CANDIDATES FOR SOCIETY OFFICE



The following are biographical sketches and candidacy statements of the nominated candidates for the annual election of officers for ECS. Ballots (and instructions for voting either online or by mail) will be sent in January 2015 to all Voting Members of the Society. The offices not affected by this election are that of the Treasurer and the Secretary.

Candidate for President



DANIEL A. SCHERSON is currently the Frank Hovorka Professor of Chemistry at Case Western Reserve University. He received a PhD in chemistry from The University of California at Davis under the late Joel

Keizer working in the area of nonlinear, non-equilibrium thermodynamics. His interests in interfacial science prompted him to spend the next four years as a postdoctoral research associate in the laboratories of John Newman at UC Berkeley, Phil Ross at the Lawrence Berkeley Laboratory, Ernest B. Yeager at Case Western Reserve University, and finally at the Fritz Haber Institute in Berlin, Germany, working both with Heinz Gerischer and Dieter Kolb, from whom he acquired both theoretical and experimental knowledge in the general area of physical electrochemistry, which ultimately shaped his academic career.

In 1983, he joined the Chemistry faculty at Case Western Reserve University, where he is currently Director of The Ernest B. Yeager Center for Electrochemical Sciences. His research interests include the development and implementation of linear and nonlinear spectroscopic and structural techniques for the in situ monitoring of interfacial electrochemical events, including operating devices, such as fuel cells, batteries, and electrosynthetic reactors. Daniel Scherson has over 240 journal publications, seven U.S. patents, and hundreds of conference presentations. He has been a member of ECS since 1976. He received a number of prestigious awards, including the IBM Faculty Development Award, David C. Grahame Award of the Physical Electrochemistry Division of ECS, The Faraday Medal of the Electrochemistry Groups of the Royal Chemical Society, The Japan Society for the Promotion of Science Fellowship, the Alexander von Humboldt Senior Fellowship Award, and the Vittorio de Nora-Diamond Shamrock Postdoctoral Fellowship. He has also served as Chair of the Physical Electrochemistry and of the Battery Divisions of ECS and is a

Candidates for Vice-President



YUE KUO is a Dow Professor in chemical engineering with a joint appointment in electrical engineering and materials science and engineering at Texas A&M University. He received a Doctor of Engineering

Science from Columbia University in 1979. He subsequently did industrial R&D including IBM's T. J. Watson Research Center and Silicon Valley. He established the Thin Film Nano & Microelectronics Research Laboratory in 1998 at Texas A&M University. In his early career, Dr. Kuo performed work on batteries, electrophoresis, and more. Dr. Kuo has pioneered works on large area PECVD, RIE, as well as TFT materials, devices, fabrication processes, and new applications, which have resulted in breakthroughs and major impacts to worldwide productions. His IC research is focused on device physics, reliability, Cu interconnects, doped metal oxide high-k gate dielectric, nonvolatile memories, and novel LEDs. Dr. Kuo has authored over 400 papers and edited 2 TFT textbooks, 3 books of lectures, journals, and 27 proceedings volumes. Honors include ECS Fellow, IEEE Fellow, ECS EPD award, distinguished research and innovation awards, 10 IBM awards, honorary professorships, 150 plenary/ keynote/invited speeches, 11 patents, and best paper awards. Dr. Kuo has served on advisory and review boards and panels for U.S. national academies, industry, universities, and governments globally.

Dr. Kuo's first contact with ECS was in 1974 as a reader of the *Journal of The Electrochemical Society* (JES) during his work on batteries. He started attending ECS conferences in 1987 and became an active member in 1989. He served as an associate editor of JES and *Electrochemical and Solid-State Letters* (2003–2012) and a technical editor of *ECS Journal of Solid State Science and Technology* and *ECS Solid State Letters* (2012–present). He served EPD as an executive committee member (1995–present), chair of award committee (2003-2005), vice-chair (2000–2004,



JOE STETTER has been an active member of ECS for almost 40 years. Dr. Stetter joined the NYC Section in 1975 and attended local meetings at the Stevens Institute of Technology in Hoboken, NJ. In

1980 Dr. Stetter moved to the Chicagoland Area (Argonne National Laboratory) and reinvigorated the ECS Chicago Section while being a professor and leading a large electrochemistry group at the Illinois Institute of Technology, Chicago. Now residing in the San Francisco Bay area, Dr. Stetter continues to actively participate in ECS as a presenter, symposium organizer, and committee worker.

Over the years Dr. Stetter have served ECS in many capacities, such as, secretary, treasurer, chair and past chair of the Sensor Division; Technical Affairs Committee; Education Committee; chair of the Individual Membership Committee; Honors and Awards Committee; and Adviser to the Battery and other Divisions. Furthermore, Dr. Stetter has been published in ECS journals, edited and reviewed for ECS journals, given short courses, and organized and chaired national and international symposia. These include chairing the 2001 International Meeting on Electronic Noses and Olfaction as part of the ECS meeting in Washington DC, Solid State Devices III (2002), Nanostructured Thin Films (2003), Sensors, Actuators and Microsystems (2003), Electrophoresis and Microfluidics (2004), Carbon Nanotubes and Nanostructures (2005), Clinical and Diagnostic Sensors and Systems (2006), Sensors Arrays and Multi-Dimensional Sensor Systems (2006), and many more to the present.

Dr. Stetter's current work is focused on the commercialization of electrochemical sensor technology. He is currently President and CTO of KWJ Engineering Inc, and a startup company, SPEC-Sensors LLC, which is his fourth successfully owned and operated company. Dr. Stetter remains active in academia, as well, with productive collaborations at Oakland University, Wisconsin Lutheran College, UC Berkeley,

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DANIEL A. SCHERSON

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Fellow of ECS. He has held the positions of Associate Editor (1997-2007) and Editor of the *Journal of The Electrochemical Society* (2008-2012).

YUE KUO

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2007-2008), and chair. He served in ECS's solid state award committee (2004-2006) and nanotechnology committee (2003-2004) as well as on its Board of Directors (2009-2011). He taught ECS short courses (1994 and 1996), and organized and chaired many symposia. He founded the world's longest continuously held ECS TFT symposium series (of 24 years) with the publication of 12 proceedings volumes. He represented ECS in the SEMI/ECS CSTIC conference (2010-present). He has been instrumental in promoting ECS in many countries.

Statement of Candidacy

In the past century, ECS has achieved its goals of advancing electrochemistry, solid state science, and allied subjects through encouraging research, dissemination of knowledge, and education of members. In order to remain vibrant and relevant, ECS has to grow continuously and respond quickly to the changing technical needs and interests of its members.

The ECS membership can be increased to offer additional member services. By joining ECS, scientists and engineers in emerging countries can gain updated knowledge and international experience. Engineers in developed countries can be prepared for professional advancement and students can obtain access to top-quality publications and be exposed to scientific and professional atmospheres. Existing ECS members can be encouraged to participate in committees and conference organization to shape the future of ECS. Recognition of members for meeting outstanding scientific achievements and for sustained services to ECS could be expanded.

The biannual ECS meetings have successfully attracted thousands of attendees to present papers, join committee meetings, and communicate with colleagues or technical experts. More emerging topics can be included in the program to benefit existing members and to attract new members. In order to expand the impact to the scientific community,

ECS can: (1) co-sponsor more meetings with societies that have complementary interests; and (2) sponsor or co-sponsor small-size conferences focused on specific subjects. More industry and government experts can be invited to deliver talks on general topics of interest to members.

The excellent reputation the ECS enjoys is maintained by the high-quality of its journals, ECS Transactions, and Interface, through joint efforts of authors, editors, and staff. In order to face the vigorous competition of the electronic age, continuous improvements in manuscript quality, impact factors, and the peer-review process are required. More original or high-impact results could be included in these publications through mechanisms of recruiting authors and market promotion. The timely publication of more focused issues on emerging topics is also very helpful.

ECS offers short courses on scientific and career-enhancement topics at international meetings to benefit members. The program can be expanded, for example, by offering more new or fundamental courses. Mini-courses can be offered by organizing several invited speakers in different but related symposia; this can be archived electronically and be available to ECS members after the proper intellectual property clearance.

It is an honor and privilege to serve ECS. If elected, I plan to continue my efforts in promoting the Society programs that benefit members and science.

JOE STETTER

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and as a Visiting Scholar in Mechanical Engineering at Georgia Institute of Technology in Atlanta, GA. His expansive experience in leading science, technology, business, scholarship, and mentorship, has allowed for successful commercialization of electrochemical technology and many product lines still in use today to protect human health.

Statement of Candidacy

This is the most important part of my statement. The ECS is a prestigious and powerful driving force for electrochemistry and science and engineering in general. The meetings are an excellent size for substantive exchanges of scientific ideas. A great vitality in this activity is possible by incorporating many young minds mixed

with the guidance and the wisdom of our senior members coupled to the ECS history and experience. I would like to place a high priority on attracting and involving young researchers into our society's activities, and this includes meetings, publications, presentations, and governance. Resources are always limited and ECS can benefit from increased involvement with other like-minded societies and industrial sponsorships.

I have always been a team builder in my companies and understand the importance and the power of multifaceted teams. Starting with our existing strong academic, industry, business, and government collaborations, we can strengthen associations and add new ones that fit the model of our existing successful ones. We can accomplish a great deal by leveraging our senior membership and their relationships within the field as well as tapping into those that I have developed over the years.

Of course it is important to maintain and strengthen the existing infrastructure at ECS including our publications by promoting the distinct qualities (like our not-for-profit approach) and raising the impact factor (the relevance of this is changing in our world but still important). Greater impact comes from addressing, with focus, the most important societal challenges: health, energy, food, water, and resource management with our electrochemistry knowledge and broader integration thereof.

I have to say that I consider much of the ECS leadership and the membership is very strong today and I have great respect for those who have been guiding and contributing to our activities. In this regard, I can only say that I will bring my unique resources, experience, and contacts to the ECS senior management to carry the best of our activities forward. My mission is to advance electrochemistry science and engineering, preserve our integrity and high standards, and lend my efforts to increase revenue and the prestige of our society for the benefit of our growing membership. This will allow the ECS to continue to be relevant and important to a strong world scientific community.

Having experience in academia, publishing, grantsmanship, company startups, raising funds, management, and business, as well as extensive involvement in ECS and its operations, makes me qualified to contribute as Vice-President. I would be honored to serve the Society and you, its members, in this capacity. Thank you for your consideration of my candidacy.