



# THE ECS CENTENNIAL CELEBRATIONS

by Mary E. Yess

In 1902, at the founding of the Society, C. J. Reed moved that the new organization be called “The American Electrochemical Society.” Immediately thereafter (in the spirit of business meetings the world over), an amendment was introduced. Carl Hering proposed that the word electrochemical be written with a hyphen and a capital C. The amendment did not carry; it lost by a vote of 29 to 21. The annals do not record how long the discussion on hyphenation and capitalization lasted, nor do they relate the nature of the comments. Judging from other contemporary writings in the *Transactions*, however, they were quite likely to have been clever and highly entertaining. This anecdote about the Society’s name is just one of many interesting stories and pictures—from the droll to the serious—that will come to light during the Society’s Centennial Year in 2002.

At that first general meeting back in 1902, the international flavor and interest was already apparent, with attendees coming from the United States and eight other countries. One hundred years later, in May 2002, the Society’s **CENTENNIAL MEETING** will still serve its traditional, long-standing purpose—presenting a full program of technical papers, with presenters and attendees from all over the world. Centennial Committee Chairman Bob Frankenthal said, “We have some wonderful events planned for meeting attendees, including three plenary talks; two major exhibits on the history of electrochemical and solid-state science and technology, and on the history of the Society; special entertainment planned for the Monday Evening Mixer; and a pull-out-the-stops Centennial Celebration Party on Wednesday evening. We hope many of our members will be able to join in the festivities and take advantage of the many special symposia planned especially for the occasion. We have three very exciting speakers lined up for the plenary talks; each will give a fascinating look at our Society and the technical fields in which we work.”



ARNOLD THACKRAY



CARVER MEAD



MARYE ANNE FOX

## THE PLENARY TALKS: REFLECTING ON THE PAST, LOOKING AT THE FUTURE

While the Society's history goes back 100 years, the practice of having a lecture at the plenary session of the Society's meetings does not. It began in 1970 when **LEO BREWER** set the tone with his excellent talk entitled, "Electrons—The Universal Glue." (See the Centennial Moment on p. 30.)

The first plenary speaker in Philadelphia will be **ARNOLD THACKRAY**, President of the Chemical Heritage Foundation (CHF). On Monday, Dr. Thackray will present an historical survey of the Society and its relationship to electrochemistry. Regular ECS meeting attendees will remember Dr. Thackray's wonderful talk from the May 1987 meeting in Philadelphia. Dr. Thackray received his PhD from Cambridge University in 1966. He has held faculty appointments in Oxford (Visiting Fellow, All Souls College) and Cambridge (Fellow, Churchill College); and at the London School of Economics, Harvard, the Institute for Advanced Study, the Center for Advanced Study in the Behavioral Sciences (Stanford), and the Hebrew University of Jerusalem. He was the founding Chairman of the Department of History and Sociology of Science at the University of Pennsylvania, and today is the Joseph Priestley Professor Emeritus.

Dr. Thackray's interests lie in the historiography of science, and in understanding technology, medicine, and science as elements of modern culture. He served as editor of *Isis*, the official journal of the History of Science Society, for seven years, and as editor of that society's newer journal, *Osiris*, for ten years.

Dr. Thackray has been active in the public life of scholarship, serving on a number of boards, including that of the American Council on Education. He is a former President of the Society for Social Studies of Science, and a member of the American Academy of Arts and Sciences. Dr. Thackray was the Treasurer of the American Council of Learned Societies from 1985 to 1996.

On Tuesday, Chairman and Founder of Foveon, Inc., **CARVER MEAD** will give us his perspective on the future of solid-state science and technology. He is the Gordon and Betty Moore professor emeritus at the California Institute of Technology, having taught there for over 40 years. Dr. Mead is a highly respected member of the Silicon Valley scientific and business community. Before starting Foveon, he made many pioneering contributions in solid-state electronics, and was one of the leading forces in VLSI design methodology. Dr. Mead holds BS, MS, and PhD degrees from the California Institute of Technology. Throughout his career as an inventor, author, and educator, Mead has received more than a dozen honors in the microelectronics and engineering fields. He holds over 50 U.S. patents and holds fellowships or distinguished memberships in seven different scientific and professional societies.

In 1999, Dr. Mead was honored with the Lemelson-MIT Prize, a \$500,000 award given for groundbreaking contributions to invention. Dr. Mead was recognized for his many contributions to the advancement of semiconductor design and proliferation. The Lemelson-MIT Prize is the world's largest single prize for invention and innovation.

Dr. Mead's major innovations include the Schottky barrier gate field-effect transistor, now known as HEMT, the standard amplifying device used in microwave communication systems, which consumers use every day when making telephone calls or dialing into the Internet. HEMT is also used in satellite and fiber optic links and cellular telephones. He is also well known for pioneering computer automation through his design concept for VLSI circuits, called structured custom design, which is used today by all semiconductor companies. His work with VLSI is also aimed at teaching engineering students how to design microchips, directly contributing to an explosion in the number of new chips on the market.

"Carver has demonstrated a unique ability to identify areas of developing importance in electronics and to jump in at the right time to accelerate progress," says Gordon E. Moore, Chairman Emeritus of Intel Corporation, and a longtime ECS member. "His contributions to VLSI design trained a generation of engineers that has driven the semiconductor industry, and his work on electronic analogs and biological systems has advanced both neural networks and our understanding of how our eyes and ears process information."

Dr. Mead's other work involves experimenting with neuromorphic electronic systems, which are systems that are closely modeled on the functions of living nervous systems. He and his students hold key patents on systems modeled after the vision, hearing, and learning of humans. According to Mead, products based on these principles have the potential to transform the interface between computers and images, sounds, and people.

(continued on page 39)



## ECS CENTENNIAL MEETING MAY 12-17, 2002 EVENTS-AT-A-GLANCE

**Sunday, May 12**

**SUNDAY EVENING GET-TOGETHER**  
Sponsored by Solartron Analytical  
Complimentary for all meeting attendees

**Monday, May 13**

**PLENARY TALK**  
**ARNOLD THACKRAY**, President,  
Chemical Heritage Foundation, on the  
history of ECS and electrochemistry  
Sponsored by Wilson Greatbatch, Ltd.

**MONDAY EVENING MIXER**

Sponsored by Solartron Analytical  
Special guest appearances and  
entertainment; a Student Poster  
Session; and the  
Technical Exhibit opens  
Complimentary for all meeting attendees

**Tuesday, May 14**

**PLENARY TALK**  
**CARVER MEAD**, Foveon, Inc. and  
California Institute of Technology, on  
future directions of solid-state science  
and technology

**ANNUAL SOCIETY LUNCHEON**

Formal greetings from invited  
guest societies  
Tickets sold in advance

**Wednesday, May 15**

**PLENARY TALK**  
**MARYE ANNE FOX**, North Carolina  
State University Chancellor, and  
2001 President of Sigma Xi, on  
"Electrochemistry: A Key Technology  
in the Nation's Economic Recovery"

**CENTENNIAL CELEBRATION PARTY**

The main event—  
a very special dinner and  
entertainment at the historic  
Crystal Tea Room in  
the Wanamaker Building  
(a block from the meeting hotel)

[WWW.ELECTROCHEM.ORG/ECS/  
CENTENNIAL/CENTENNIAL.HTM](http://WWW.ELECTROCHEM.ORG/ECS/CENTENNIAL/CENTENNIAL.HTM)

## Centennial Celebration

(continued from page 9)

**MARYE ANNE FOX**, North Carolina State University Chancellor, will deliver the plenary talk on Wednesday, with a look at the future of electrochemistry. Fox is the 2001 President of Sigma Xi, the international research society whose programs and activities promote the health of the scientific enterprise and honor scientific achievement. A member of the National Academy of Sciences, Fox is a noted physical organic chemist whose work has application in materials science, solar energy conversion, and environmental chemistry. Prior to her appointment at N.C. State, she was the Waggoner Regents Chair in Chemistry and vice president for research at the University of Texas at Austin.

Dr. Fox received her BS from Notre Dame College and her PhD from Dartmouth. After a postdoctoral appointment at the University of Maryland, she joined the faculty at Texas in 1976. Fox has received a number of teaching and mentoring awards throughout her career, and is active as a lecturer nationally on science education. In 1996, she received Sigma Xi's Monie A. Ferst Award from the Georgia Institute of Technology in recognition of her contributions to research through education. She also advises state and national organizations on science, technology, and chemistry. She has served as co-chair of a joint National Science Board taskforce on graduate education and on National Research Council, Texas, and Louisiana K-12 advisory panels. She has chaired the NRC Committee on Undergraduate Science Education and currently serves as the Co-chair of the Government-University-Industry Research Roundtable. Fox has served as a member of the executive committee of the National Academy of Sciences, and was vice chair of the National Science Board from 1994 to 1996. She has served on 14 editorial boards, including the *Journal of the American Chemical Society*. A fellow of the American Academy of Arts and Sciences, the American Philosophical Society, and the American Association for the Advancement of Science, Fox has received the Garvan and Southwest Regional awards from the American Chemical Society and has also been honored with international research awards from Spain, Holland, Germany, and Russia.



**2002 IS ALMOST HERE**—The ECS Centennial Committee recently met at the Joint International Meeting in San Francisco. Pictured here (from left to right) are **WAYNE WORRELL**; **JAN TALBOT**, ECS President; **ROBERT P. FRANKENTHAL**, Centennial Committee Chairman; and **DENNIS TURNER**. Missing from the photograph are **PAUL MILNER**, **BRUCE DEAL**, and **FORREST TRUMBORE**.

## CELEBRATING THE CENTENNIAL ALL YEAR

The **ECS WEBSITE** features a set of pages with detailed information about the Society's Centennial year. On the site you'll find interesting links to the Society's online historical archives, such as the Society Timeline, a list of past officers, and excerpts from the Society's 75<sup>th</sup> anniversary history book. There are ongoing updates about the special events at the May 2002 Centennial Meeting as well, including the latest, a surprise guest at the Monday Evening Mixer. The special Centennial Celebration Party on Wednesday promises to be no ordinary banquet; so take a look at these pages for some hints about the special entertainment planned for that evening.

In the technical arena, the **JOURNAL OF THE ELECTROCHEMICAL SOCIETY** will publish a series of special articles throughout the Centennial year. Editor Paul Kohl said, "We have invited people well-known to the Society and well-known in their field to contribute articles about the history of electrochemical and solid-state science and technology as the various aspects of it have found a home at ECS." Included will be a look at 100 years of technical activity in the **JOURNAL**, written by three of its Editors, Norman Hackerman, Barry Miller, and Paul Kohl.

**INTERFACE** will dedicate the entire spring 2002 issue to the Society's Centennial. It will include a photo essay on the Society, some amusing anecdotes from the archives, the re-publication of some editorials that have appeared in early ECS journals, as well as the Philadelphia Meeting Program. The magazine's Editor, Krishnan Rajeshwar, said, "We plan to have some fun with the photographs and to provide a fascinating look at events that have occurred throughout the world while the Society has been steadily growing. There's still time too, if any members have photographs or amusing anecdotes that they would like to contribute."

To commemorate this special year, a hardcover **HISTORY OF THE ELECTROCHEMICAL SOCIETY** will be published. The work, underway for several years, will include many photographs from the Society's archives, some never before published. The book, begun and researched by Dennis Turner, is currently being written and edited by Forrest Trumbore; both are ECS members of long-standing and past Society officers. They have spent many a day poring over the Society's complete library of journals, books, and meeting programs in Pennington, and have made many trips to the Society's archives at CHF in Philadelphia. The book promises to be a fascinating look at the people and events that have shaped the Society's 100 years of excellence. ■

*Mary Yess is the Managing Editor of Interface, the ECS Director of Publications, and resident guardian of the Society's photo and journal archives.*