistry at CAS Key Laboratory of Organic Solids, Institute of Chemistry, Chinese Academy of Sciences, speaking on “Photovoltaic Materials and Devices for Polymer Solar Cells.” Polymer Solar Cells (PSC) have attracted great attention in recent years because of their advantages of low cost fabrication, light weight and possibility to be fabricated into flexible devices.

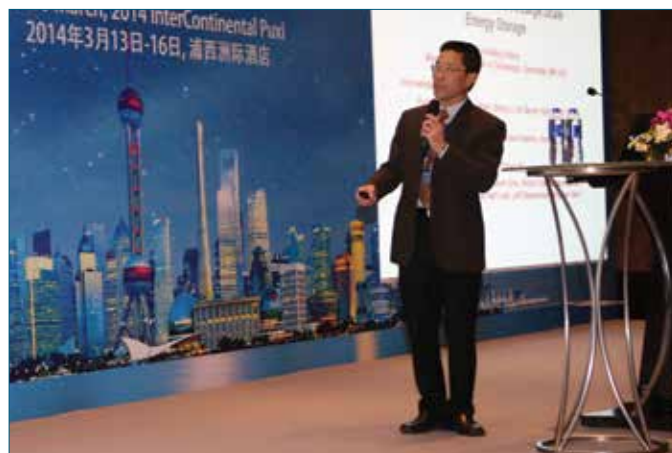
Dr. Li presented his current research focus, increasing the power conversion efficiency of PSC. He talked about the requirements of the high efficiency donor/acceptor and electrode buffer layer materials, and reported on recent research progress on two dimension conjugated polymers donor materials, fullerene bisadduct acceptor materials and solution-processable electrode buffer layers.

Yet-Min Chiang, the Kyocera Professor in the Department of Materials Science and Engineering at Massachusetts Institute of Technology, presented “Benefits and Barriers to Large Scale Energy Storage.” Prof. Chiang highlighted his work developing a new type of flow battery based on high energy density particle suspension electrodes for ultralow-cost large scale energy storage.

More than 20 other keynote speakers added great depth to the scientific material presented in Shanghai.

Student poster award winners were Morten Stornes, Norwegian University of Science and Technology; Tongwen Yu, Dalian Institute of Chemical Physics, Chinese Academy of Sciences; Guangmin Zhou, Institute of Metal Research, Chinese Academy of Sciences.

ECS and CSE thank all the presenters, exhibitors and volunteers for their support in making ECEE 2014 a success.



The plenary speaker YET-MIN CHIANG.



YONGFANG LI delivers his plenary talk.



Shanghai at night.



## CANCUN

Mexico

October 5-9, 2014

Moon Palace Resort

226<sup>th</sup> Meeting of The Electrochemical Society  
 XXIX Congreso de la Sociedad Mexicana de Electroquímica  
 7<sup>th</sup> Meeting of the Mexico Section of The Electrochemical Society



**2014 ECS and SMEQ  
 Joint International Meeting**



Over 2,000 people attended the 2014 ECS and SMEQ Joint International Meeting in Cancun, Mexico. This was ECS's first return visit to Cancun since 2006. Participants could choose among 51 symposia and 2,299 presentations.

As part of the career development series, ECS was pleased to present the Panel of Professionals on Monday, October 6. Attendees heard from three guest speakers, representing industry, academia, and government, each discussing the unique challenges and opportunities of pursuing a career in their chosen field. Additionally, there were four well-attended short courses held on Sunday of the meeting: Basic Impedance Spectroscopy, Polymer Electrolyte Fuel Cells, Fundamentals of Electrochemistry: Basic Theory and Kinetic Methods, and Operation and Exploitation of Electrochemical Capacitor Technology.

Norberto Casillas, former President of Sociedad Mexicana de Electroquímica, welcomed everyone on behalf of SMEQ and ECS, noting the 7th meeting of the ECS Mexico Section, and the 29th

Congreso for SMEQ. ECS President Paul Kohl also welcomed the crowd and was the master of ceremonies for the awards presentations, which included 10 different awards and 41 winners.

The Charles W. Tobias Young Investigator Award was given to Adam Weber, staff scientist of Lawrence Berkeley National Laboratory, for his research leadership that furthered the understanding of transport in electrochemical systems through the use of mathematical modeling and advanced diagnostic techniques. Dr. Weber presented his award-winning address entitled "Understanding Transport Phenomena in Polymer-Electrolyte Fuel Cells" at the meeting.

The Edward Goodrich Acheson Award was established for distinguished contributions to the advancement of any of the objects, purposes, or activities of ECS. The 2014 Acheson Award went to Ralph Brodd, President of Broddarp. Dr. Brodd is an ECS Past President and an ECS Honorary member. Dr. Brodd was honored for his exceptional service to the Society, and for inspiring leadership in the innovation, commercialization, management, and public service activities based on the electrochemistry of batteries.

Daniel Scherson, ECS Senior Vice-President assisted with the introduction of the 2014 Class of Fellows. These members were recognized for contributions to the advancement of science and technology, for leadership in electrochemical and solid state science and technology, and for active participation in the affairs of The Electrochemical Society.

Víctor Gerardo Carreón Rodríguez, Director Adjunto de Planeación y Cooperación Internacional delivered the ECS Lecture, "Advances in Science, Technology and Innovation (STI) in Mexico". He explained how Mexico's goal is to develop the capabilities to transition toward a knowledge-based society and economy by contributing to the growth of the national investment in STI, developing and strengthening highly qualified human resources, strengthen regional development, promoting exchange between academic research and the economic sector, strengthening scientific and technological infrastructure, and strengthen the STI capacities in biotechnology.

In its first "Science for Solving Society's Problems Challenge," ECS partnered with the Bill & Melinda Gates Foundation during the ECS Electrochemical Energy and Water Summit to leverage the brainpower of the many scientists in electrochemistry and solid state science and technology that regularly attend ECS meetings. The four grantees were identified during a multi-day workshop. Over 100 researchers were guided through a brainstorming and working group session with the theme of improving access to clean water and sanitation in developing countries. The winners included: Plamen Atanassov, University of New Mexico; Luis Godinez, Centro de Investigación y Desarrollo Tecnológico en Electroquímica SC, Mexico; Neus Sabate, Institut de Microelectrónica de Barcelona (CSIC); Juan Pablo Esquivel, University of Washington; Erik Kjeang, Simon Fraser University, and Gemma Reguera, Michigan State University.

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SMEQ and ECS leadership at the plenary session: (left to right) **FACUNDO ALMERAYA CALDERÓN**, SMEQ President; **PAUL KOHL**, ECS President; and **NORBERTO CASILLAS** former SMEQ President.



**RALPH BRODD** (third from left) at the special reception in his honor for winning the Edward Goodrich Acheson Award. Standing with Dr. Brodd are (left to right): **RICHARD ALKIRE**, **DOROTHY BRODD**, (Dr. Brodd), **HARIKIA DELIGIANI**, **SOL KRONGELB**, and **LUBOMYR ROMANKIW**.

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The student poster session awards were handed out by ECS President, Paul Kohl. The winners were:

First Place, Electrochemical Science and Technology, Axel Gambou-Bosca (Université du Québec à Montréal); Daniel Belanger, adviser.

Second Place, Electrochemical Science and Technology, Miguel Angel Arellano Gonzalez (Universidad Autonoma Metropolitana Iztapalapa); Ignacio Gonzalez, Maftinez and Anne-Claire Texier, advisers.

First Place: Solid State Science and Technology, Andrew Dumey and Elizabeth Hotvedt (University of Rochester); Prof. Mukaibo, adviser.

Second Place: Solid State Science and Technology, Andrew R. Akbashev (Drexel University); Jonathan E. Spanier, adviser.

The student mixer was well attended by 140 students, and a special dinner/dance party was held on the edge of the Gulf of Mexico on a beautiful Thursday evening. A great crowd danced the night away to a live band.

Special thanks goes to all of the meeting sponsors and exhibitors, who showcased the tools and equipment so critical to scientific research.



**ADAM WEBER** (left) received the Charles W. Tobias Young Investigator Award from ECS President **PAUL KOHL** (right).



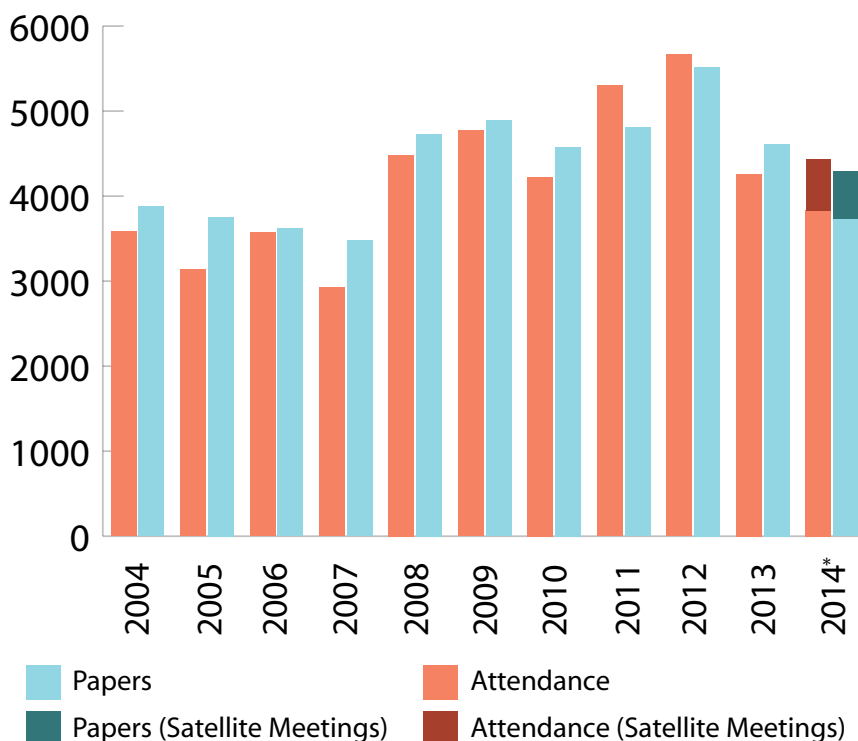
ECS President Paul Kohl challenged the leadership of SMEQ to a ping-pong match. The photo above shows **NOBERTO CASILLAS** (left), former president of SMEQ, and **PAUL KOHL** (right) during the action.

In addition to the regular ECS biannual meetings, ECS, its Divisions, and Sections co-sponsor meetings and symposia of interest to the technical audience ECS serves. The following is a list of co-sponsored meetings for 2014:

- **10<sup>th</sup> International Symposium on Electrochemical Micro & Nanosystem Technologies** — Okinawa, Japan
- **Fifth International Conference on Electrophoretic Deposition: Fundamentals and Applications (EPD-2014)** — Hernstein, Austria
- **XIV International Congress of the Mexican Hydrogen Society** — Cancun, Mexico
- **65<sup>th</sup> Annual Meeting of the International Society of Electrochemistry** — Lausanne, Switzerland
- **15<sup>th</sup> International Conference on Advanced Batteries, Accumulators and Fuel Cells (ABAF 15)** — Brno University of Technology
- **ACS Symposium on Fuel Cell Chemistry and Operation** — San Francisco, CA
- **Shechtman International Symposium on Sustainable Mining, Minerals, Metal and Materials Processing** — Cancun, Mexico
- **IMLB 2014: International Meeting on Lithium Batteries** — Como, Italy
- **2014 Beyond Lithium Ion VI Conference** — Argonne, IL
- **15<sup>th</sup> Topical Meeting of the International Society of Electrochemistry** — Niagara Falls, Canada
- **14<sup>th</sup> Topical Meeting of the International Society of Electrochemistry** — Nanjing, China
- **China Semiconductor Technology International Conference 2014 (CSTIC 2014)** — Shanghai, China

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## ECS Meeting Growth



\*This year includes papers and attendees from an ECS Satellite meeting.



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**BRUNO SCROSATI**, IMLB 2014 Chair and founder of IMLB.



**KARIM ZAGHIB**, a past chair of IMLB (2010), with a meeting attendee.



**Khalil Amine**, a member of the IMLB 2014 International Organizing Committee, speaks at the gala dinner.



This group photo taken at CSTIC 2014 includes (from left to right): **QINGHUANG LIN** (CSTIC Co-chair), **DAVID HUANG** (CSTIC Co-chair), **SHIH-WUU LEE** (SMIC EVP, Keynote speaker), **TAK NING** (IBM Fellow, Keynote speaker), **KEVIN ZHANG** (Intel fellow and VP, Keynote speaker), **COR CLAEYS** (CSTIC Chair), **ALLEN LU** (SEMI China President), **ROQUE CALVO** (ECS, Executive Director), and **PAUL KOHL** (ECS, President).

## Division News



The **Nanocarbons Division** student award winners at the 225<sup>th</sup> ECS meeting in Orlando: (left to right) **PEETER VALK**, Student Poster Award winner; **BRUCE WEISMAN**, Nanocarbons Division Chair; **KARLEE P. CASTRO**, outstanding student oral presentation winner; and, **ERIC V. BUKOVSKY**, outstanding student oral presentation winner.



The **Battery Division** held its Division luncheon in Cancun on Tuesday, October 6, 2014. **MARTIN EBNER** (pictured on the left) received the Battery Division Student Research Award. **RAM MANTHIRAM** (right) received during the luncheon the Battery Division Research Award. Pictured in the center is **BOR YANN LIAW**, Chair of the Battery Division. (Photograph by Shirley Meng, Battery Division Treasurer.)



The **Electrodeposition Division Research Award** winner **ALLAN WEST** (left) received his award from Division Chair **GIOVANNI ZANGARI** (right) at the Division luncheon on Wednesday, October 13, 2014, at the fall ECS meeting in Cancun.



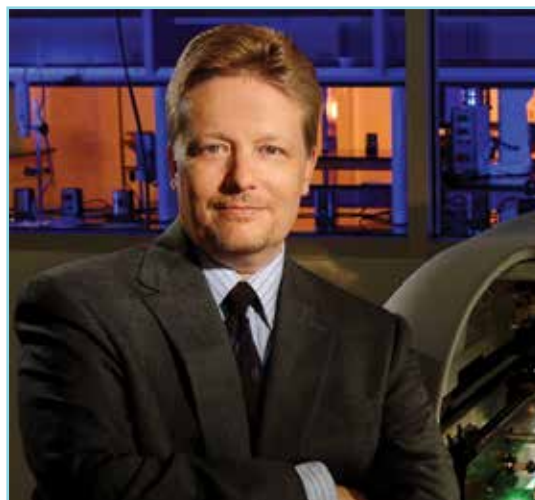
## Membership

Membership has been the hallmark of The Electrochemical Society since our founding in 1902. In 2014, our membership held strong, as 9 out of 12 months showed growth in year over year membership numbers. The overall growth of individual membership exhibited an increase of 0.4%.

Members serve in key volunteer leadership roles throughout the society's committees, divisions and sections. Members also give their time to the development of technical programming at our meetings, submitting and reviewing content for our journals and the development and participation in regional ECS activities.



The Enrico Fermi Award recipients **ALLEN J. BARD** (left) and **ANDREW SESSLER** (right) meet in the Oval Office with **PRESIDENT BARACK H. OBAMA** on February 3, 2014. (Photo by P. Souza, reprinted with permission of The White House Photo Office.)



**Eric Wachsmann**, ECS chair of the Interdisciplinary Science and Technology Subcommittee, was presented with the International Association for Hydrogen Energy Sir William Grove Award at the World Hydrogen Energy Conference in Gwangju, Korea, in June 2014.



Participants in the workshop at the Electrochemical Energy Summit in Cancun.



The support of our membership has enabled ECS to achieve great heights in 2014. In just the last year, we accomplished the following together:

- \$210,000 dollars in seed funding distributed to four projects addressing global water, sanitation and hygiene challenges at the fourth international E2S, made possible by a partnership with the Bill & Melinda Gates Foundation.
- 3 global meetings led by ECS: ECEE 2014, a joint meeting with the Chinese Society of Electrochemistry, in Shanghai; International Meeting on Lithium Batteries in Lake Como, Italy; and the 2014 Joint International Meeting with the Sociedad Mexicana de Electroquímica, in Cancun, Mexico. In 2015, we will continue this trend by hosting the Conference on Electrochemical Energy Conversion & Storage in Glasgow, Scotland.
- 15 accomplished scientists inducted as ECS Fellows: George E. Blomgren, Gerardine Gabriela Botte, Ralph J. Brodd, Yasuhiro Fukunaka, Jay W. Grate, Dirk Guldi, Bruce Parkinson, Fred Roozeboom, Alvin Salkind, Sudipta Seal, Michael Thackeray, Tooru Tsuru, Harry Tuller, Jose Zagal and Piotr Zelenay.
- 3 members honored with major society awards at the 226<sup>th</sup> ECS Meeting: Ralph J. Brodd, Edward Goodrich Acheson Award; Chad Mirkin, Vittorio de Nora Award; and Dennis Hess, Henry B. Linford Award for Distinguished Teaching
- 5 students awarded ECS Summer Fellowships: Tuncay Ozel, Northwestern University; Christena K. Nash, the Laboratory of Ingrid Fritsch; Andrey Gunawan, Arizona State University; Brandy Kinkead, Simon Fraser University and Hadi Tavassol, the University of Illinois at Urbana Champaign. Summer fellowships are given to assist qualified graduate students during the summer months in the pursuit of research in a field of interest to ECS.
- 353 open access articles published in 2014 to the ECS Digital Library after the launch of author choice open access.

Student chapter growth continues to be a focus of the organization as students are the lifeblood of the Society. Student chapter membership pulls from both undergraduate and graduate populations at academic institutions throughout the world. ECS student chapter members receive free membership to the Society, which is renewable yearly. This program continues to provide a forum for education on electrochemical and solid-state science and technology related topics. Chapters host organized scholarly and community service activities and serve as local stewards and advocates of ECS within their academic communities.

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*ECS President PAUL KOHL (center, back row) inducted the 2014 Class of ECS Fellows. Seated in the front row holding their plaques (from left to right) are FRED ROOZEBOOM, BRUCE PARKINSON, JOSE H. ZAGAL, GERARDINE BOTTE, PIOTR ZELENAJ, ALVIN SALKIND, and JAY W. GRATE. Standing in the back row without their plaques (from left to right) are YASUHIRO FUKUNAKA, TOORU TSURU, (President Kohl), MICHAEL M. THACKERAY, and GEORGE BLOMGREN. Missing from the photo are RALPH J. BRODD, DIRK M. GULDI, SUDIPTA SEAL, and HARRY L. TULLER.*

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In 2014, 9 new ECS student chapters were established. New chapters include:

- Clemson University (USA)
- University of North Florida (USA)
- Norwegian University of Science and Technology (Norway)
- University of Arkansas (USA)
- University of California-San Diego (USA)
- University of Iowa (USA)
- University of Kentucky (USA)
- University of Nevada-Reno (USA)
- University of Pittsburgh (USA)

By the close of 2014, the roster of active student chapters grew to 45.

Presented annually at the Fall ECS bi-annual meeting, the Outstanding ECS Student Chapter Award recognizes one student chapter annually that has distinguished itself through active participation in the Electrochemical Society's technical activities, outstanding community and outreach activities in science and engineering education, and a robust membership base. The 2014 ECS Outstanding Student Chapter Award was presented to The University of Texas at Austin. Additionally, The University of Maryland and Valley of the Sun (Central Arizona) were recognized as Chapters of Excellence for 2014.

(continued on page 108)



The University of Texas at Austin ECS Student Chapter and faculty advisor **ARUMUGAM MANTHIRAM** (front left) with **ALLEN BARD** (far right) and UT-Austin Student Chapter President **JOSEPHINE CUNNINGHAM** (in the center holding the 2014 ECS Outstanding Student Chapter Award plaque).



Boston ECS Student Chapter officers, from left to right, are **ERIN KINGSTON**, **JONATHAN DOAN**, **AUSTIN ARROCO**, **ANDY VONG**, **FERNANDO GONZALES**, **JOSEPH ROMEO**, and **EUGENE SMOTKIN** (Faculty Advisor).



The University of Maryland ECS Student Chapter members participated in Congressional Visits Day in April 2014. Here they are with Maryland Congresswoman Donna Edwards. From left to right: **CHRIS PELLEGRINELLI**, **COLIN GORE** (Chapter President), Rep. **DONNA EDWARDS**, **TOM HAYS** (Chapter Vice President) and **MOHAMMED HUSSAIN**.





Some of the attendees, invited speakers, and organizers of the Second Annual Young Electrochemists Symposium 2014 organized by the ECS British Columbia Student Chapter. Speakers of YES 2014: **CURTIS BERLINGUETTE** (First on the left in the front row), **HOGAN YU** (Second on the left, front row), **AMIN AZIZIA** (First on the left, second row), **THOMAS KADYK** (front row, sixth from the left) and **ALIX MELCHY** (seventh from the left, back). Organizing Committee of YES 2014: **MOHAMMAD SAAD DARA**, Chair of the ECS BC Student Chapter (First person in the front row on the right), **BRANDY KINKEAD**, Vice Chair (Ninth person in the front row on the right), **POOYA HOSSEINI BENHANGI**, Treasurer (Fourth person in the front row on the left), and **ANDREW WANG**, Secretary (Fifth person in the front row on the right).



Founders of the ECS University of California San Diego Student Chapter 2014. From left: **JIAJIA HUANG**, **HAODONG LIU**, **RYAN LU**, **HAN NGUYEN**, **JEREMY ROSENFELD**, **JIMMY MAC** and **JUDITH ALVARADO** in front of the Structural and Materials Engineering building of the UC San Diego Jacobs School of Engineering.



A group of University of North Florida Student Chapter members, (left to right) **DERRICK NGYUEN**, **ANNADANESH SHELLIKERI** (Vice President), **CHARLES OLADIMEJI** (Secretary), **JAMAL STEPHENS**, **PEDRO MOSS** (Faculty Advisor), **RUBEN NELSON** (President), **VENROY WATSON**, and **SHANNON ANDERSON**.

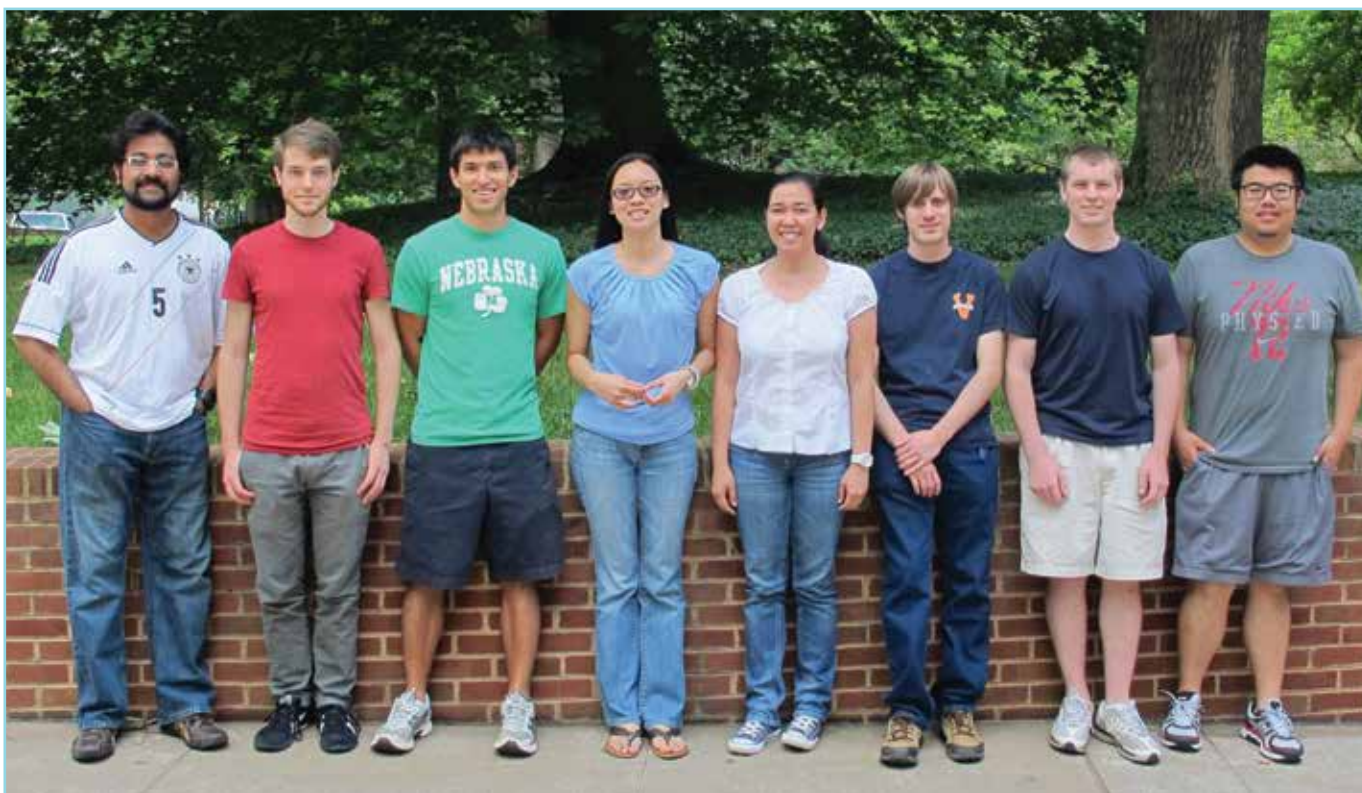
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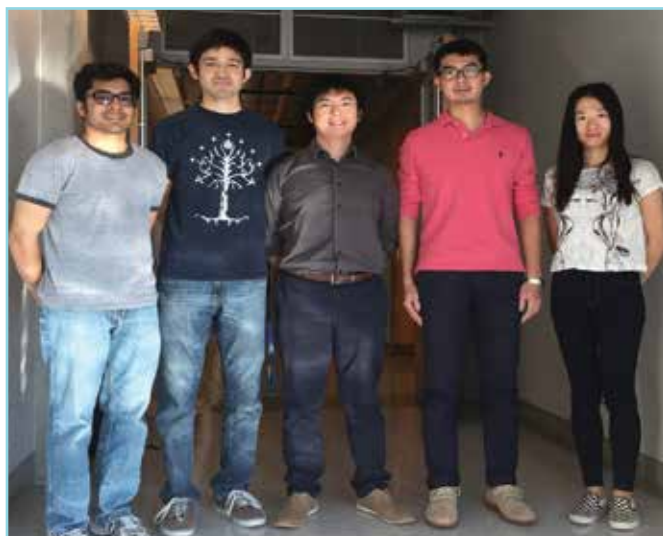
ECS Indiana University Student Chapter organized a seminar where Keith Stevenson of the University of Texas gave a presentation on his work with spatially-resolved charge transfer processes. Here are the reception are (left to right): **KEITH STEVENSON, CAITLYN MCGUIRE, LAUREN STRAWSINE, ERIN MARTIN, ANNA WEBER, KRISTIN MORTON, LUSHAN ZHOU, WENQING SHI, YI ZHOU, and DENNIS PETERS.**



The University of Virginia ECS Student Chapter Executive Body: (from left) **JAY SRINIVASAN, PIERCE ROBINSON, MICHAEL NGUYEN, MARY LYN LIM, NOELLE CO, SCOTT LEE, ROB GOLDEN, and GILBERT LIU.**



The ECS Student Chapter at the Norwegian University of Science and Technology held a seminar in April 2014. Here is a group picture of the participants outside a nearby ski lodge.



Officers of the Atlanta Student Chapter at Georgia Tech: (left to right) **RAJIV JAINI**, Treasurer; **NAOKI NITTA**, Vice President; **TIM LIN**, Social Chair; **ENBO ZHAO**, President; and **LIANG HE**, Secretary.



ECS President Paul Kohl presented awards to the winners of the Student Poster Session competition in Cancun. From left to right are: **ANDREW R. AKBASHEV** (Second Place, Solid State Science & Technology); ECS President **PAUL KOHL**; **AXEL GAMBOU-BOSCA** (First Place, Electrochemical Science & Technology); and **ANDREW DURNEY** (First Place, Solid State Science & Technology).



(continued from page 104)

Just like student chapters, ECS Sections are stewards and advocates of the society that provide key regional programming, symposia, grants, activities and awards to further the mission and vision of ECS. Sections bridge the gap by providing an experience to members on a local level outside of ECS biannual meetings. Sections help increase ECS membership and generate awareness for electrochemistry and solid-state science and technology. In 2014, ECS maintained 22 Sections across Asia, Europe, Latin America, the Middle East, North America, South America and Southern Asia.

The ECS community also includes institutional members, who are actively moving science forward in exciting and innovative ways. ECS Institutional Membership

provides a direct relationship between ECS and organizations involved in electrochemical science and technology. Institutional Members help ECS to advance the Society's purpose and objectives. In 2014, seven organizations were recognized with the Leadership Circle Award

for continuous service to the ECS including: Asahi Kasei E-Materials Corporation, Gelest Inc., Honda R&D Co. Ltd., Next Energy EWE-Forschungszentrum, Lawrence Berkeley National Lab, ZSW and 3M Company. ECS had 49 Institutional Members at the end of 2014.



*Speakers and Twin Cities Section Officers at the 2014 Twin Cities Electrochemistry Symposium. Front row: PETER ZHANG (Section Vice Chair, Medtronic), ALAN SHI (Section Treasurer, Medtronic). Back row: PHILIPPE BUHLMANN (Speaker, University of Minnesota), VINCENT CHEVRIER (Section Chair, 3M), TERRY SMITH (Speaker, 3M), SHAWN KELLEY (Speaker, Medtronic), JONATHAN TOMSHINE (Speaker, Mayo Clinic), PETER FAGUY (Speaker, DoE), BENJAMIN WILSON (Section Student Representative, University of Minnesota), DARREL UNTERECKER (Speaker, Medtronic), and JAGAT SINGH (Section Secretary, 3M).*

## ECS Sections

### Asia/Japan

China  
Japan  
Korea  
Taiwan

### Europe

Europe

### Latin America

Brazil  
Chile  
Mexico

### Middle East

Israel

### North America

Arizona  
Canada  
Chicago  
Cleveland  
Detroit  
Georgia  
National Capital  
New England  
Pittsburgh  
San Francisco  
Texas  
Twin Cities

### Southern Asia

India



*The Georgia Section and the ECS Atlanta Student Chapter hosted a joint meeting in April 2014. Here is a group photograph of the meeting participants.*



# ECS Membership Statistics

(as of October 1, 2014)

**Table I. ECS Membership by Class**

Category	2008	2009	2010	2011	2012	2013	2014	2014/2013 %Change
Active	5082	5129	4858	4874	4717	4253	4260	0.2%
Institutional Reps	116	98	126	137	158	175	219	25.1%
Life	46	46	49	53	71	101	105	4.0%
Emeritus	248	266	282	293	265	283	296	4.6%
Honorary	25	24	23	23	22	25	27	8.0%
<b>Subtotal Active in Good Standing</b>	<b>5517</b>	<b>5563</b>	<b>5338</b>	<b>5380</b>	<b>5233</b>	<b>4837</b>	<b>4907</b>	<b>1.4%</b>
Delinquent	945	1130	1503	1115	1230	1225	1143	-6.7%
<b>Total Active on Record</b>	<b>6462</b>	<b>6693</b>	<b>6841</b>	<b>6495</b>	<b>6463</b>	<b>6062</b>	<b>6050</b>	<b>-0.2%</b>
Students	1428	1592	1466	1541	1442	1438	1497	4.1%
Delinquent	512	648	946	719	859	775	760	-1.9%
<b>Total Students</b>	<b>1940</b>	<b>2240</b>	<b>2412</b>	<b>2260</b>	<b>2301</b>	<b>2213</b>	<b>2257</b>	<b>2.0%</b>
<b>Total Individual Members</b>	<b>8402</b>	<b>8933</b>	<b>9253</b>	<b>8755</b>	<b>8764</b>	<b>8275</b>	<b>8307</b>	<b>0.4%</b>

**Table II. ECS Membership by Division\***

Division	2008	2009	2010	2011	2012	2013	2014	2014/2013 %Change
Battery	1450	1130	1575	1711	1740	1987	1824	-8.2%
Corrosion	521	515	476	444	448	458	434	-5.2%
Dielectric Science & Technology	375	377	301	306	281	256	235	-8.2%
Electrodeposition	509	500	471	474	453	464	445	-4.1%
Electronics & Photonics	759	821	671	661	582	581	556	-4.3%
Energy Technology	1060	1145	1196	1239	1175	1122	1025	-8.6%
Nanocarbons	205	212	176	155	175	183	177	-3.3%
High Temperature Materials	196	209	203	212	209	212	202	-4.7%
Industrial Electrochemistry & Electrochemical Engr	297	301	303	313	309	303	282	-6.9%
Luminescence & Display Materials	120	122	102	100	99	94	90	-4.3%
Organic & Biological Electrochemistry	215	222	188	175	176	180	166	-7.8%
Physical & Analytical Electrochemistry	664	652	596	597	561	609	561	-7.9%
Sensor	247	276	222	242	223	233	218	-6.4%

\*From 2007 Division statistics include only primary interests. Previous years' include primary and secondary interests.

**Table III. ECS Membership by Occupation**

Occupation	2008	2009	2010	2011	2012	2013	2014	2014/2013 %Change
Academic	2446	2558	2467	2410	2370	2206	2346	6.3%
Industry	2456	2160	2034	2197	2135	1902	1900	-0.1%
Government	431	436	391	394	403	377	435	15.4%
Retired	77	119	112	112	112	111	117	5.4%

## ECS Student Chapters

ECS Student Chapters	Year Founded	Faculty Advisor	
Atlanta Student Chapter at Georgia Tech	2008	Peter J. Hesketh	peter.hesketh@me.gatech.edu
Auburn University	2007	Jeffrey Fergus	jwfergus@eng.auburn.edu
Boston (Northeastern University, Harvard University, MIT, University of Massachusetts)	2009	Eugene Smotkin	e.smotkin@neu.edu
Brno University of Technology	2006	Jiri Vondrak	vondrakj@feec.vutbr.cz
Calgary	2011	Viola Birss	birss@ucalgary.ca
California State University- Fullerton Division	2012	John Haan	jhaan@fullerton.edu
Central Illinois	2008	Andrzej Wieckowski	andrzej@scs.uiuc.edu
Clemson University	2014	Stephen Creager	screage@clemson.edu
ECS Cleveland Section and Ernest B. Yeager Center for Electrochemical Sciences Joint Student Chapter	2005	James D. Burgess	jdb22@po.cwru.edu
Colorado School of Mine	2012	Andrew Herring	aherring@mines.edu
Drexel University	2012	Yury Gogotsi & Ekaterina Pomerantseva	gogotsi@drexel.edu & epomeran@coe.drexel.edu
Indiana University	2012	Lane Baker & Dennis Peters	lanbaker@indiana.edu & peters@indiana.edu
Kerala, India at CUSAT	2008	M. K. Jayaraj	mkj@cusat.ac.in
Lahore, Pakistan	2008	Inam Ul Haque	inamul.haque@gmail.com
Montana State University	2013	Paul Gannon & Ryan Anderson	pgannon@montana.edu & ryan.anderson@coe.montana.edu
Montreal	2010	Steen B. Schougaard	schougaard.steen@uqam.ca
North Florida	2014	Pedro Moss	plm1735@my.fsu.edu
Norwegian University of Science and Technology	2014	Ana Mari Svensson	annmari.svensson@ntnu.no
Ohio State University	2006	Anne Co	co@chemistry.ohio-state.edu
Ohio University	2011	Gerardine Botte	botte@ohio.edu
Rensselaer Polytechnic Institute	2013	Daniel Lewis & David Duquette	lewisd2@rpi.edu & duqued@rpi.edu
Research Triangle Student Chapter (Duke University, NC State, UNC - Chapel Hill)	2013	Jeffrey Glass (Duke)	jeff.glass@duke.edu
South Brazilian (Univ. Fed. do Rio Grande do Sul)	2010	Luis Frederico P. Dick	lfdick@ufrgs.br
SRM University	2013	Ranjit Thapa & Bhalchandra Kakade	ranjit.phy@gmail.com & bhalchandrakakade@gmail.com
Tel Aviv University	2009	Eliezer Gileadi & Yosi Shacham-Diamand	gileadi@post.tau.ac.il & yosish@post.tau.ac.il
Tyndall National Institute	2012	Alan O'Riordan	alan.oriordan@tyndall.ie
University of Arkansas	2014	Rick Wise & Ingrid Fritsch	rickwise@uark.edu & ifritsch@uark.edu
University of British Columbia	2013	Dan Bizzotto	bizzotto@chem.ubc.ca
University of California – Berkeley	2006	Bryan McCloskey	bmcclosk@berkeley.edu
University of California – Riverside	2011	Alexander Balandin	balandin@ee.ucr.edu
University of California – San Diego	2014	Shirley Meng	shirleymeng@ucsd.edu
University of Central Florida	2000	Kalpathy Sundaram	sundaram@mail.ucf.edu
University of Cincinnati	2007	Marc Cahay	marc.cahay@uc.edu
University of Florida	2005	Mark Orazem	morazem@che.ufl.edu
University of Iowa	2014	John Leddy	johna-leddy@uiowa.edu
University of Kentucky	2014	Mona Shirpour	mshirpour@gmail.com
University of Maryland	2011	Eric Wachsman	ewach@umd.edu
University of Nevada – Reno	2014	Dev Chidambaram	dcc@unr.edu
University of Pittsburgh	2014	Prasanth Kumta	pkumta@pitt.edu
University of South Carolina	2010	Xiao-dong Zhou	xiao-dong.zhou@sc.edu
University of Tartu	2013	Kaido Tammeveski	kaido@chem.ut.ee
University of Texas at Austin	2006	Ram Manthiram	rmanth@mail.utexas.edu
University of Texas at Dallas	2012	Moon Kim	moonkim@utdallas.edu
University of Virginia	2006	Giovanni Zangari	gz3e@virginia.edu
Valley of the Sun (Central Arizona)	2013	Candace Chan	Candace.chan@asu.edu



## Finance

We are pleased to present the audited financial statements of ECS for the year ending December 31, 2014. These reports indicate that our financial health continues to be strong and that we met the Society's financial objectives for the year, which contributed to the advancement of electrochemical and solid state science through the dissemination of technical content.

For the year ended December 31, 2014, net assets increased by \$654,922. The surplus was a result of greater than anticipated revenues totaling \$7.6 million, largely due to higher than expected returns from the investment portfolio, contributions and grants revenue. These were partially offset by lower than expected membership, meetings and rental operations revenue.

The total operating expenses increased to \$7.1 million primarily due to increased society meetings and exhibits costs related to the ECEE meeting in China, and grant sub-awards. General and administrative costs were virtually flat as compared to the previous year. We anticipate further increases in the staff size to manage the growth in marketing, publications and technological requirements in support of ongoing Society initiatives.

The Society's Statement of Financial Position reflects assets of \$16.9 million. Of these total assets, 68.0% are either custodial or endowment funds. Growth in these funds is important because it is clear that there will be pressure to generate financial support through investment and contribution revenues. The Free the Science open access initiative has shifted our focus to the eventual free dissemination of content. Digital Library pricing has flattened and, over time, will begin to decline as we shift from a subscription-based model to a contribution-based model. Therefore, our broader financial goal is to avoid the use of the endowment funds to cover operating expenses, if possible, enabling the funds to maintain future growth.

From a financial perspective, 2014 was a very good year for ECS, largely due to the performance of our investment portfolio. We anticipate the need for significant investments to fund the technology necessary to advance our programs, disseminate content and support the open access initiative. The Society's current financial strength will aid in these investments.

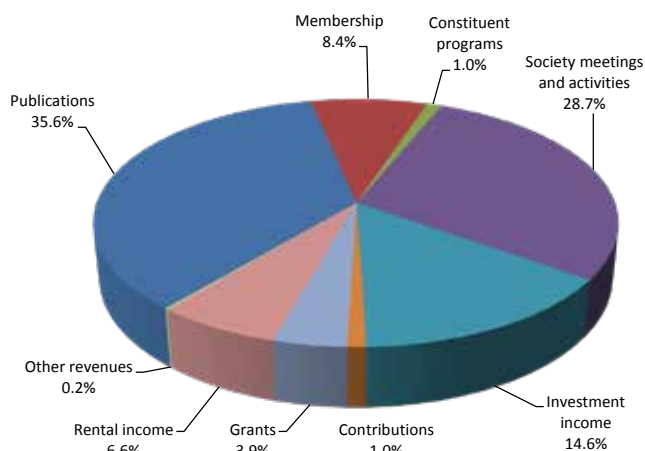


**E. Jennings Taylor**  
Treasurer

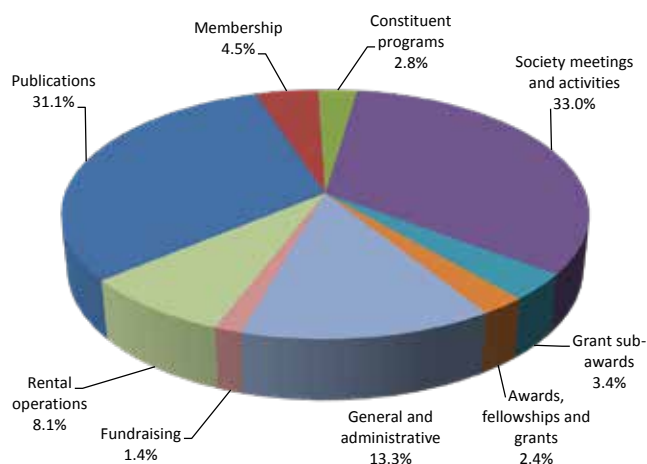


**Paul Grote**  
Director of Finance

**ECS Revenue Percentages 2014**



**ECS Expense Percentages 2014**



The Electrochemical Society is a nonprofit international association of scientists and engineers chartered as a tax exempt organization under Section 501(c)(3) of the United States Internal Revenue Code. The Board of Directors engages the services of an independent auditor to assure that the Society maintains an effective system of financial management, and continues to operate under its nonprofit charter. The Board of Directors received an unqualified or clean opinion from their independent auditors, WithumSmith+Brown for the fiscal year ending December 31, 2014.

## Financial Summary

Consolidated Statement of Financial Position *(For the years ended December 31, 2014 and 2013)*

<b>Assets</b>	<b>2014</b>	<b>2013</b>
Cash and cash equivalents	\$ 864,867	\$ 1,762,595
Accounts receivable, net	4,568	42,616
Unconditional promises to give, net	19,385	17,575
Prepaid expenses, deposits and other assets	131,377	329,801
Investments in marketable securities	11,341,707	9,667,985
Custodial account investments	161,891	630,284
Deferred rent	62,993	58,442
Investments in real estate:		
Land	1,603,427	1,603,427
Buildings, less accumulated depreciation of \$688,163	2,716,021	2,801,126
Intangible assets	-	-
<b>Total assets</b>	<b>\$16,906,236</b>	<b>\$16,913,851</b>
<b>Liabilities and Net Assets</b>		
Liabilities		
Accounts payable and accrued expenses	\$ 335,696	\$ 357,462
Deferred revenue	1,396,767	1,600,829
Custodial account liability	161,891	630,284
Security deposits	37,141	30,900
Deferred compensation	144,772	119,329
Net Assets		
Unrestricted	13,445,911	12,875,468
Temporarily restricted	491,190	424,196
Permanently restricted	892,868	875,383
<b>Total net assets</b>	<b>14,829,969</b>	<b>14,175,047</b>

Consolidated Statement of Changes in Net Assets *(For the years ended December 31, 2014 and 2013)*

<b>Revenues</b>		
Publications	\$ 2,726,619	\$2,660,730
Membership	641,975	529,990
Constituent programs	80,569	63,177
Society meetings and activities	2,199,348	2,072,274
Investment income	1,122,986	1,019,234
Contributions	74,631	81,432
Grants	295,975	-
Rental income	505,819	468,764
Other revenues	12,374	14,960
<b>Total Revenues</b>	<b>7,660,296</b>	<b>6,910,561</b>
<b>Expenses</b>		
Program services		
Publications	\$ 2,214,212	\$ 2,127,074
Membership	322,145	183,396
Constituent programs	200,126	635,591
Society meetings and activities	2,349,033	1,719,343
Grant sub-awards	245,282	-
Awards, fellowships and grants	169,269	135,908
Total Program Services Expenses	5,500,067	4,801,312
Supporting services		
General and administrative	945,150	923,188
Fundraising	102,123	27,549
Rental operations	575,950	480,489
Total Supporting Services Expenses	1,623,223	1,431,226
<b>Total Expenses</b>	<b>7,123,290</b>	<b>6,232,538</b>
Increase in net assets from operations	537,006	678,023
Net change in fair value of investments	117,916	294,251
Change in net assets	654,922	972,274
Net assets, beginning of year	14,175,047	13,202,773
<b>Net assets, end of year</b>	<b>\$14,829,969</b>	<b>\$14,175,047</b>

*These financial statements are a condensed version of the audited statements of ECS for the years ending December 31, 2014 and 2013. ECS will be pleased to provide complete copies along with all footnotes and the unqualified report of our auditors upon request.*



# Notes to Financial Statements

## 1. Summary of Significant Accounting Policies

The consolidated financial statements include the accounts of The Electrochemical Society, Inc. (the Society) and its Divisions, Groups and Sections and ECS Holdings, LLC, (the LLC). All intercompany balances and transactions have been eliminated in consolidation.

The consolidated financial statements have been prepared to focus on the Society and its subsidiaries as a whole, and to present balances and transactions according to the existence or absence of donor-imposed restrictions. Accordingly, net assets and changes therein are classified as follows: Unrestricted net assets – net assets not subject to donor-imposed stipulations; Temporarily restricted net assets – net assets subject to donor-imposed stipulations that will be met by actions of the Society and/or by the passage of time; Permanently restricted net assets (endowment funds) – net assets subject to donor-imposed stipulations that they be maintained permanently by the Society.

## 2. Income Tax Status and Income Taxes

ECS and its Divisions, Groups, and Sections qualify as a tax-exempt organization described under Section 501(c)(3) of the Internal Revenue Code and all of its income, except income generated through the advertising included in its publications, is exempt from Federal income taxes.

As a single-member limited liability company, the LLC is treated as a “disregarded entity” for income tax purposes and, as such, its financial activity is reported in conjunction with the Federal income tax filings of ECS. LBF is a limited liability company, therefore, the income or loss is passed through to the members and no provision or liability for federal and state income taxes has been included in the financial statements for the company. The Society has adopted the accounting pronouncement that provides guidance on uncertain tax positions. The Society has no unrecognized tax benefits at December 31, 2014.

## 3. Investments

Investments in equities and fixed income instruments are reported at fair market value, and investment in real estate is reported at cost. Investment income and realized and unrealized net gains and losses on investments of permanently restricted net assets are reported as follows: as increases or decreases in temporarily restricted net assets if the terms of the gift impose restrictions on the use of the income and/or net gains; as increases or decreases in unrestricted net assets in all other cases. Cost, market value and unrealized appreciation (depreciation) at December 31, 2014 are summarized as follows:

	Cost	Market Value	Unrealized Appreciation (Depreciation)
Money market funds	\$ 2,761	\$ 2,761	\$ –
Stocks and mutual funds	7,777,964	8,769,458	991,494
Certificate of deposit	105,520	105,520	–
Corporate and U.S. bonds	2,226,714	2,356,325	129,611
Real estate	5,007,611	5,007,611	–
Real Estate Trust	250,000	269,534	19,534
<b>Total</b>	<b>\$15,370,570</b>	<b>\$16,511,209</b>	<b>\$ 1,140,639</b>

## 4. Endowment Funds

The Society’s endowment funds consist of several funds established to fund awards, as well as an educational endowment fund, publications endowment fund and an ECS endowment fund. The endowment funds include both donor-restricted funds and funds designated by the Board of Directors to function as endowments. As required by generally accepted accounting principles (GAAP), net assets associated with endowment funds are classified based on the existence or absence of donor-imposed restrictions.

The Society’s policy requires the preservation of the fair value of the original gift as of the gift date of the donor-restricted endowment funds absent explicit donor stipulations to the contrary. As a result, the Society classifies as permanently restricted net assets the original value of gifts donated to the permanent endowment and the original value of subsequent gifts to the permanent endowment. The remaining portion of the donor-restricted endowment fund that is not classified in permanently restricted net assets is classified as temporarily restricted net assets until those amounts are appropriated for expenditure by the Society.

## 5. ECS Holdings, LLC

ECS Holdings LLC was chartered in 1998 to manage the real estate assets of the Society. Current real estate holdings include five buildings at Howe Commons in Pennington, NJ valued at a cost of \$5,007,611. The Society occupies one of the buildings and the other four are classified as an investment. The LLC leases office space in these four buildings to various tenants under operating leases arrangements expiring through 2021. Rental income under the aforementioned leases totaled \$505,819 (excluding intercompany rentals of \$105,701) for the year ended December 31, 2014.

## 6. Report of the ECS Audit Committee

The ECS Audit Committee provides oversight of The Electrochemical Society’s financial reporting process on behalf of the Board of Directors. Management (ECS Staff Directors and Officers) is responsible for the financial statements and the financial reporting process, including the system of internal control. In fulfilling its oversight responsibilities, the Committee discussed the financial statements in the annual report with management, including a discussion of quality, not just the acceptability, of the accounting principles; the reasonableness of significant judgments; and the clarity of disclosures in the financial statements.

The members of the Audit Committee in 2014 were Tetsuya Osaka (Chair), Paul Kohl, E. Jennings Taylor, Daniel Scherson and Stuart Swirson.

The ECS Audit Committee discussed with the independent auditors the overall scope and plans for their respective audits. The Committee meets with the independent auditors with and without management present, to discuss the results of their examinations, their evaluations of the Society’s internal control, compliance with laws and regulations, and the overall quality of the Society’s financial reporting.

Based on the discussions referenced above, the ECS Audit Committee recommended for acceptance to the Board of Directors the audited financial statements for the year ended December 31, 2014 and the Board unanimously approved.

## Marketing &amp; Digital Engagement

Discover  
Your  
Community

ECS created a new Marketing & Digital Engagement group in 2014. Since its establishment, the goal has been to implement new marketing strategies to expand our reach and build a sense of community. **Take a look at some of the highlights from 2014.**

## ECS Redcat Blog

The ECS Redcat Blog ([www.ecsblog.org](http://www.ecsblog.org)) was established to keep members and nonmembers alike informed on the latest scientific research and innovations pertaining to electrochemistry and solid state science. With a constant flow of information, blog visitors (almost 6,000/month and growing) are able to stay on the cutting-edge of science and interface with a like-minded community.

redcat™

## Website Redesign

In 2014, ECS began the process of a website redesign. As we move forward in this process, we hope to provide a more streamlined website that is user-friendly and rich in dynamic content.



## Weekly eNews

The transition to a weekly distribution of our eNews allows us to provide you with more quality content. Keep up with the latest innovations in science, find the top journal articles, and be the first to know about great discounts on meetings and membership by signing up for our free eNews (<http://ow.ly/PPUny>).

## Videos

You Tube

Since its creation, the ECS YouTube channel ([www.youtube.com/ecsl902](http://www.youtube.com/ecsl902)) has been popularized with videos

from our biannual meetings as well as pieces that highlight some of the greatest pillars of electrochemical and solid state science and technology.



## Job Board

Our job board ([www.ecsblog.org/jobs](http://www.ecsblog.org/jobs)) hosts an array of open positions, from postdoctoral to highly sought after research positions, from some of the top establishments across the globe. Employers can post open positions for free!



## Knowledge Base

Long-time ECS historian and member Zoltan Nagy has been compiling this huge database of electrochemical knowledge ([knowledge.electrochem.org](http://knowledge.electrochem.org)) since the late 90s. He partnered with ECS in 2014 to make it available to the public. It includes lists of websites, proceedings, review chapters, full articles, electrochemical dictionary and encyclopedia, and more.



## Social Media



The content and visits to our social media pages took off in 2014. It's the place to connect, share, and discover your community. See what topics your peers are discussing on our Facebook page ([www.facebook.com/TheElectrochemicalSociety](http://www.facebook.com/TheElectrochemicalSociety)), engage with us on Twitter ([www.twitter.com/ECSorg](http://www.twitter.com/ECSorg)), and networking via our LinkedIn page ([www.electrochem.org/linkedin](http://www.electrochem.org/linkedin)).



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(as of December 31, 2014)

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(as of December 31, 2014)

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If you would like more information about making a planned gift, or to notify ECS about your intentions for planned giving, please contact Dan Fatton, Director of Development at 609.737.1902 ext. 115.



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Industrie De Nora S.p.A.	Yeager Center for Electrochemical Sciences
INFICON	ZSW

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### Past Presidents of the Society

J. W. Richards.....	1902-1904
H. S. Carhart.....	1904-1905
W. D. Bancroft.....	1905-1906
C. Hering.....	1906-1907
C. F. Burgess.....	1907-1908
E. G. Acheson.....	1908-1909
L. H. Baekeland.....	1909-1910
W. H. Walker.....	1910-1911
W. R. Whitney.....	1911-1912
W. L. Miller.....	1912-1913
E. F. Roeber.....	1913-1914
F. A. Lidbury.....	1914-1915
L. Addicks.....	1915-1916
F. A. J. FitzGerald.....	1916-1917
C. G. Fink.....	1917-1918
F. J. Tone.....	1918-1919
W. D. Bancroft.....	1919-1920
W. S. Landis.....	1920-1921
A. Smith.....	1921-1922
C. G. Schluederberg.....	1922-1923
A. T. Hinckley.....	1923-1924
H. C. Parmelee.....	1924-1925
F. M. Becket.....	1925-1926
W. Blum.....	1926-1927
S. C. Lind.....	1927-1928
P. J. Kruesi.....	1928-1929
F. C. Frary.....	1929-1930
L. Kahlenberg.....	1930-1931
B. Stoughton.....	1931-1932
R. A. Witherspoon.....	1932-1933
J. Johnston.....	1933-1934
H. S. Lukens.....	1934-1935
J. H. Critchett.....	1935-1936
D. A. MacInnes.....	1936-1937
W. G. Harvey.....	1937-1938
R. L. Baldwin.....	1938-1939
H. J. Creighton.....	1939-1940

F. C. Mathers.....	1940-1941
R. R. Ridgway.....	1941-1942
E. M. Baker.....	1942-1943
R. M. Burns.....	1943-1944
S. D. Kirkpatrick.....	1944-1945
W. R. Veazey.....	1945-1946
W. C. Moore.....	1946-1947
G. W. Heise.....	1947-1948
J. A. Lee.....	1948-1949
A. L. Ferguson.....	1949-1950
C. L. Faust.....	1950-1951
R. M. Hunter.....	1951-1952
J. C. Warner.....	1952-1953
R. J. McKay.....	1953-1954
M. J. Udy.....	1954-1955
H. H. Uhlig.....	1955-1956
H. Thurnauer.....	1956-1957
N. Hackerman.....	1957-1958
S. Swann.....	1958-1959
W. C. Gardiner.....	1959-1960
R. A. Schaefer.....	1960-1961
H. B. Linford.....	1961-1962
F. L. LaQue.....	1962-1963
W. J. Hamer.....	1963-1964
L. I. Gilbertson.....	1964-1965
E. B. Yeager.....	1965-1966
H. J. Read.....	1966-1967
H. C. Gatos.....	1967-1968
I. E. Campbell.....	1968-1969
N. C. Cahoon.....	1969-1970
C. W. Tobias.....	1970-1971
C. V. King.....	1971-1972
T. D. McKinley.....	1972-1973
N. B. Hannay.....	1973-1974
D. A. Vermilyea.....	1974-1975
T. R. Beck.....	1975-1976
M. J. Pryor.....	1976-1977

D. N. Bennion.....	1977-1978
D. R. Turner.....	1978-1979
J. B. Berkowitz.....	1979-1980
E. M. Pell.....	1980-1981
R. J. Brodd.....	1981-1982
F. J. Strieter.....	1982-1983
J. B. Wagner, Jr.....	1983-1984
P. C. Milner.....	1984-1985
R. C. Alkire.....	1985-1986
R. E. Enstrom.....	1986-1987
F. G. Will.....	1987-1988
B. E. Deal.....	1988-1989
E. J. Cairns.....	1989-1990
J. M. Woodall.....	1990-1991
L. R. Faulkner.....	1991-1992
W. L. Worrell.....	1992-1993
R. P. Frankenthal.....	1993-1994
J. A. Amick.....	1994-1995
K. R. Bullock.....	1995-1996
D. W. Hess.....	1996-1997
B. Miller.....	1997-1998
G. M. Blom.....	1998-1999
D. E. Hall.....	1999-2000
C. M. Osburn.....	2000-2001
J. Talbot.....	2001-2002
K. Spear.....	2002-2003
B. Scrosati.....	2003-2004
R. Susko.....	2004-2005
W. Smyrl.....	2005-2006
Mark Allendorf.....	2006-2007
Barry MacDougall.....	2007-2008
D. Noel Buckley.....	2008-2009
Paul Natishan.....	2009-2010
William D. Brown.....	2010-2011
Esther S. Takeuchi.....	2011-2012
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C. Hering.....	1902
C. J. Reed.....	1902-1904
S. S. Sadtler.....	1904-1907
J. W. Richards.....	1907-1921
C. G. Fink.....	1921-1947
R. M. Burns.....	1947-1949

H. B. Linford.....	1949-1959
I. E. Campbell.....	1959-1965
R. F. Bechtold.....	1965-1968
D. R. Turner.....	1968-1974
P. C. Milner.....	1974-1980
F. A. Trumbore.....	1980-1984

J. A. Amick.....	1984-1988
E. W. Brooman.....	1988-1992
J. McBreen.....	1992-1996
R. Susko.....	1996-2000
P. Natishan.....	2000-2004
P. Vanýsek.....	2004-2008
J. Leddy.....	2008-2012

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F. A. Lidbury.....	1920-1924
A. Smith.....	1924-1931
R. M. Burns.....	1931-1943
W. W. Winship.....	1943-1949
E. G. Widell.....	1949-1955
L. I. Gilbertson.....	1955-1961

E. G. Enck.....	1961-1964
R. H. Schaefer.....	1964-1967
R. H. Cherry.....	1967-1973
F. J. Strieter.....	1973-1976
J. L. Griffin.....	1976-1982
J. Kruger.....	1982-1986
R. P. Frankenthal.....	1986-1990

R. E. White.....	1990-1994
W. M. Bullis.....	1994-1997
Y. H. Wong.....	1997-1998
W. D. Brown.....	1998-2002
P. Fedkiw.....	2002-2006
J. Susko.....	2006-2010
Christina Bock.....	2010-2014



### Edward Goodrich Acheson Award

E. G. Acheson.....	1929
E. F. Northrup.....	1931
C. G. Fink.....	1933
F. J. Tone.....	1935
F. M. Becket.....	1937
F. C. Frary.....	1939
C. F. Burgess.....	1942
W. Blum.....	1944
H. J. Creighton.....	1946
D. A. MacInnes.....	1948
G. W. Vinal.....	1950
J. W. Marden.....	1952
G. W. Heise.....	1954
R. M. Burns.....	1956
W. J. Kroll.....	1958
H. B. Linfood.....	1960
C. L. Faust.....	1962
E. A. Gulbransen.....	1964
W. C. Vosburgh.....	1966
F. L. LaQue.....	1968
S. Ruben.....	1970
C. W. Tobias.....	1972
C. V. King.....	1974
N. B. Hannay.....	1976
D. A. Vermilyea.....	1978
E. B. Yeager.....	1980
H. C. Gatos.....	1982
N. Hackerman.....	1984
E. M. Pell.....	1986
H. H. Uhlig.....	1988
T. R. Beck.....	1990
D. R. Turner.....	1992
J. B. Wagner, Jr.....	1994
R. C. Alkire.....	1996
J. M. Woodall.....	1998
L. R. Faulkner.....	2000
B. Deal.....	2002
W. L. Worrell.....	2004
V. de Nora.....	2006
Robert P. Frankenthal.....	2008
John Newman.....	2010
Dennis Hess.....	2012
Ralph J. Brodd.....	2014



### Olin Palladium Medal Award

(formerly the Palladium Medal Award, 1951-1977)

C. W. Wagner.....	1951
N. H. Furman.....	1953
U. R. Evans.....	1955

K. F. Bonhoeffer.....	1957
A. N. Frumkin.....	1959
H. H. Uhlig.....	1961
N. Hackerman.....	1965
P. Delahay.....	1967
T. P. Hoar.....	1969
L. Brewer.....	1971
V. G. Levich.....	1973
M. J. N. Pourbaix.....	1975
H. Gerischer.....	1977
R. Parsons.....	1979
I. M. Kolthoff.....	1981
M. Cohen.....	1983
M. Fleischmann.....	1985
A. J. Bard.....	1987
B. E. Conway.....	1989
J. Newman.....	1991
J.-M. Savéant.....	1993
J. Kruger.....	1995
R. W. Murray.....	1997
J. B. Goodenough.....	1999
N. Sato.....	2001
E. Gileadi.....	2003
R. Rapp.....	2005
Sergio Trasatti.....	2007
Dieter M. Kolb.....	2009
Koji Hashimoto.....	2011
Ralph White.....	2013



### Gordon E. Moore Medal for Outstanding Achievement in Solid-State Science and Technology

(formerly the Solid State Science & Technology Award, 1973-2005)

W. G. Pfann.....	1973
H. C. Gatos.....	1975
R. N. Hall.....	1977
M. B. Panish.....	1979
G. L. Pearson.....	1981
N. Holonyak, Jr.....	1983
J. M. Woodall.....	1985
A. Y. Cho.....	1987
J. F. Gibbons.....	1989
J. D. Plummer.....	1991
B. E. Deal.....	1993
W. L. Worrell.....	1995
K. E. Spear.....	1997
I. Akasaki.....	1999
A. Reisman.....	2001
R. B. Fair.....	2003
D. Hess.....	2005
Tak H. Ning.....	2007
C. Grant Willson.....	2009
Stephen Pearton.....	2011
Fan Ren.....	2013



### Vittorio de Nora Award in Electrochemical Engineering and Technology

(formerly the Electrochemical Science and Technology Award, 1974-1977)

A. Brenner.....	1974
R. B. MacMullin.....	1976
F. T. Bacon.....	1978
H. B. Beer.....	1980
J. C. Schumacher.....	1982
D. E. Danly.....	1984
K. Kordesch.....	1986
A. Heller.....	1988
C. W. Tobias.....	1990
E. B. Yeager.....	1992
L. T. Romankiw.....	1994
R. Baboian.....	1996
W. G. Grot.....	1998
D. R. Turner.....	2000
R. C. Alkire.....	2004
F. Mansfeld.....	2006
John S. Newman.....	2008
Derek Pletcher.....	2010
Bruno Scrosati.....	2012
Chad Mirkin.....	2014



### Carl Wagner Memorial Award

A. J. Bard.....	1981
G. C. Wood.....	1983
R. C. Alkire.....	1985
R. W. Murray.....	1987
W. L. Worrell.....	1989
D. D. Macdonald.....	1991
J. Jorné.....	1993
B. R. MacDougall.....	1995
M. J. Weaver.....	1997
C. R. Martin.....	1999
P. A. Kohl.....	2001
R. M. Crooks.....	2003
J. Hupp.....	2005
Philip N. Bartlett.....	2007
Henry S. White.....	2009
Peter Bruce.....	2011
Marc T. M. Koper.....	2013





### Henry B. Linford Award for Distinguished Teaching

C. W. Tobias	1982
B. E. Conway	1984
A. J. Bard	1986
L. Brewer	1988
J. Newman	1990
K. Nobe	1992
J. O'M. Bockris	1994
T. C. Franklin	1996
R. A. Rapp	1998
G. Stoner	2000
D. Peters	2002
R. M. Latanision	2004
D. Pletcher	2006
Eliezer Gileadi	2008
Daniel T. Schwartz	2010
Mark E. Orazem	2012
Dennis Hess	2014

### Charles W. Tobias Young Investor Award

Stuart B. Adler	2004
Hock Min Ng	2006
Yang Shao-Horn	2008
Thomas J. Schmidt	2010
Bryan S. Pivovar	2012
Bilge Yildiz	2012
Adam Weber	2014

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Edward Weston	1926
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W. Lash Miller	1929
Edward Dean Adams	1930
Charles F. Burgess	1932
Frederick M. Becket	1934
L. H. Baekeland	1936
Robert A. Witherspoon	1940
Archer E. Wheeler	1941
W.R. Whitney	1944
Paul J. Kruesi	1944
Colin G. Fink	1946
Oliver W. Brown	1946
John W. Marden	1947
William Blum	1953
Robert M. Burns	1959
George W. Heise	1959
Frank C. Mathers	1959
Stanislaus Skowronski	1962

Oliver W. Storey	1962
A. Kenneth Graham	1963
Howard A. Acheson	1971
Charles L. Faust	1971
Cecil V. King	1973
Herbert H. Uhlig	1973
Norman Hackerman	1973
Henry B. Linford	1974
Sherlock Swann	1974
Ernest G. Enck	1975
W. C. Gardiner	1975
Ivor E. Campbell	1976
Ernest B. Yeager	1977
David A. Vermilyea	1977
Charles W. Tobias	1977
Harry C. Gatos	1978
Ralph M. Hunter	1979
Dennis R. Turner	1980
Henry F. Ivey	1980
Walter J. Hamer	1980
Michael J. Pryor	1981
Francis L. LaQue	1981
N. Bruce Hannay	1982
Theodore R. Beck	1982
Vittorio de Nora	1982
John L. Griffin	1983
Erik M. Pell	1983
Samuel Ruben	1983
Paul C. Milner	1986
Harold J. Read	1986
Forrest A. Trumbore	1986
Douglas N. Bennion	1987
Ralph J. Brodd	1987
Jerome Kruger	1987
Glenn W. Cullen	1990
James C. Acheson	1990
Richard C. Alkire	1991
Bertram Schwartz	1991
J. Bruce Wagner, Jr.	1991
V. H. Brannely	1991
R. S. Karpiuk	1996
F. J. Strieter	1996
W. L. Worrell	1996
Barry Miller	1999
Jefferson Cole	2001
L. Faulkner	2003
R. Frankenthal	2003
L. Romankiw	2003
Gordon E. Moore	2007
John S. Newman	2007
Jerry M. Woodall	2007
Allen J. Bard	2013
John B. Goodenough	2013

### Fellows of The Electrochemical Society

Allen J. Bard	1990
Robert B. Comizzoli	1990
Glenn W. Cullen	1990
Theodore I. Kamins	1990
Paul C. Milner	1990
Edward H. Nicollian	1990

Robert A. Osteryoung	1990
Arnold Reisman	1990
Lubomyr T. Romankiw	1990
Geraldine C. Schwartz	1990
Ben G. Streetman	1990
J. Bruce Wagner, Jr.	1990
Theodore R. Beck	1991
Elton J. Cairns	1991
Bruce E. Deal	1991
Werner Kern	1991
William A. Pliskin	1991
Charles W. Tobias	1991
Rolf Weil	1991
Richard C. Alkire	1992
Vittorio de Nora	1992
Jerome Kruger	1992
Barry Miller	1992
Dennis R. Turner	1992
Jerry M. Woodall	1992
Richard P. Buck	1993
Larry R. Faulkner	1993
Dennis W. Hess	1993
Vik J. Kapoor	1993
Rolf H. Muller	1993
Carlton M. Osburn	1993
Robert A. Rapp	1993
George L. Schnable	1993
Y. H. Wong	1993
Petr Zuman	1993
George K. Celler	1994
Sung-Nee George Chu	1994
John P. Dismukes	1994
Richard B. Fair	1994
Adam Heller	1994
Richard A. Oriani	1994
Boone B. Owens	1994
Wayne L. Worrell	1994
Fred Anson	1995
Laurence D. Burke	1995
Brian E. Conway	1995
Robert P. Frankenthal	1995
Karl M. Kadish	1995
Digby D. Macdonald	1995
Gleb Mamantov	1995
Florian Mansfeld	1995
Royce W. Murray	1995
John Newman	1995
Yutaka Okinaka	1995
Howard W. Pickering	1995
George Rozgonyi	1995
Mordechay Schlesinger	1995
Karl E. Spear	1995
John M. Blocher, Jr.	1996
Hans K. Bönni	1996
Der-Tau Chin	1996
Hugh Isaacs	1996
Wolfgang J. Lorenz	1996
S. J. Pearton	1996
Subhash C. Singhal	1996
Venkataraman Swaminathan	1996
James A. Amick	1997
Denis Noel Buckley	1997

## Fellows (continued)

Eliezer Gileadi.....	1997	Tetsuya Osaka.....	2002	Albert J. Fry.....	2008
Michel J. Froment.....	1997	Krishnan Rajeshwar.....	2002	Fernando Garzon.....	2008
Koji Hashimoto.....	1997	Israel Rubinstein.....	2002	Yury Gogotsi.....	2008
Chung-Chiun Liu.....	1997	Sigeru Torii.....	2002	Curtis F. Holmes.....	2008
Edward McCafferty.....	1997	Toshio Shibata.....	2002	Prashant V. Kamat.....	2008
Theodore D. Moustakas.....	1997	Sorin Cristoloveanu.....	2002	Patrik Schmuki.....	2008
Shyam P. Muraka.....	1997	David Duquette.....	2003	Gery R. Stafford.....	2008
Stella W. Pang.....	1997	Peter Fedkiw.....	2003	Joseph R. Stetter.....	2008
Joachim Walter Schultze.....	1997	Charles Hussey.....	2003	John Stickney.....	2008
James D. Sinclair.....	1997	Richard McCreery.....	2003	Thomas Thundat.....	2008
Norman L. Weinberg.....	1997	Frank McLarnon.....	2003	Vladimir Bagotsky.....	2009
Lawrence Young.....	1997	Robin Susko.....	2003	Ugo Bertocci.....	2009
Huk Y. Cheh.....	1998	Darrel Untereker.....	2003	Manfred Engelhardt.....	2009
Donald E. Danly.....	1998	Osamu Yamamoto.....	2003	Tom Fuller.....	2009
Dennis H. Evans.....	1998	G. T. Burstein.....	2004	Peter Hesketh.....	2009
Fumio Hine.....	1998	C. Clayton.....	2004	Uziel Landau.....	2009
Dennis C. Johnson.....	1998	G. Davis.....	2004	Dolf Landheer.....	2009
Zoltan Nagy.....	1998	M. J. Deen.....	2004	Thomas P. Moffat.....	2009
Katsumi Niki.....	1998	S. Fonash.....	2004	Ikuzo Nishiguchi.....	2009
Jun-ichi Nishizawa.....	1998	M. Meyyappan.....	2004	Kohei Uosaki.....	2009
Fan Ren.....	1998	J. F. Rusling.....	2004	Rudolph G. Buchheit.....	2010
Antonio J. Ricco.....	1998	M. Seo.....	2004	Francis D'Souza.....	2010
David A. Shores.....	1998	M. Shur.....	2004	Toshio Fuchigami.....	2010
William H. Smyrl.....	1998	J. Simonet.....	2004	Michel Houssa.....	2010
George Thompson.....	1998	M. Stratmann.....	2004	Robert G. Kelly.....	2010
Eric Brooman.....	1999	J. Talbot.....	2004	Roger C. Newman.....	2010
Stanley Bruckenstein.....	1999	M. S. Whittingham.....	2004	Peter N. Pintauaro.....	2010
Kathryn Bullock.....	1999	R. Adzic.....	2005	Peter C. Searson.....	2010
Shimshon Gottesfeld.....	1999	J. Davidson.....	2005	David Shoesmith.....	2010
Yue Kuo.....	1999	T. Hattori.....	2005	Bernard Tribollet.....	2010
Dieter Landolt.....	1999	J. P. Leburton.....	2005	John W. Weidner.....	2010
Jerzy Ruzyllo.....	1999	P. Marcus.....	2005	David J. Young.....	2010
Norio Sato.....	1999	C. Martin.....	2005	Hugh C. DeLong.....	2011
Ralph White.....	1999	P. Natishan.....	2005	Hubert Gasteiger.....	2011
William Yen.....	1999	D. Pletcher.....	2005	Arumugam Manthiram.....	2011
Cammy Abernathy.....	2000	B. Scrosati.....	2005	Ashok Kumar Shukla.....	2011
Kuzhikalail M. Abraham.....	2000	J. Scully.....	2005	Paul C. Trulove.....	2011
John C. Angus.....	2000	R. Singh.....	2005	Karim Zaghib.....	2011
W. Ronald Fawcett.....	2000	H. H. Strehblow.....	2005	Giovanni Zangari.....	2011
David S. Ginley.....	2000	M. Williams.....	2005	Thomas A. Zawodzinski.....	2011
Yasuhiko Ito.....	2000	A. Baca.....	2006	Jeffrey R. Dahn.....	2012
Howard Huff.....	2000	S. Bandyopadhyay.....	2006	Stefan DeGendt.....	2012
Robert F. Savinell.....	2000	T. Fahidy.....	2006	Hariklia Deligianni.....	2012
Roger Staehle.....	2000	G. Frankel.....	2006	Andrew Gewirth.....	2012
Charles W. Struck.....	2000	C. Jagadish.....	2006	Meilin Liu.....	2012
Sergio Trasatti.....	2000	N. Koshida.....	2006	Junichi Murota.....	2012
Dieter M. Kolb.....	2001	J. Lessard.....	2006	Sri Narayan.....	2012
David J. Lockwood.....	2001	H. Massoud.....	2006	Trung Van Nguyen.....	2012
James McBreen.....	2001	H. Yokokawa.....	2006	Winston Revie.....	2012
Patrick J. Moran.....	2001	B. MacDougall.....	2006	Daniel Schwartz.....	2012
Shohei Nakahara.....	2001	M. Orazem.....	2006	Esther Takeuchi.....	2012
William E. O'Grady.....	2001	D. Misra.....	2006	Mark Verbrugge.....	2012
Supramanian Srinivasan.....	2001	A. Virkar.....	2006	Petr Vanýsek.....	2012
Mark Allendorf.....	2002	A. Wieckowski.....	2006	Bruce Weisman.....	2012
William Brown.....	2002	Simon S. Ang.....	2007	Hector Abruña.....	2013
Cor Claeys.....	2002	Viola Birss.....	2007	Nancy Dudney.....	2013
Martin Kendig.....	2002	Marc Cahay.....	2007	Gary Hunter.....	2013
Kim Kinoshita.....	2002	James M. Fenton.....	2007	Jiri Janata.....	2013
Paul Kohl.....	2002	Dennis G. Peters.....	2007	Johna Leddy.....	2013
Zempachi Ogumi.....	2002	Daniel A. Scherson.....	2007	Shelley Minter.....	2013
		Eric D. Wachsman.....	2007	Sanjeev Mukerjee.....	2013
		Doron Aurbach.....	2008	Elizabeth Opila.....	2013

**Fellows (continued)**

Jan Robert Selman.....	2013
Kalpathy Sundaram.....	2013
Enrico Traversa.....	2013
Martin Winter.....	2013
George E. Blomgren.....	2014
Gerardine Botte.....	2014
Ralph J. Brodd.....	2014
Yasuhiro Fukunaka.....	2014
Jay W. Grate.....	2014
Dirk Guldi.....	2014
Bruce Parkinson.....	2014
Fred Roozeboom.....	2014
Alvin Salkind.....	2014
Sudipta Seal.....	2014
Michael Thackeray.....	2014
Tooru Tsuru.....	2014
Harry Tuller.....	2014
Jose Zagal.....	2014
Piotr Zelenay.....	2014

**Edward G. Weston**  
**Summer Fellowship**
*(formerly the Edward G. Weston Fellowship, 1930-1945)*

E. B. Sanigar.....	1930
K. Solliner.....	1931
M. E. Fogle.....	1932
R. D. Blue.....	1933
P. A. Jacquet.....	1934
M. A. Coler.....	1935
H. B. Linfood.....	1936
G. L. Putnam.....	1937
V. de Nora.....	1938
W. P. Ruemmier.....	1940
R. E. Black.....	1941
W. E. Roake.....	1942
R. D. Misch.....	1947
M. T. Simnad.....	1948
R. L. Brubaker.....	1961
D. Yohe.....	1962
H. O. Daley, Jr.....	1963
M. D. Hawley.....	1964
T. G. McCord.....	1965
J. D. McLean.....	1966
K. B. Prater.....	1967
K. Doblhofer.....	1968
L. R. Faulkner.....	1969
W. J. Horkans.....	1970
W. J. Horkans.....	1971
W. J. Bover.....	1972
B. J. Alexander.....	1973
S. S. Fraton, Jr.....	1974
M. Suchanski.....	1975
R. J. Nowak.....	1976
P. A. Kohl.....	1977
C. D. Jaeger.....	1978
L. Bottomley.....	1979
G. L. McIntire.....	1980
J. Pemberton.....	1981
M. E. Kordesch.....	1982
R. G. Tompson.....	1983

P. M. Kovach.....	1984
J. N. Harb.....	1985
S. E. Creager.....	1986
X. Zhang.....	1987
C. Amass.....	1988
R. J. Phillips.....	1989
J. E. Franke.....	1990
S. R. Snyder.....	1991
P. Pantano.....	1992
G. J. Edens.....	1993
B. Idriss.....	1994
D. Bizzotto.....	1995
L. A. Lyon.....	1996
C. Claypool.....	1997
B. Bath.....	1998
A. C. Templeton.....	1999
P. W. Wuelfing.....	2000
K. Balss.....	2001
T. Hu.....	2002
J. Mauzeroll.....	2003
J. Seegmiller.....	2004
E. Blair.....	2005
F. Laforge.....	2006
Alex G. Güell.....	2007
Matthew J. Banholzer.....	2008
Shulei Chou.....	2009
Binh-Minh Nguyen.....	2010
Abrin Schmucker.....	2011
Sujat Sen.....	2012
Philippe Dauphin Ducharme.....	2013
Tuncay Ozel.....	2014

**Colin Garfield Fink**  
**Summer Fellowship**

P. Brown.....	1962
W. G. Lemmermann.....	1963
W. G. Stevens.....	1964
J. P. Carney.....	1965
S. Piekarski.....	1966
B. S. Pons.....	1967
R. E. Bonewitz.....	1968
L. Papouchado.....	1969
R. G. Reed.....	1970
R. Fike.....	1971
D. L. McAllister.....	1972
R. R. Chance.....	1973
P. I. Lee.....	1974
J. B. Flanagan.....	1975
J. S. Hammond.....	1976
P. D. Tyma.....	1977
S. M. Wilhelm.....	1978
J. D. Porter.....	1979
R. S. Glass.....	1980
E. E. Bancroft.....	1981
T. D. Cabeika.....	1982
B. L. Wheeler.....	1983
E. T. T. Jones.....	1984
D. A. Van Galen.....	1985
J. S. Hanson.....	1986
P. Gao.....	1987
D. T. Schwartz.....	1988
A. E. Russell.....	1989

J. Xue.....	1990
C. K. Rhee.....	1991
M. J. Shane.....	1992
C. M. Pharr.....	1993
J. M. Lauerhaus.....	1994
S. M. Hendrickson.....	1995
J. C. Hutchinson.....	1996
P. V. A. Pamidi.....	1997
G. S. Hwang.....	1998
W. Baker.....	1999
A. Crown.....	2000
R. Maus.....	2001
S. Peper.....	2002
M. Alpuche-Aviles.....	2003
A. Mugweru.....	2004
G. Lica.....	2005
A. Martinson.....	2006
Prabeer Barpanda.....	2007
Sau Yen Chew.....	2008
Hyea Kim.....	2009
Brian Adams.....	2010
Tae-Ho Shin.....	2011
Devika Sil.....	2012
Gabriel G. Rodríguez-Calero.....	2013
Christena K. Nash.....	2014

**Joseph W. Richards**  
**Summer Fellowship**

V. E. Hauser, Jr.....	1960
M. J. Schaer.....	1961
R. E. Visco.....	1961
A. K. Postma.....	1962
C. C. Liu.....	1963
M. J. Vasile.....	1964
M. J. Vasile.....	1965
C. C. Liu.....	1966
B. N. Baron.....	1967
L. P. Zajicek, Jr.....	1968
K. R. Bullock.....	1969
S. H. Cadle.....	1970
J. W. Webb.....	1971
C. P. Keszthelyi.....	1972
M. Shabrang.....	1973
D. H. Karweik.....	1974
T. P. DeAngelis.....	1975
D. L. Feke.....	1976
H. Faulkner.....	1977
D. M. Novak.....	1978
B. R. Karas.....	1979
R. M. Cohen.....	1980
R. N. Dominey.....	1981
R. M. Ianniello.....	1982
D. F. Tessier.....	1983
N. T. Sleszynski.....	1984
C. M. Lieber.....	1985
J. L. Valdes.....	1986
R. Q. Bligh.....	1987
D. W. Conrad.....	1988
S. A. Schofield.....	1989
J. A. Roberts.....	1990
M. S. Freund.....	1991
L. Gao.....	1992



**Joseph W. Richards Summer Fellowship**  
(continued)

H. Gasteiger .....	1993
J. Schoer .....	1994
S. Morin .....	1995
N. Madigan .....	1996
S. Petrovic .....	1997
J. J. Sumner .....	1998
A. Wijayawardhana .....	1999
B. Liu .....	2000
C. Noble .....	2001
C. B. France .....	2002
P. Ramadass .....	2003
J. Carroll .....	2004
K. Salaita .....	2005
J. Breger .....	2006
Sadagopan Krishnan .....	2007
Meng Jiang .....	2008
Haizhou Liu .....	2009
Mohammad Rez Khajavi .....	2010
Jeyavel Velmurugan .....	2011
Balazs Berkes .....	2012
Yongjin Lee .....	2013
Andrey Gunawan .....	2014

**F. M. Becket Summer Fellowship**

(formerly the F. M. Becket Memorial Award 1962-1999)

R. B. Johnson .....	1962
J. K. Johnstone .....	1964
K. Lehman .....	1966
H. K. Bowen .....	1967
T. E. Parker .....	1971
G. M. Crosbie .....	1973
N. A. Godshall .....	1975
J. D. Hodge .....	1977
W. Cheng .....	1979
P. Davies .....	1981
P. A. Barron .....	1983
G. J. Miller .....	1985
M. Rosenbluth .....	1987
J. D. Cotton .....	1989
J. Philliber .....	1991
P. Agarwal .....	1993
H. C. Slade .....	1995
K. S. Weil .....	1997
G. S. Hwang .....	1999
J. Parrish .....	2001
S. Wasileski .....	2002
E. Clark .....	2003
F. Deng .....	2004
S. Harrison .....	2005
Y. Yang .....	2006
Michael Orthner .....	2007
Marcos Jose Leitos Santos .....	2008
Steve Rhieu .....	2009
James Whitaker .....	2011
Celeste Morris .....	2012
Carlo Santoro .....	2013
Brandy Kinkad .....	2014

**Herbert H. Uhlig Summer Fellowship**

Natalia Shustova .....	2008
Venkatasubramanian Viswanathan .....	2009
Swetha Puchakayala .....	2011
Julia van Drunen .....	2012
Junsi Gu .....	2013
Hadi Tavassol .....	2014

**Energy Research Summer Fellowship**

(supported by the U.S. Department of Energy)

M. R. Deakin .....	1985
P. B. Johnson .....	1985
D. A. La Hurd .....	1985
S. E. Morris .....	1985
D. P. Wilkinson .....	1985
D. G. Frank .....	1986
K.-C. Ho .....	1986
R. G. Kelly .....	1986
I.-H. Yeo .....	1986
J. Kwak .....	1986
L. C. Dash .....	1987
S. A. Naftel .....	1987
T. R. Nolen .....	1987
D. Schwartz .....	1987
T. H. Wong .....	1987
S. D. Fritts .....	1988
D. A. Koos .....	1988
D. A. Hazlebeck .....	1988
M. O. Schloh .....	1988
S. S. Perine .....	1988
J. E. Baur .....	1989
C.-P. Chen .....	1989
D. W. Eng .....	1989
R. L. McCarley .....	1989
C. J. Murphy .....	1989
C. K. Nguyen .....	1990
I.-H. Oh .....	1990
T. G. Strein .....	1990
J. W. Weidner .....	1990
S. E. Gilbert .....	1990
C. S. Johnson .....	1991
H. Huang .....	1991
D. R. Lawson .....	1991
B. D. Pendley .....	1991
C. C. Streinz .....	1991
P. A. Connick .....	1992
A. C. Hillier .....	1992
D. L. Taylor .....	1992
K. K. Lian .....	1992
T. T. Nadasdi .....	1992
D. G. Jensen .....	1993
J. C. Bart .....	1993
G. Seshadri .....	1993
J. A. Poirier .....	1993
K. W. Vogt .....	1993
Z. Shi .....	1994
C.-C. Hsueh .....	1994
V. A. Adamian .....	1994

K. M. Maness .....	1994
K. M. Richard .....	1994
Y.-E. Sung .....	1995
J. C. Conboy .....	1995
L. A. Zook .....	1995
W. R. Everett .....	1995
H. Zhang .....	1995
S. Grachtchak .....	1996
J.-B. Green .....	1996
S. Motupally .....	1996
C. Nasr .....	1996
S. Nayak .....	1996
K. Hu .....	1997
M. E. Williams .....	1997
A. Zolfaghari .....	1997
C. R. Horne .....	1997
G. K. Jennings .....	1997
M. Zhao .....	1998
S. Sriramulu .....	1998
J. Ritchie .....	1998
M. A. Elhamid .....	1998
S. Zou .....	1998
K. Cooper .....	2000
K. Grant .....	2000
D. Hansen .....	2000
J. F. Hicks .....	2000
Z. Liu .....	2000

**Oronzio de Nora Industrial Electrochemistry Fellowship**

N. Mano .....	2004
N. Mano .....	2005
N. Mano .....	2006
Vijayasekaran Boovaragavan .....	2007
Vijayasekaran Boovaragavan .....	2008
Vijayasekaran Boovaragavan .....	2009
Wenjing (Angela) Zhang .....	2010

**Norman Hackerman Young Author Award**

(formerly the Young Authors Prize, 1929-1988)

W. C. Gardiner .....	1929
D. K. Alpern .....	1930
F. L. Jones .....	1931
F. W. Godsey, Jr. ....	1932
B. L. Bailey .....	1933
J. R. Heard, Jr. ....	1934
U. B. Thomas, Jr. ....	1935
W. A. Johnson .....	1936
R. S. Soanes .....	1937
N. B. Nichols .....	1938
G. A. Moore .....	1939
J. S. Mackay .....	1940
E. Adler .....	1941
S. Speil .....	1942
W. G. Berl .....	1943
J. P. Coyle .....	1944
A. E. Hardy .....	1945
N. A. Nielsen .....	1946
H. Leidheiser, Jr. ....	1947
M. A. Streicher .....	1948

### Norman Hackerman Young Author Award (continued)

J. C. Griess, Jr.	1949
G. W. Murphy	1950
J. T. Byrne	1951
W. E. Kuhn	1952
J. Halpern	1953
M. J. Pryor	1954
M. Stern	1955
R. S. Cooper	1956
P. Ruetschi	1957
M. Stern	1958
F. A. Posey	1959
A. C. Makrides	1960
J. D. Newson	1961
M. J. Dignam	1962
J. A. Cunningham	1963
R. E. Westerman	1964
R. E. Visco	1965
J. Newman	1966
H. W. Pickering	1967
G. G. Charette	1968
G. Dryhurst	1969
J. Newman	1969
W. R. Parrish	1969
A. J. Appleby	1970
D. C. Johnson	1970
D.-T. Chin	1971
M. S. Whittingham	1971
M. A. Hopper	1972
F. Kuhn-Kuhnenfeld	1972
M. J. Bowden	1973
L. Thompson	1973
D. Simonsson	1973
S. H. Cadle	1974
A. D. Dalvi	1974
L. R. Faulkner	1975
S. Solmi	1975
P. Negrini	1975
B. MacDougall	1976
S. K. Ubhayakar	1976
C. W. Manke	1977
W. J. Horkans	1977
A. G. Gonzalez	1978
C. H. Tsang	1978
D. A. Antoniadis	1978
D. Y. Wang	1979
C. W. Magee	1979
E. Takayama	1980
H. Reller	1980
W. J. P. Van Enckevort	1981
M. W. M. Graef	1981
C. Y. Chao	1981
L. F. Lin	1981
D. W. Sittari	1982
T. P. Chow	1982
P. G. Pickup	1983
K. F. Jensen	1983
D. B. Graves	1983
N. A. Godshall	1984
E. K. Broadbent	1984
J. C. Farmer	1985
G. S. Oehrlein	1985
J. Richer	1986
T. Tanaka	1986
C. P. Wilde	1987
P. N. Bartlett	1987
J. Maier	1987
J. A. Bardwell	1988
C.-J. Han	1988
A. E. Husser	1989
D. H. Craston	1989
J. M. Rosamilia	1989
J. H. Comfort	1989
M. W. Verbrugge	1990
C. J. Giunta	1990
T. J. Mountziaris	1991
J. V. Cole	1991
D. W. Suggs	1991
B. W. Gregory	1991
D. B. Bonham	1992
E. S. Aydil	1992
P. P. Apte	1993
A. West	1993
H. A. Gasteiger	1994
F. R. Myers	1994
R. Vidal	1995
G. D. Papasouliotis	1995
J. H. Nordlien	1996
J. Lee	1996
A. K. Padhi	1997
S. M. Han	1997
A. D. Robertson	1998
Y. Shao-Horn	1998
S. R. Kaluri	1998
A. Bautista	1999
P. A. O'Neil	1999
R. T. Leah	2000
J. W. Klaus	2000
J. F. Whitacre	2001
P. Feichtinger	2001
T. J. Pricer	2002
P. S. Lee	2002
K. Jambunathan	2003
S. Noda	2003
M. Miyamoto	2003
R. Akolkar	2004
Y.-K. Hong	2004
S. Borini	2005
M. Kunitatsu	2005
Mathieu Bervas	2006
Pradeep Dixit	2006
Steffen Eccarius	2007
A. T. J. van Niftrik	2007
Kevin Ralston	2008
Eu Jin Tan	2008
Yudi Setiawan	2008
Paul Albertus	2009
Louis Hutin	2009
Gijs Dingemans	2010
Erik Langereis	2010
Stephen E. Potts	2010
Xingbao Zhu	2010

Igor Volov	2011
Claudia Fleischmann	2011
Sebastien Couet	2011
Koen Schouteden	2011
Philipp Hönicke	2011
Kiersten Horning	2012
Sykes Mason	2012
Balavinayagam Ramalingam	2012
Rahul Malik	2013
Aziz Abdellahi	2013
Nathaniel D. Leonard	2014

### Bruce Deal & Andy Grove Young Author Award

Konstantinos Spyrou	2013
Pengfei Guo	2014
Ran Cheng	2014
Wei Wang	2014

### ECS General Society Student Poster Session Awards

F. Forouzan	1993
D. L. Taylor	1993
L. Abraham	1994
A. J. Aldykiewicz	1994
A. Dalmia	1994
M. Murthy	1994
R. Munkundan	1995
A. E. Thomas	1995
C. E. Ramberg	1995
W. Wang	1995
S. Chen	1996
K. Kowal	1996
C. Leger	1997
E. Potteau	1997
K. Bera	1998
E. Dickenson	1998
G. Q. Lu	1998
M. W. Riley	1998
J. Pearton	1999
A. Templeson	1999
N. Baydokhi	2000
A. Pismenny	2000
A. Besing	2001
V. Sochnikov	2001
S. Dimovski	2002
P. Maitra	2002
H. Ohtsuka	2002
T. Wiley	2002
P. Kavanagh	2003
B. Monahan	2003
O. Rabin	2003
P. Scopece	2003
K. Yasuda	2003
M. Guan	2004
K. Kanaizuka	2004
A. Oide	2004
R. M. Todi	2004
W. J. Cheong	2005
J. Chmiola	2005
S. Chrisanti	2005
C. Drake	2005

## ECS General Society Student Poster Session Awards (continued)

D. L. Gonzalez-Parra	2006
Naoko Kamiura	2006
T. Takeyasu	2006
Arun Vijayakumar	2006
Naoaki Hashimoto	2007
Daisuke Kikutani	2007
Toyoki Okumura	2007
Gholamreza Rostamikia	2007
Arun Vijayakumar	2007
Rajwant Singh Bedi	2008
Bryan K. Boggs	2008
John Chmiola	2008
Yuta Ishigami	2008
J. S. O'Brien	2008
Tyler Osborn	2008
Ralf Peipmann	2008
Philippe Perret	2008
Kenji Takada	2008
Vinit Todi	2008
Natalia B. Shustova	2008
Joshua Snyder	2008
Tomomasa Sugiyama	2008
Anasuya Adibhatla	2009
Magdalena Gizowska	2009
Frederik Golks	2009
Karina Kangas	2009
Kiera A. Kurak	2009
Manale Maalouf	2009
Debasish Mohanty	2009
Natalia Shustova	2009
Joko Sutrisno	2009
Jaroslav Syzdek	2009
Alex Avekians	2010
Shayna Brocato	2010
Pablo de la Iglesia	2010
Christian Desilets	2010
Ayesha Maria Hashambhoy	2010
Carolyn Lau	2010
Raja S. Mannam	2010
Joshua P. McClure	2010
Sarvesh Pasem	2010
Robert Sacci	2010
Misato Tashiro	2010
Jesse Benck	2011
Benjamin Caire	2011
Zhebo Chen	2011
Damilola Daramola	2011
Kirsten Marie Jensen	2011
Javed Khan	2011
Simon Lux	2011
Ashley Maes	2011
Lingchong Mai	2011
Francis Richey	2011
Neil Spinner	2011
Melissa Vandiver	2011
Georgi Bodurov	2012
Aurelien Etienne	2012
Kiersten Horning	2012
Yoon Jang Kim	2012

Prabhu Doss Mani	2012
K. Sykes Mason	2012
Seungha Oh	2012
Michael Siedlik	2012
Bong Seob Yang	2012
Yoshinobu Adachi	2012
Kwi Nam Han	2012
Takashi Hasegawa	2012
Cheng Ai Li	2012
Shigeta Yagyu	2012
Michal Osiak	2013
Andrew J. Naylor	2013
Danielle Smiley	2013
Mohammed Boota	2013
Kelsey B. Hatzall	2013
Christopher R. Dennison	2013
Tobias Placke	2013
Buido Schmuelling	2013
Richard Kloepsch	2013
Olga Fromm	2013
Sergej Rothermel	2013
Paul Meister	2013
Kristy Jost	2013
John McDonough	2013
Takashi Tsuda	2013
Masanari Hashimoto	2013
Axel Gambou-Bosca	2014
Miguel Angel Arellano Gonzalez	2014
Andrew Durney	2014
Elizabeth Hotvedt	2014
Andrew R. Akbashev	2014
Jorge Ivan Aldana-Gonzalez	2014

## ECS Sponsored Meeting Student Poster Award Winners

### Simpósio Brasileiro de Electroquímica e Eletroanalítica (SIBEE)

L. M. Nunes	2009
Felipe Ibanhi Pires	2011
V. Dos Santos	2013

### China Semiconductor Technology International Conference (CSTIC)

C. Santini	2009
L. Ma	2010
M. B. Gonzalez	2011
Chien Chi Chen	2012
Tao Deng	2013
Meng Lin	2014

### Euro CVD Award

A. Szkudlarek	2011
Not Awarded	2013

### IC4N: From Nanoparticles and Nanomaterials to Nanodevices and Nanosystems

M. Gharbi	2009
H. N. Green	2011
Mariana Sendova	2013

### Sociedad Mexicana de Electroquímica (SMEQ) and ECS Mexican Section Meeting

A. Mendez-Albores	2008
L. S. Hernandez-Munoz	2009

C. Avila-Gonzalez	2010
D. C. Martinez-Casillas	2011
Lidia G. Trujano-Ortiz	2012
Paola Yamela De la Cruz-Guzmán	2013

## Turner Book Prize

S. Speil	1942
W. G. Berl	1943
J. P. Coyle	1944
J. T. Waber	1945
B. Cartwright	1946
A. E. Hardy	1947
M. A. Streicher	1948
R. E. Hoeckelman	1949
P. Delahay	1950
K. H. Stern	1951
C. C. Templeton	1951
P. T. Gilbert	1952
R. B. Holden	1953
D. A. Vermilyea	1954
J. G. Jewell	1955
J. H. Westbrook	1956
A. C. Makrides	1957
J. P. Pemsler	1958
R. G. Carlson	1959
R. E. Meyer	1960
P. C. Milner	1960
H. Freitag	1961
P. J. Boddy	1962
E. J. Cairns	1963
M. Weinstein	1963
R. W. Bartlett	1964
E. M. Hofer	1965
C. S. Tedmon, Jr.	1966
F. P. Kober	1967
J. M. Hale	1968

## Leadership Circle Awards

### Legacy Level

Dow Chemical Co., Central Research, received 2011
Olin Chlor Alkali Products Division, received 2011
Occidental Chemical Corp., received 2013

### Medallion Level

Occidental Chemical Corp., received 2007
Atotech USA, Inc., received 2009
Energizer, received 2009

### Diamond Level

General Electric Co., Corporate Research & Development, received 2001
General Motors Research Laboratories, received 2001
Rayovac, received 2002
Duracell, received 2006
IBM Corporation, received 2006

### Gold Level

Toshiba Corp., Research & Development Center, received 1998
Siltronic AG, received 1998
Osram Sylvania, Inc., Chemical & Metallurgical Division, received 1999



**Leadership Circle Award***(continued)*

Sandia National Laboratories, received 2000  
 International Lead Zinc Research Organization, Inc., received 2003  
 Medtronic, Inc., Energy and Component Center, received 2004  
 Toyota Central Research and Development Labs, Inc., received 2004  
 Yuasa Corp, received 2004  
 Princeton Applied Research/Solartron Analytical, received 2005  
 Saft Batteries, received 2006  
 CSIRO Minerals, received 2007  
 Industrie de Nora, received 2007  
 Ballard Power Systems, Inc., received 2008  
 ECO Energy Conversion, received 2008  
 Varta Automotive GmbH, Advanced Battery Division, received 2008  
 Greatbatch, Inc., received 2010  
 Leclanche S. A., received 2009  
 Max-Planck-Institut für Festkörperforschung, received 2009  
 Giner, Inc., received 2010  
 Greatbatch, Inc., received 2010  
 TIMCAL Graphite and Carbon Ltd., received 2011  
 3M Company, received 2014

**Silver Level**

Eltech Systems Corp., received 1992  
 Tronox LLC, received 1994  
 Japan Storage Battery Co., Ltd., received 1997  
 3M Company, received 1998  
 E. I. Du Pont de Nemours & Co., Inc., HD Microsystems, received 1998  
 Solartron Instruments, received 1999  
 Central Electrochemical Research Institute, received 2002  
 TDK Corp., R&D Center, received 2002  
 Valence Technology, received 2002  
 DAISO, Co., Ltd., received 2003  
 Panasonic Corp., received 2003  
 C. Uyemura & Co., Ltd., Central Research Lab, received 2005  
 Electrosynthesis Co., Inc., received 2005  
 FMC Corporation, Active Oxidants Division, received 2005  
 Nacional de Grafite, LTDA, received 2005  
 Permelec Electrode, Ltd., received 2005  
 PG Industries, Inc., Chemicals Group Technical Center, received 2005  
 Scribner Associates, Inc., received 2005  
 Technic Inc., received 2005  
 Advance Research Chemicals, Inc., received 2007  
 Yeager Center for Electrochemical Sciences at CWRU, received 2007  
 PEC North America, received 2009  
 Quallion, LLC, received 2009  
 UTC Power, received 2009  
 Broddarp of Nevada, received 2010  
 Teledyne Energy Systems, Inc., received 2010  
 OM Group, Inc., received 2012  
 Evonik Degussa GmbH, received 2013

Permascand AB, received 2013  
 ZSW, received 2014  
 Lawrence Berkeley National Lab, received 2014

**Bronze Level**

Hach Company, Radiometer Analytical Division, received 2002  
 De Nora Technologie Elettrochimiche S.r.L., received 2003  
 BAE Systems Battery Technology Center, received 2005  
 Agilent Laboratories, received 2008  
 Evonik Degussa GmbH, received 2008  
 Samsung SDI, received 2008  
 GAIA-Akkumulatorenwerke GmbH, received 2009  
 Permascand AB, received 2009  
 ZSW Center for Solar Energy & Hydrogen Research, received 2009  
 Coolohm, Inc., received 2010  
 ElectroChem, Inc., received 2010  
 Faraday Technology, Inc., received 2010  
 Johnson Matthey, received 2010  
 Metrohm USA, received 2010  
 Pine Research Instrumentation, received 2010  
 Sanyo Electric Co. Ltd., received 2011  
 Nissan Motor Co. Ltd., received 2011  
 Hydro-Québec, received 2011  
 Bio-Logic USA/Bio-Logic SAS, received 2012  
 Gamry Instruments, received 2012  
 Rockwood Lithium, received 2012  
 ENEOS CELLTECH Co. Ltd., received 2012  
 Fortu Research GmbH, received 2012  
 Asahi Kasei E-Materials Corp., received 2014  
 Gelest, Inc., received 2014  
 Honda R+D Co. Ltd., received 2014  
 Next Energy EWE-Forschungszentrum, received 2014

**Battery Division Student Research Award**

J. R. Waggoner .....1980  
 K. E. Yee .....1980  
 W. A. van Schalkwijk .....1981  
 C. Y. Mak .....1986  
 T. I. Evans .....1987  
 C. C. Streinz .....1988  
 J. Weidner .....1989  
 M. G. Lee .....1990  
 E. J. Podlaha .....1991  
 G. E. Gray .....1992  
 D. Qu .....1993  
 P. De Vidts .....1994  
 S. Motupally .....1995  
 J. Xu .....1996  
 Y. Shao-Horn .....1997  
 I. Courtney .....1998  
 G.E. Rousse .....1999  
 V. Srinivasan .....2000  
 M. Zhao .....2001

V. Subramaniam .....2001  
 L. Fransson .....2002  
 K.-W. Park .....2003  
 A. Weber .....2004  
 C. Delacourt .....2005  
 K. Kang .....2006  
 Feng Jiao .....2007  
 Nonglak Meethong .....2009  
 Yi-Chun Lu .....2010  
 Christopher Fell .....2011  
 Yuhui Chen .....2012  
 Mohammed Ati .....2013  
 Martin Ebner .....2014

**Battery Division Research Award**

J. J. Lander .....1958  
 D. M. Smyth .....1959  
 T. P. Dirkse .....1962  
 F. G. Will .....1964  
 J. Burbank .....1966  
 C. P. Wales .....1966  
 D. Tuomi .....1968  
 Y. Okinaka .....1970  
 A. C. Simon .....1972  
 S. M. Caulder .....1972  
 J. McBreen .....1974  
 T. Katan .....1976  
 S. Szpak .....1976  
 A. Heller .....1978  
 K. R. Bullock .....1980  
 R. A. Huggins .....1982  
 D. Pavlov .....1984  
 G. H. J. Broers .....1985  
 J. L. Devitt .....1986  
 D. H. McClelland .....1986  
 J. P. Gabano .....1987  
 M. Armand .....1988  
 J. Jorne .....1989  
 A. N. Dey .....1990  
 R. E. White .....1991  
 D. N. Bennion .....1992  
 E. Peled .....1993  
 K. M. Abraham .....1995  
 J. Dahn .....1996  
 B. Scrosati .....1997  
 C. Delmas .....1999  
 J. B. Bates .....2000  
 S. Wittingham .....2002  
 K. Kinoshita .....2003  
 J. Newman .....2004  
 G. Ceder .....2004  
 M. Thackeray .....2005  
 T. Ohzuku .....2006  
 Clare P. Grey .....2007  
 Peter G. Bruce .....2008  
 Linda Nazar .....2009  
 Dominique Guyomard .....2010  
 Yang-Kook Sun .....2011  
 Stefano Passerini .....2012  
 Doron Aurbach .....2013  
 Arumugam Manthiram .....2014

## Battery Division Research Award (continued)

### Battery Division Technology Award

Y. Nishi.....	1994
K. Ozawa.....	1994
E. S. Takeuchi.....	1995
S. Gilman.....	1996
J.-M. Tarascon.....	1997
G. E. Blomgren.....	1998
A. Yoshino.....	1999
H. Y. Cheh.....	2000
B. B. Owens.....	2001
D. Wilkinson.....	2002
M. Winter.....	2002
J. Yamaki.....	2003
M. Yoshio.....	2003
M. Ue.....	2004
D. Aurbach.....	2005
P. Novak.....	2005
K. Lee.....	2006
Michel Broussely.....	2007
Hiroshi Inoue.....	2008
Satoshi Mizutani.....	2008
Eiji Endoh.....	2009
Khalil Amine.....	2010
Jeffrey Dahn.....	2011
Yet-Ming Chiang.....	2012
Karim Zaghib.....	2013
Feng Wu.....	2014



## Corrosion Division H. H. Uhlig Award (formerly the Outstanding Achievement Award of the Corrosion Division 1973-1983)

M. Cohen.....	1973
D. A. Vermilyea.....	1975
J. Kruger.....	1977
M. J. Pryor.....	1979
T. R. Beck.....	1981
N. Sato.....	1983
P. Kofstad.....	1985
H. W. Pickering.....	1987
R. P. Frankenthal.....	1989
H. Leidheiser.....	1991
H. Isaacs.....	1993
W. H. Smyrl.....	1995
M. J. Graham.....	1997
K. Hashimoto.....	1999
D. Macdonald.....	2001
F. Mansfeld.....	2002
C. Leygraf.....	2003
R. Newman.....	2004
P. Marcus.....	2005
G. T. Burstein.....	2006
Edward McCafferty.....	2007
Martin Stratmann.....	2008
John R. Scully.....	2009
Gerald S. Frankel.....	2010
Patrik Schmuki.....	2011

Hans-Henning Strehblow.....	2012
Mário Ferreira.....	2013
Paul Natishan.....	2014

## Corrosion Division Morris Cohen Graduate Student Award

(formerly the Corrosion Division Award for Summer Study 1986-1988)

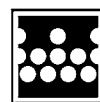
S. D. Scarberry.....	1986
C. C. Streinz.....	1987
R. Bianco.....	1988
M. A. Harper.....	1992
R. G. Buchheit.....	1993
J.-F. Yan.....	1994
B. V. Cockeram.....	1995
I. Odneval.....	1996
D. G. Kolman.....	1997
C. S. Brossia.....	1998
M. Verhoff.....	1999
S. Yu.....	2000
S. F. Nitodas.....	2001
K. Cooper.....	2002
T. Ramgopal.....	2003
Q. Meng.....	2004
D. Chidambaram.....	2005
H. Tsuchiya.....	2006
Magnus Johnson.....	2007
Christopher D. Taylor.....	2008
Mariano Iannuzzi.....	2009
Pouria Ghods.....	2010
Hongbo Cong.....	2011
Mariano Kappes.....	2012
Quentin Van Overmeere.....	2013
Yolanda Hedberg.....	2014



## Dielectric Science and Technology Division Thomas D. Callinan Award

J. A. Davies.....	1968
J. P. S. Pringle.....	1968
G. M. Sessler.....	1970
J. E. West.....	1970
C. A. Mead.....	1971
W. Kern.....	1972
J. R. Szedon.....	1973
C. M. Osburn.....	1975
T. W. Hickmott.....	1976
J. R. Ligenza.....	1977
R. Williams.....	1978
R. J. Kriegler.....	1979
B. E. Deal.....	1982
L. Young.....	1983
A. K. Sinha.....	1985
A. C. Adams.....	1986
S. P. Murarka.....	1987
R. B. Comizzoli.....	1988
E. A. Irene.....	1988
R. A. Levy.....	1989
M. H. Woods.....	1990

V. J. Kapoor.....	1991
S. I. Raider.....	1992
D. W. Hess.....	1993
Y.-H. Wong.....	1994
K. L. Mittal.....	1995
W. D. Brown.....	1996
J. P. Dismukes.....	1997
R. Singh.....	1998
A. Rohatgi.....	1999
K. Saraswat.....	2000
P. Ho.....	2001
J. Deen.....	2002
S. K. Banerjee.....	2003
A. G. Revesz.....	2003
S. Fonash.....	2004
Paul A. Kohl.....	2008
Tsu-Jae King Liu.....	2011
Durgamadhab (Durga) Misra.....	2013



## Electrodeposition Division Research Award

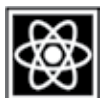
W. Weil.....	1980
Y. Okinaka.....	1981
E. B. Budevski.....	1982
R. C. Alkire.....	1983
L. T. Romankiw.....	1984
R. J. von Gutfeld.....	1984
J. W. Dini.....	1985
H. R. Johnson.....	1985
H. Leidheiser.....	1986
J. P. Hoare.....	1987
H. Y. Cheh.....	1988
D. S. Lashmore.....	1989
S. Nakahara.....	1990
T. C. Franklin.....	1991
R. E. White.....	1992
P. C. Andricacos.....	1993
M. J. Froment.....	1994
D. Landolt.....	1995
T. Osaka.....	1996
M. Schlesinger.....	1997
Madhav Datta.....	1998
R. Winand.....	1999
H. Honma.....	2000
D. Kolb.....	2002
J. Switzer.....	2003
J. Dukovic.....	2004
P. Bartlett.....	2005
T. P. Moffat.....	2006
Ibro Tabakov.....	2007
Olaf Magnussen.....	2008
John Stickney.....	2009
Takayuki Homma.....	2010
Philippe Allongue.....	2011
Hariklia Deligianni.....	2012
Daniel Lincot.....	2013
Alan C. West.....	2014

## Electronics and Photonics Division Award (continued)



### Electronics and Photonics Division Award

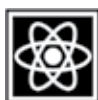
F. A. Trumbore.....	1970
F. C. Palilla.....	1971
M. B. Panish.....	1972
W. A. Pliskin.....	1973
B. E. Deal.....	1974
H. M. Manasevit.....	1975
M. G. Craford.....	1976
A. Y. Cho.....	1977
C. M. Wolfe.....	1978
E. Sirtl.....	1979
J. M. Woodall.....	1980
G. A. Rozgonyi.....	1981
G. W. Cullen.....	1982
D. W. Shaw.....	1983
A. Reisman.....	1984
S.-M. Hu.....	1985
E. H. Nicollan.....	1986
B. Schwartz.....	1987
K. E. Bean.....	1988
T. Kamins.....	1989
D. M. Brown.....	1990
C. M. Osburn.....	1991
G. S. Oehrlein.....	1992
B. S. Meyerson.....	1993
G. K. Celler.....	1994
L. C. Kimerling.....	1995
H. Huff.....	1996
A. F. Tasch.....	1997
U. M. Gösele.....	1999
S. N. G. Chu.....	2000
S. P. Murarka.....	2001
S. Cristoloveanu.....	2002
T. Ohmi.....	2003
C. Claeys.....	2004
S. Pearton.....	2005
H. Massoud.....	2006
Yue Kuo.....	2007
Fan Ren.....	2008
Eicke R. Weber.....	2009
Lih J. Chen.....	2010
M. Jamal Deen.....	2011
Chennupati Jagadish.....	2012
Durgamadhab (Durga) Misra.....	2013
Albert Baca.....	2014



### Energy Technology Division Research Award

M. W. Verbrugge.....	1994
S. Srinivasan.....	1996
H. R. Kunz.....	1998

A. W. Czanderna.....	1999
R. Selman.....	2001
I. Uchida.....	2001
A. Nozik.....	2003
K. Kinoshita.....	2004
K. Kanamura.....	2005
S. Licht.....	2006
Radoslav Adzic.....	2007
Yang Kook Sun.....	2007
Tom Fuller.....	2008
Krishnan Rajeshwar.....	2009
Jai Prakash.....	2009
John Weidner.....	2010
Karim Zaghib.....	2010
Claude Levy-Clément.....	2011
Piotr Zelenay.....	2013
James Fenton.....	2014



### Energy Technology Division Srinivasan Young Investigator Award

Vijay Ramani.....	2012
Adam Weber.....	2012
Stefan Freunberger.....	2013
Minhua Shao.....	2014



### Nanocarbons Division Richard E. Smalley Research Award

Sumio Iijima.....	2008
Phaedon Avouris.....	2009
Robert Haddon.....	2011
Nazario Martin.....	2013



### SES Research Young Investigator Award of the Nanocarbons Division

Nikhil Koratkar.....	2009
Mark C. Hersam.....	2010
Aurelio Mateo-Alonso.....	2012



### High Temperature Materials Division Outstanding Achievement Award

J. B. Wagner, Jr.....	1986
W. L. Worrell.....	1988
R. A. Rapp.....	1990
H. Schmalzried.....	1992
S. C. Singhal.....	1994
C. G. Vayenas.....	1996

C. Bernard.....	2001
H. Yokokawa.....	2002
K. Spear.....	2004
A. Virkar.....	2006
David J. Young.....	2008
Harry L. Tuller.....	2010
Eric Wachsman.....	2012
Janusz Nowotny.....	2014

### High Temperature Materials Division J. B. Wagner, Jr. Young Investigator Award

S. Mohnney.....	1999
S. M. Haile.....	2001
M. Swihart.....	2003
R. Mukundan.....	2005
Xiao-Dong Zhou.....	2007
Juan Claudio Nino.....	2009
Toshiaki Matsui.....	2011
Paul Gannon.....	2013



### Industrial Electrochemistry and Electrochemical Engineering Division New Electrochemical Technology (NET) Award

Asahi Glass Company.....	1999
DeNora Tecnologie.....	2005
E-Tek.....	2005
Bayer Material Science AG.....	2005
Ballard Power Systems.....	2007
FuelCell Energy.....	2009
U.S. Army Engineer Research and Development Center, Construction Engineering Research Laboratory, and Electro Tech CP.....	2011
UTC Power.....	2013
Matthew Ward Brodt.....	2014

### Industrial Electrochemistry and Electrochemical Engineering Division H. H. Dow Memorial Student Achievement Award

R. Bakshi.....	1991
G. J. Yusem.....	1992
J. A. Poirier.....	1993
S. Siu.....	1994
M. Vreeke.....	1995
A. E. Thomas.....	1996
S. A. Leith.....	1997
P. Soo.....	1998
S. Sriramulu.....	1999
K. M. Jeerage.....	2000
A. L. Prieto.....	2001
W. He.....	2002
J. Zhang.....	2003
S. Basker.....	2004



**Industrial Electrochemistry and  
Electrochemical Engineering  
Division Student Achievement Award**  
(continued)

V. Ramani.....	2005
N. Jalani.....	2006
Brenda L. Garcia-Diaz.....	2007
Sunil Roy.....	2008
Prabeer Barpanda.....	2009
Brandon Bartling.....	2010
Long Cai.....	2011
Meng Li.....	2012
Young Woo-Lee.....	2013
Matthew Ward Brodt.....	2014

**Industrial Electrochemistry and  
Electrochemical Engineering  
Division Student Achievement Award**

Y.-E. Sung.....	1995
J. K. N. Mbindyo.....	1996
C. A. Smith.....	1997
J. A. Drake.....	1998
R. Lowrey.....	1999
C. Arvin.....	2000
B. Djurfors.....	2001
V. Subramanian.....	2002
P. M. Gomadam.....	2003
I. AlNashef.....	2004
V. Sethuraman.....	2006
Minhua Shao.....	2007
Vinten Dewikar.....	2008
Paul Albertus.....	2009
Satheesh Sambandam.....	2010
Venkatasailanathan Ramadesigan.....	2011
Rainer Kungas.....	2012
Wei Yan.....	2013
Christopher Arges.....	2013
Paul Northrop.....	2014
Venkata Raviteja Yarlagadda.....	2014
Vedasri Vedharathinam.....	2014



**Luminescence and Display Materials  
Division Centennial Award**

A. Meijerink.....	2004
A. Srivastava.....	2004
H. Guedel.....	2006
David J. Lockwood.....	2010
Hajime Yamamoto.....	2012



**Organic and Biological  
Electrochemistry Division Manuel  
Baizer Memorial Award**

T. Shono.....	1994
H. Lund.....	1996

H. Schäfer.....	1998
S. Torii.....	1998
J. Simonet.....	2000
J. Utley.....	2000
J. M. Savéant.....	2002
M. Tokuda.....	2004
D. Evans.....	2004
I. Nishiguchi.....	2006
Albert Fry.....	2008
Toshio Fuchigami.....	2010
Dennis Peters.....	2012
Jun-Ichi Yoshida.....	2014



**Physical and Analytical  
Electrochemistry Division  
David C. Grahame Award**

F. C. Anson.....	1983
J. Newman.....	1985
A. Heller.....	1987
M. J. Weaver.....	1989
B. Miller.....	1991
A. T. Hubbard.....	1993
R. M. Wightman.....	1995
D. M. Kolb.....	1997
P. N. Ross, Jr.....	1999
D. A. Scherson.....	2001
A. Wieckowski.....	2003
H. White.....	2005
Joseph T. Hupp.....	2007
Héctor D. Abruña.....	2009
Masatoshi Osawa.....	2011
Richard L. McCreery.....	2013

**Physical and Analytical  
Electrochemistry Division  
Max Bredig Award in  
Molten Salt Chemistry**

M. Blander.....	1987
G. P. Smith.....	1990
R. A. Osteryoung.....	1992
G. Mamantov.....	1994
N. Bjerrum.....	1996
H. A. Øye.....	1998
Y. Ito.....	1999
G. N. Papatheodorou.....	2002
M. Gaune-Escard.....	2004
J. Wilkes.....	2006
Bernard Gilbert.....	2008
C. Austen Angell.....	2010
Derek Fray.....	2012
Charles Hussey.....	2014



**Sensor Division Outstanding  
Achievement Award**

J. Janata.....	1994
R. P. Buck.....	1996
I. Lundström.....	1998
A. J. Ricco.....	2000
M. Aizawa.....	2002
N. Yamazoe.....	2004
W. Heineman.....	2006
Chung-Chiun Liu.....	2008
Thomas Thundat.....	2010
Sheikh Ali Akbar.....	2012
Peter Hesketh.....	2014



**Sensor Division Student Paper Award**

Jeffrey Kirsch.....	2012
Kazuaki Edagawa.....	2012

**Gwendolyn B. Wood Section  
Excellence Award**

Metropolitan New York Section.....	1975-1976
Columbus Section.....	1976-1977
Chicago Section.....	1979-1980
Chicago Section.....	1980-1981
Chicago Section.....	1981-1982
Southern Wisconsin Section.....	1982-1983
Southern Wisconsin Section.....	1983-1984
Southern Wisconsin Section.....	1984-1985
National Capital Section.....	1985-1986
North Texas Section.....	1986-1987
Southern Wisconsin Section.....	1987-1988
Chicago Section.....	1988-1989
Southern Wisconsin Section.....	1989-1990
North Texas Section.....	1990-1991
Southern Wisconsin Section.....	1991-1992
Southern Wisconsin Section.....	1992-1993
New England Section.....	1993-1994
National Capital Section.....	1994-1995
National Capital Section.....	1995-1996
National Capital Section.....	1996-1997
Canadian Section and National Capital Section.....	1997-1998
Chicago Section.....	1998-1999
New England Section.....	1999-2000
National Capital and New England Section.....	2000-2001
National Capital Section.....	2001-2002
National Capital Section.....	2002-2003
San Francisco Section.....	2003-2004
San Francisco Section.....	2004-2005
San Francisco Section.....	2005-2006

**Canada Section Electrochemical Award**

E. J. Casey	1982
Brian E. Conway	1986
L. Young	1990
S. Flengas	1994
Jacek Lipkowski	1998
Jean Lessard	2002
Jeffrey R. Dahn	2006
David Shoesmith	2010

**Canada Section R. C. Jacobsen Award**

George Fraser	1988
Barry MacDougall	1990
Louis Brossard	1994
Ernest E. Criddle	2002
Sharon G. Roscoe	2006
Jacek Lipkowski	2010

**Canada Section W. Lash Miller Award**

J. L. Ord	1969
J. E. Desnoyers	1971
A. K. Vijh	1973
W. R. Fawcett	1975
W. A. Adams, A. J. Spring Thorpe	1977
Barry MacDougall	1979
David W. Shoesmith	1981
A. Belanger	1983
Viola I. Birss	1985
S. Das Gupta	1987
K. Tomantscher, D. Leaist	1989
Jennifer Bardwell	1991
Jeff Dahn	1993
Alireza Zolfaghari-Hesari	1999
Daniel Bizzotto	2001
Jamie Noel	2003
Aicheng Chen	2009
Hua-Zhong (Hogan) Yu	2011
Not Awarded	2013

**Canada Section Student Award**

Jean St-Pierre	1988
Gessie Brisard	1989
James Hinatsu	1990
Gregory Jerkiewicz	1991
Hubert Dumont	1992
Meijie Zhang	1993
Dan Bizzotto	1994
Sylvie Morin	1995
Alexandre Brolo	1996
Aicheng Chen	1997
Ian A. Courtney	1998
Dany Brouillette	1999
Shiyuan Qian	1999
Bryan Park	2000
Luc Beaulieu	2001
Vlad Zamliny	2002
Sandra Rifai	2003
Amy Lloyd	2004
M. Toupin	2006
Thamara Laredo	2007
Arash Shahryari	2008

Mohamed Naser	2009
Mohammed Naser	2010
Ahmad Ghahremaninezhad	2011
Karen Chan	2012
Drew Higgins	2013

**Cleveland Section Ernest B. Yeager Electrochemistry Award**

B. Miller	2004
Richard McCreery	2006
Uziel Landau	2008
Jacek Lipkowski	2010
Gerald Frankel	2012

**Europe Section Gerischer Award**

Akira Fujishima	2003
Michael Graetzel	2005
Allen J. Bard	2007
Rüdiger Memming	2009
Helmut Tributsch	2011
Arthur Nozik	2013

**Europe Section****Alessandra Volta Award**

M. Armand	2000
J.-M. Tarascon	2002
R. G. Compton	2004
Bruno Scrosati	2006
Not Awarded	2010
Jean-Noël Chazalviel	2012
Phillip Bartlett	2014

**Georgia Section Student Award**

Matthew Lynch	2012
Kara Evanoff	2013
Johanna Karolina Stark	2014

**Korea Section Student Award**

Ho-Suk Ryu	2006
Jae-Hwan Oh	2007
Sung Ki Cho	2008
Cheol-Min Park	2009
Ji-Hyung Han	2010
Young Woo Lee	2011
Not Awarded	2012
Seong Min Bak	2013
Haegyeom Kim	2014

**National Capital Section William Blum Award**

W. Blum	1958
S. Schuldiner	1960
D. N. Craig	1962
A. Brenner	1964
J. Kruger	1966
J. Burbank	1969
K. H. Stern	1972
B. F. Brown	1974
A. C. Simon	1976
R. T. Foley	1978

R. de Levine	1980
E. McCafferty	1982
R. L. Jones	1984
Ugo Bertocci	1986
P. J. Moran	1988
M. H. Peterson	1990
D. S. Lashmore	1992
J. R. Scully	1994
Paul M. Natishan	1996
G. D. Davis	1998
W. E. O'Grady	2000
Thomas P. Moffat	2002
J. L. Hudson	2004

**National Capital Section Robert T. Foley Award**

R. T. Foley	1989
W. J. Hamer	1991
G. E. Stoner	1993
P. J. Moran	1995
P. M. Natishan	1997
J. Kruger	1999
R. G. Kelly	2001

**San Francisco Section Daniel Cubicciotti Student Award**

L. J. Oblonsky	1995
Y. Ma	1996
C. Wade	1997
C. R. Horne	1998
M. Tucker	1999
L. V. Protsailo	2000
H. Visser	2001
D. Wheeler	2002
J. Hollingsworth	2003
E. Guyer	2004
D. Steingert	2005
Sarah Stewart	2006
James Wilcox	2007
Susan Ambrose	2008
Que Anh Nguyen	Honorable Mention 2008
Yuan Yang	Honorable Mention 2008
Paul Albertus	2009
Andrew Lee	Honorable Mention 2009
Mark Oliver	Honorable Mention 2009
Venkat Viswanathan	2010
Yi Wei Chen	Honorable Mention 2010
Thomas Conry	Honorable Mention 2010
Maureen Tang	2011
Yi Wei Chen	Honorable Mention 2011
Thomas Conry	Honorable Mention 2011
Allison Engstrom	2012
Matthew McDowell	Honorable Mention 2012
Xiongwu Kang	Honorable Mention 2012
Daniel Cohen	2013
Mallory Hammock	Honorable Mention 2013
Anthony Ferrese	Honorable Mention 2013
Nian Liu	2014
Isaac Markus	Honorable Mention 2014
Alan Berger	Honorable Mention 2014