



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 2013 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



**TETSUYA OSAKA** is a professor in the Department of Applied Chemistry, Faculty of Science and Engineering, Waseda University, Tokyo, Japan, a position he has held since 1986. He currently serves as

Director of the Institute for Nanoscience and Nanotechnology, Waseda University. Previously, he was Director of the Department of Applied Chemistry from 1996 to 1998, Dean of the Graduate School of Science and Engineering from 1998 to 2002, Provost of the Research Promotion Division from 2002 to 2006, Director of the Waseda Research Institute for Science and Engineering, and Deputy Dean of the Faculty of Research and Engineering from 2008 to 2010. He received his Doctor of Engineering degree in 1974 from Waseda University. In 1975, he was a post-doctoral fellow at Georgetown University, and in 1989 he served as a Visiting Professor at the University of Minnesota.

Dr. Osaka served as President of the Magnetics Society of Japan, President of the Electrochemical Society of Japan, President of the Japan Institute of Electronic Packaging, Vice-President of the Surface Finishing Society of Japan, Vice-President of the International Society of Electrochemistry (ISE), and Chair of the ECS Japan Section.

Prof. Osaka's recent work is focused on electrochemical nanotechnology, including electro- and electroless-deposition/surface finishing, electronic packaging materials, magnetic storage and energy storage devices, and chemical- and bio-sensors. He has contributed as an author and/or editor to more than 70 books and published more than 890 original and review papers in these fields. He has been identified as one of the Highly Cited Researchers in the Materials Science category on the website of Thomson Scientific's ISIHighlyCited.com. <http://isihighlycited.com>.

Dr. Osaka's technical contributions have been recognized by many awards including the Medal with Purple Ribbon bestowed by the Decoration Bureau of the Cabinet Office, Japan in 2010; Prizes for

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## Candidates for Vice-President



**KRISHNAN RAJESHWAR'S** research contributions include the first demonstrated use of ionic liquid electrolytes for electrode stabilization in photoelectrochemical (PEC) devices, novel approaches to the electrosynthesis of binary and ternary semiconductor thin

films, the discovery and development of new protective electrode coatings in PEC cells, the detailed study of ion transport in polymer electrodes, development of new *in situ* techniques for monitoring electrochemical processes, novel nanocomposite matrices for CO<sub>2</sub> and O<sub>2</sub> reduction, and the mechanistic aspects of heterogeneous photocatalysis. He has also co-authored several invited reviews, book chapters, and two monographs on the environmental applications of electrochemistry/photoelectrochemistry and on renewable hydrogen generation. He is the author of over 400 peer-reviewed publications in reputable journals, including several in the *Journal of The Electrochemical Society* and *Electrochemical and Solid-State Letters*.

Dr. Rajeshwar has served on several advisory panels including the National Science Foundation, American Water Works Association, Research Corporation for Science Advancement, and the Department of Energy. He has organized many symposia in solar energy conversion and conducting polymers for the American Chemical Society and ECS. Dr. Rajeshwar received the Distinguished Research Award from the University of Texas at Arlington. He is also the recipient of the Wilfred T. Doherty Award of the American Chemical Society. He was inducted into the Academy of Distinguished Scholars at UT Arlington as a charter member and now holds the title of Distinguished University Professor. He is currently an interim Associate Vice-President for Research at the University of Texas at Arlington.

Dr. Rajeshwar has been a member of ECS since 1978. He has rotated through several leadership positions within the Society including Chair of the Energy Technology

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**JERZY RUZYLLO** is a Distinguished Professor of Electrical Engineering and Professor of Materials Science and Engineering at Penn State University. Dr. Ruzyllo's research activities are in the area of manufacturing methods and devices for semi-

conductor micro- and nano-electronics and photonics as well as processing and characterization of electronic and photonic materials. His research emphasizes surface modification processes, as well as novel methods of semiconductor, including semiconductor quantum dots, and dielectric thin film formation and characterization.

Dr. Ruzyllo obtained advanced degrees, including a PhD in 1977 and a DSc ("Habilitation") in 1983 from the Warsaw University of Technology in Poland where he also served on the faculty prior to joining Penn State in 1984. A member of ECS since 1985, Dr. Ruzyllo is involved primarily with the Electronics and Photonics Division where from 2001 to 2007 he served as Treasurer, Vice-Chair, and Chair. He served on the ECS Board of Directors, Honors and Awards Committee, and as a Chair of the Gordon E. Moore Award Subcommittee. He is currently a member of the Publications Subcommittee. Over the years, Dr. Ruzyllo has initiated several successful symposia sponsored and co-sponsored by the Electronics and Photonics Division, including the Symposium on Semiconductor Cleaning Science and Technology for which he has been a lead co-organizer continuously since 1989.

Dr. Ruzyllo has presented results of his work in over 250 papers and conference presentations, many of them in ECS publications (fourteen papers in the *Journal of The Electrochemical Society*, three in *Electrochemical and Solid-State Letters*, two in the *Interface*, and 47 in the Proceedings series and *ECS Transactions*).

Dr. Ruzyllo is a Fellow of ECS (1999) and a Fellow of IEEE (2004). He holds a title of Professor bestowed in 2003 by the President of the Republic of Poland.

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## Candidate for President:

**TETSUYA OSAKA**

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Science and Technology in the Development Category of the Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science, and Technology in 2008; Society Award of the Magnetics Society of Japan in 2006; Chemical Society of Japan Award for 2003 in 2004; Pergamon Electrochimica Acta Gold Medal of ISE in 1998; Society Award of the Electrochemical Society of Japan in 2001; Society Award of the Surface Finishing Society of Japan in 1999; and the Simon Wernic International Award of the International Union for Surface Finishing in 1996. A member of ECS since 1979, Dr. Osaka served as a leading organizer and a co-editor of many proceedings volumes. He received Research Award of the Electrodeposition Division of ECS in 1996 and was elected a Fellow of ECS (2002), IEEE (2002), IUPAC (2004), and ISE (2006). ■

## Candidate for Vice-President:

**KRISHNAN RAJESHWAR**

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Division, Chair of the New Technology Subcommittee; and has served as a member of the Technical Affairs, Ways and Means, and Honors and Awards committees. He is currently serving as the Editor of *Interface* and has edited several proceedings and *ECS Transactions* volumes for the Society. He is a Fellow of ECS and received the Energy Technology Division Research Award of the Society in 2009. More recently he served as a member of the 2010-2011 Presidential Task Force; this group oversaw the development of ECS Technical Interest Areas to help launch the new journals of the Society. He was the moderator of a discussion panel on the first Electrochemical Energy Summit that was successfully held at the Boston meeting of the Society.

### Statement of Candidacy

I am honored and privileged to be a candidate for Vice-President of the Society and would be delighted to continue my service to the Society in a leadership role. The Society has been an integral part of my professional life during the past three decades, and I have treasured the numerous friendships made over all these years through my continuing involvement with it. It has

been a pleasure to watch the Society grow and expand its leadership role in electrochemical and solid state science and technology on a global scale. It is critical to continue this growth and further expand the Society's reaches in more countries around the globe. I believe that my background and experience in forging an extensive network of collaborative ties in my own research career will stand me in good stead with this particular initiative.

Another crucial strategic area for the Society is enhancing its leadership role in journals and publications. The challenges presented by a constantly changing world of scientific publishing and declining revenues from library subscriptions and traditional revenue streams have been well-recognized by the Society leadership. In this regard, I was fortunate to be able to play a role in the recent transition to a four-journal format (see *Interface*, spring 2012, p.18 for details on the launch announcement) that better couples the technical interest areas of the Society membership and the biannual meeting content. I look forward to being a member of the leadership team to continue safeguarding the Society's pre-eminent role in electrochemical and solid-state science and technology. Along with these challenges come unique opportunities in the areas of energy, materials science, and biotechnology. In this regard, my approximately 14-year involvement with the publication activities of the Society as the Editor of *Interface* uniquely positions me to recognize and defend the multiple technical/professional interests of our membership.

ECS is a well-run organization with a glittering history of evolving with rapidly changing times, successfully overcoming many challenges, and capturing new opportunities. I am excited by what the future holds for the Society and thank you in advance for your support. ■

## Candidate for Vice-President:

**JERZY RUZYLLO**

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### Statement of Candidacy

ECS is an elite scientific society which carries out its activities relying on its excellent reputation and long history of scientific leadership. To continue on this course in the environment that is evolving in terms of growing globalization and radically-improved information transfer technology, the Society must also evolve to make sure the

appeal of its message resonates worldwide, and that the changing needs of its members are accommodated to the fullest. In this statement, I address issues that I would consider to be of particular importance to the continued success of the Society.

To stay on top as a scientific society, ECS must be very efficient in the way it disseminates the knowledge generated through its members' activities. Accordingly, publishing at the highest scientific impact level should remain at the forefront of the Society's agenda. At the other end of the spectrum, publishing with educational and popularization of science objectives should also be included in the Society's publication offering. If elected, I would like to promote more aggressive exploration by the Society of the publishing and education opportunities using innovative communication tools and aimed specifically at the next generation scientists and engineers.

While quantity is not a substitute for quality, the issue of membership must remain as a point of attention. This is because a certain critical mass, in terms of the membership numbers, is needed to assure the Society's adequate impact and relevance. Other than the routine solicitation of new members, the way to assure growth of membership is through global expansion, including moving Society's biannual meetings across the continents, as well as attraction (and retention after graduation) of student members. Each avenue is important in its own way and each must be vigorously pursued.

A phenomenon of recent years is that the demarcation lines between scientific domains of electrochemistry and solid-state are in many instances blurring. This phenomenon should be considered a very favorable course of events to the scientific organization which defines itself as "the society for solid-state and electrochemical science and technology." Now and in the future, more than ever in the past, a blend of electrochemistry and solid-state makes the Society unique and is its leading strength. Given the opportunity, I will promote deepening of synergistic interactions between scientific domains represented by the ECS.

As a scientific society ECS fulfills its mission of the advancement of science, and the dissemination of knowledge and education in the fields of solid-state and electrochemical science and technology very successfully. This is responsibility of the ECS's leadership to strive to enhance even further the Society's image and its leading role in the scientific community worldwide, now and in the future. If elected, I would be honored to be a part of this process. ■