

# Candidates for Society Office

The following are biographical sketches and candidacy statements of the nominated candidates for the annual election of officer for the Society. Ballots will be mailed, in January 2006, to all Voting Members of the Society. The office not affected by this election is the Secretary.

## Candidate for President



**MARK ALLENDORF** is a Distinguished Member of the Technical Staff at Sandia National Laboratories in Livermore, California, and a Fellow of The Electrochemical Society. He graduated

in 1980 with an AB in chemistry (*magna cum laude*, Phi Beta Kappa) from Washington University in St. Louis and received his PhD in inorganic chemistry from Stanford University in 1986.

Dr. Allendorf has worked extensively in the field of high temperature chemistry, with an emphasis on chemical vapor deposition processes (CVD). His work includes investigations for growth and the underlying chemistry responsible for precursor decomposition for the CVD of tin oxide, indium oxide, boron nitride, silicon carbide, and titanium compounds. As a result of this work, he developed an extensive online database of gas-phase thermochemistry relevant to high-temperature processes using *ab initio* quantum-chemistry methods. Currently, he is also using thermodynamic analyses to identify chemical systems for solar production of hydrogen. Dr. Allendorf is a member of the Microfluidics Department at Sandia-CA, where he is developing new nanoporous materials for separations and sensing applications. Other recent activities in his laboratory include: thermochemical and transport modeling of high-temperature refractory corrosion; mechanistic studies of heterogeneous catalysis processes used to make ethylene and synthesis gas; and development of models to predict the performance of metal-insulator-semiconductor sensors in complex gas mixtures.

Dr. Allendorf's activities with ECS include service as secretary/treasurer, junior vice-chair, senior vice-chair, and chair of the High Temperature Materials Division (1994-99; *ex officio* member of the ECS Board of Directors 1997-99); and member of the Publication (1992-95), Technical Affairs (1994-97), Finance (1999-01), and Ways and Means (2000)

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## Candidates for Vice-President



**CURTIS F. HOLMES** received his undergraduate degree in chemistry from Louisiana State University and his Ph.D. in physical chemistry from Indiana University. His doctoral

research was in the fields of irreversible thermodynamics and statistical mechanics.

After completing his education he entered the U.S. Army. He spent one year as a first lieutenant in a research institute and then served as a captain in Vietnam, where he was awarded the Bronze Star Medal.

In 1973, Dr. Holmes joined Calspan Corporation, a contract research institution in Buffalo New York. He led research projects involving chemical analysis, discriminant function analysis, and computer modeling.

Dr. Holmes joined Wilson Greatbatch Ltd. (now Greatbatch, Inc.) in 1976. In 1980, he was named Vice President, Technology and has held the positions of Vice President of Technology and Senior Vice President. His responsibilities included process and product quality, regulatory affairs, reliability, intellectual property, and research and development.

Curt Holmes has participated in a variety of research and development projects for the development of advanced batteries for implantable biomedical devices. Among the projects he has participated in are the improvement of efficiency and reliability of lithium/iodine pacemaker batteries, the development of medium-rate batteries for implantable drug delivery systems and neurostimulators, and the development of high-rate lithium/silver vanadium oxide batteries for the implantable defibrillator.

In 1999, Dr. Holmes relocated to Greatbatch-Hittman, Inc. in Columbia, Maryland, a subsidiary of Greatbatch, Inc., where he served as President. The company produces feedthroughs, coated electrode tips, and other components

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**PAUL M. NATISHAN** is a Research Materials Scientist at the Naval Research Laboratory (NRL) in Washington, DC. He received a B.S. in biology from Wilkes College in 1975

and his M.S. and Ph.D. in materials science and engineering from the University of Virginia. Dr. Natishan was awarded a National Research Council Associateship in 1983 to work at NRL. He then joined NRL as a Research Metallurgist in 1985 and is currently a group leader. His research efforts have been in the areas of improving dental alloys, the electrochemical disinfection of fluids, the use of ion beam surface modification techniques to study and improve the corrosion resistance of aluminum, the production and use of diamond and diamond-coated materials, and the determination of chloride uptake by aluminum using X-ray photoelectron spectroscopy and X-ray absorption spectroscopy. His research has resulted in 72 publications and seven U.S. patents.

Dr. Natishan has been a member of ECS for 24 years and became active as a member of the National Capital Section Executive Committee and chaired the Section during the 1991-1992 program year. He served on the Council of Section's Executive Committee and was chair from 1996 to 1997. Dr. Natishan was a member of the Corrosion Division's Executive Committee, the chair of the *ECS Transactions* Charter Committee, and has served on many other committees. He was the Society Secretary from 2000-2004 and twice served on the Board of Directors (1996-1998 and 2000-2004). He has organized numerous symposia, edited six proceeding volumes, and edited the ECS booklet, "What is Electrochemistry?" (1997). He is currently a member of the Finance Committee, the *ECS Transactions* Steering Committee, and is the ECS alternate Trustee to the Federation of Materials Societies. Dr. Natishan was the recipient of the

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## Candidates for Treasurer



**SUBHASH C. SINGHAL** is a Battelle Fellow and Director, Fuel Cells at the Pacific Northwest National Laboratory in Richland, Washington. He received a BS degree from Agra University and a B Eng degree in metallurgy from the Indian Institute of Science. Dr. Singhal was awarded a PhD in materials science and engineering from the University of Pennsylvania, and received an MBA

degree from the University of Pittsburgh, where he was awarded the Vincent W. Lanfear Prize for the highest academic performance.

Dr. Singhal joined Pacific Northwest National Laboratory in 2000 after having worked at Siemens Power Generation (formerly Westinghouse) for over 29 years. At Siemens, he conducted/managed major research and development programs on advanced materials for various energy conversion systems. From 1984, he was manager of Fuel Cell Technology there, and was responsible for the development of solid oxide fuel cells (SOFCs) for stationary power generation. In this role, he led an internationally recognized group in the SOFC technology and brought this technology from a few-watt curiosity to fully-integrated 200 kW size power systems. He has authored over 75 publications, edited 13 books, received 13 patents, and given over 220 plenary and other invited presentations worldwide.

Dr. Singhal is also an adjunct professor in the Department of Materials Science and Engineering at the University of Utah; and serves on the Visiting Advisory Board of the Department of Materials Science and Engineering at the University of Florida.

An ECS member since 1976, Dr. Singhal has been active in Society and Division affairs. He served on the Society's ad hoc Long Range Planning Committee, Ways and Means Committee, Publications Committee, Honors and Awards Committee, Solid-State Science and Technology Award Subcommittee, the F. M. Becket Award Subcommittee, the Young Authors Award Subcommittee, the Carl Wagner Memorial Award Subcommittee (chair, 1994-96), and as a member of the Board of Directors (1991-1993). He has been active in the High Temperature Materials Division and served as its chair during 1991-1993; he continues to serve on its Executive Committee. He received the High Temperature Materials Division's Outstanding Achievement Award in 1994 and was elected a Fellow of the Society in 1996. In 1989, he initiated the highly successful biennial International Symposium on Solid Oxide Fuel Cells, and has since chaired these symposia every two years. Dr. Singhal has also been an active member of the Pittsburgh Section, where he served as chair during 1985-1987

Dr. Singhal is a member of the National Academy of Engineering, and a Fellow of the American Ceramic Society, The Electrochemical Society, ASM International

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**JOHN R. SUSKO**, in his distinguished professional career, has been a corporate executive, entrepreneur, and chief technologist. In 1993, Susko founded JRS Technology, where he was president and CEO. His responsibilities included research, development, and product certification of state-of-the-art energy management systems for building lighting and controls, as well as

financial, sales, and personnel aspects of the business. Prior to this, John Susko was a senior engineer in IBM, where he held numerous engineering and management positions in the research and development of advanced materials and technologies critical to IBM. As technical advisor to the Division Laboratory Director, he developed the IBM strategic roadmap for electronic packaging technology and served as the technical liaison for the construction of an \$86M engineering development facility. Other technical and managerial responsibilities included experimental development of kinetics models for the permeation and diffusion of moisture and noxious gases through polymer systems, thin film development for advanced packages, and the creation of the first gigabit optoelectronic transceiver. Before joining IBM, Susko taught chemistry at Broome Technical College. Susko has over 30 publications, including two in the *IBM Journal of Research and Development*. He holds seven U.S. patents with another ten patents pending. Susko received his BS in chemistry from Elmira College.

As an ECS member, Susko has served the Society on numerous committees including Finance, Ways and Means, Publication, Education, Individual Membership, and the Board of Directors. Under his leadership, the Education ad hoc committee on student participation created the very successful Society Student Poster Session. As chair of the Individual Membership Committee, he led the effort that streamlined the membership application process, allowing for a nonmember meeting registration conversion option, which consistently retains 40% of these applicants as ECS members. He is currently teaching the resume writing and interviewing workshop, which is instrumental in assisting students and experienced professionals improve their employment options and success. Susko has been a member of the Society since 1984 and been active in Divisional leadership where he served as chair, vice-chair, treasurer and secretary for DS&T. He has organized a number of symposia including the well-received Metallized Plastics series. He has co-authored proceedings volumes and books on the subject.

### Candidate's Statement

As a long-standing member, I have great pride in our Society and will provide the leadership essential to the growth and development of ECS so it continues to be the premier professional organization in the areas

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## Allendorf

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committees. He served as an organizer for several major ECS symposia, including the International Symposium on Chemical Vapor Deposition. In addition, he is a member of the editorial board for the journal *Chemical Vapor Deposition*. Dr. Allendorf is the author of over 90 publications, the editor of seven ECS proceedings volumes, and has presented work at nearly 100 technical conferences. He is the recipient of a Sandia Award for Leadership and the E. Karl Bastress Award (given to outstanding research staff at Sandia's Combustion Research Facility) for coupling fundamental research to the needs of industry. ■

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## Holmes

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for implantable biomedical devices and batteries. In 2001, he became Group Vice President, Components, with responsibilities for divisions of the company in Clarence, New York, Carson City Nevada, and Columbia Maryland.

In 2004, he returned to Western New York to become the company's Chief Technology Officer. He is involved in research and development activities, coordination with customers, and general corporate management.

A frequent participant in scientific conferences, Dr. Holmes has organized or chaired technical sessions for ECS, the Annual Conference on Battery Applications and Advances, and several of the International Meetings on Lithium Batteries. In 1997, he was invited to present the Bourner Lecture at the International Power Sources Symposium in Brighton, UK.

Dr. Holmes has been an active member of ECS since 1977. He has served as secretary, vice-chair, and chair of the ECS Battery Division. He was appointed to the Technical Affairs Committee of the Society in 1997. He presently serves as chair of the Publication Committee.

He is a member of the Pacemaker Committee of the Association for the Advancement of Medical Instrumentation. He was elected a Fellow of the American Institute for Medical and Biological Engineering in 1996. He is also a professional member of the American Heart Association.

Dr. Holmes has authored over fifty technical papers and four book chapters; and he holds three U.S. patents.

## Candidate's Statement

I am honored to have been nominated as a candidate for Vice-President of The Electrochemical

Society. I have been involved in the society for 28 years and have greatly benefited from my association with it.

From 1992 through 1998, I served as secretary, vice-chair, and chair of the Battery Division. During that time I became familiar with the workings of the Society and was successful in interacting with the Society officers, staff, and fellow Divisional leaders.

I have also been an active technical participant in Society activities. I have presented many papers over the years and have organized and chaired several technical sessions. I have also served as editor of a proceedings volume.

As chair of the Publication Committee I have dealt with issues involving one of our most important functions—the dissemination of scholarly presentations of technical advances made by our members. I was involved in the institution of our newest publication, *ECS Transactions*, the first issues of which will be featuring information presented in the recent Los Angeles meeting.

In addition to my professional duties at Greatbatch, Inc., I am involved with the State University of New York at Buffalo, where I serve as a biomaterials faculty associate. As such I have an appreciation for the role the Society in serving student members and will continue to encourage student participation in our meetings and publications. Of course student members are the future of ECS, and their activities within the Society should be encouraged and supported.

I will continue to support the interaction of the Society with other professional organizations. I am a member of the American Chemical Society, The Association for the Advancement of Medical Instrumentation, and the American Heart Association; so I have an appreciation for the workings of our sister professional organizations.

I believe that ECS has a great future. We have a robust society full of members who enhance the technical and organizational functioning of ECS. We have an excellent and dedicated staff at Society headquarters. We have a 100+ year history of service to our members and the international technical community. I would be proud to continue my service to the Society if elected to this position. ■

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## Natishan

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National Capital Section's Blum Award (1996) and Foley Award (1998); and he was inducted as an ECS Fellow at the recent ECS meeting in Los Angeles. In addition to his ECS activities, he was a

section editor for the *ASM Handbook* on Corrosion and an editor for the journal, *Corrosion*. He was named a Fellow of NACE International in 1998 and is currently a member of the Research Committee of NACE International.

## Candidate's Statement

It has been my great pleasure to work with the ECS volunteer leadership and staff over the years and it is a great honor to be a candidate for Vice-President. I believe that the main purposes of the Society are to serve its members and advance the solid state and electrochemical sciences.

Through my committee work since the late '80s, I have become aware of the workings of the Society on a number of levels. As a result of these experiences, I have gained a valuable understanding of the Society and its diversity. The Society must be aware of, and meet the needs of, its diverse membership, which includes members of academia, government, and industry, as well as our increasing international membership. I think that it is important that we continue to grow internationally while continuing to provide stimulating meetings, quality publications, and the high degree of member benefits that we have all enjoyed.

As Vice-President, I would work to ensure that the ECS staff has the necessary resources to support the member-volunteers to further enhance the level of service to our members. As Secretary, I was the liaison between the Board of Directors, the members, and the ECS staff. Having interacted with the staff, one grows in appreciation of their professionalism and helpfulness. It has been through their tireless efforts that the Society has been able to move forward in areas such as electronic publication, new publications, increased member benefits, and great meeting venues.

The ECS publications are major member benefits. The electronic submission and review processes, electronic archiving of past issues of the *Journal*, and the initiation of *ECS Transactions* have been great steps forward in providing timely publication of manuscripts and information dissemination. I have had a great opportunity to work through the ideas leading to development of *ECS Transactions* while I was Secretary and then as the chair of the *ECS Transactions* Charter Committee. Moving to an electronic format for publishing and disseminating papers presented at the meeting was an exciting experience and I would look forward to continuing to support these efforts and to the creation of the ECS Digital Library.

An area in which I am happy to see that the Society has been very

proactive is that of increasing activities for our student members. The student poster session, reduced membership fees, summer fellowships, and Divisional support of travel grants and complimentary memberships are great ways for students to have access to the meetings, services, and publications. As the student members are the future of the Society, I think it is vital that we continue to engage our student members and increase these efforts.

The Society has worked to increase educational activities and public awareness on many levels. One of these avenues is the Federation of Materials Societies (FMS), which is a consortium of technical and professional societies and associations. The main goal of FMS is to help the materials community arrive at materials policy consensus and to assist in informing policy makers of FMS constituent concerns such as research funding, which directly affects a large portion of the ECS members. I believe it is important that ECS continues to work to educate lawmakers and the public about the benefits to society that are gained through research. FMS also works to increase science awareness among pre-college level students. They seek to positively impact the number of students that enter science and engineering studies which are the potential members of the future. ■

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### Singhal

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and the American Association for the Advancement of Science (AAAS). He is also a member of the Mineral, Metals & Materials Society (TMS), Society of the Sigma Xi, and Beta Gamma Sigma. He served as President of the International Society for Solid State Ionics during 2003-2005. In 2001; received the American Ceramic Society's Edward Orton Jr. Memorial Award; and in 2002, he received an Invited Professorship Award from the Japan Ministry of Science. He serves on the editorial board of the *Fuel Cell Virtual Journal* and is an associate editor of the *Journal of Fuel Cell Science and Technology*. He has also served on many national and international advisory panels.

### Candidate's Statement

The Society's objectives include advancing the theory and practice of solid-state and electrochemical science and technology, dissemination of knowledge in these fields, and the promotion of education on fundamental and applied science and engineering in these fields. Thanks to experienced governance and an effective, dedicated staff, ECS has done a good job in achieving these objectives. To further the Society's and our profession's image,

I would like to see a visible, more prominent government relations and public outreach program in the Society. The Society should become a central voice for electrochemical science and technology in the nation. We have a responsibility to the public at large to be an authoritative source of reliable information concerning national and international issues related to electrochemical science and technology (e.g., corrosion of aging infrastructure, application of batteries and fuel cells in transportation, and environmentally clean electrochemical power generation, to name a few). We must explore ways to fulfill this mission. We have got a role to play in a more effective public outreach. The officers of ECS are positioned uniquely to be a role model of a vibrant, understandable, and believable voice directed at the public. A coordinated outreach program can be of immeasurable help in bringing our message to the public.

In addition, solid-state and electrochemical science and technology have a role to play in keeping this nation technologically and economically sound and growing. To do this, it is essential that we maintain and build our science and the scientific workforce. ECS must take a strong leadership role in helping to establish a national science policy, in enhancing career opportunities, and in making electrochemistry attractive to the best and brightest of our youth. These actions should also help in expanding our membership.

I also believe that the Society must continue to develop more membership assistance programs and benefits, broaden its horizons internationally, respond to new challenges as they arise, and seek out and capitalize on new opportunities.

The above goals and proposals are great in scope. I strongly believe that they are essential to strengthen and advance ECS, advance our profession, and provide wider benefits to our members, which all should help expand our membership base. I will bring in my extensive industry, university, and government management experience and international recognition to help achieve these goals and keep the Society at the forefront of solid-state and electrochemical science and technology in the world. I am honored to be nominated a candidate for Treasurer, and if elected, I will diligently work for our Society and maintain its prominence in the scientific community, maintain its long-term financial stability, and expand the services it offers to its members. ■

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### Susko

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of electrochemistry and solid-state science and technology. As candidate for Treasurer, I view my role in The Electrochemical Society as a facilitator in the continued improvement of the Society, consistent with the requirements and needs of the Divisions, Sections, and membership. Because the Treasurer is the chief financial officer for ECS, I believe my business and management experience will be an invaluable asset for recognizing and understanding Society needs; and to act as a catalyst in developing, promoting, and funding solutions, consistent with the current and future direction of the Society.

My vision for the Society is of continued growth through distinction. To achieve this vision, we must continue to recognize the Society's strengths and weaknesses; and be prepared to make the necessary improvements to ensure the future growth and success of the Society. As treasurer, my goal is to promote global awareness of the Society and the extensive interdisciplinary technical benefits we offer. Currently our Society relies on our excellent publications, technical meetings, and website. Continued initiatives need to be funded, especially with respect to online publication link access, back issue electronic retrieval capability, and electronically personalized proceedings volumes of topical interest. Firm alliances, with information consolidators, are required to properly position our Society in the rapidly changing world of electronic information dissemination. Additionally, our website needs future enhancement with interactive displays aimed at attracting young scientists to ECS and its fields of interest. Future revisions should include meeting format changes to promote more specialized topics; interdivisional and intersociety symposia, with leading-edge topics; increased use of *Interface* to promote the Society to nonmembers; and improved symposium planning and coordination.

Our membership has a wealth of diverse talent—from universities, government labs, and industry. As such, I firmly believe our members are ECS's greatest asset; and as such, recruiting new members and retaining current members are critical elements of the Society's future. Excellent sources for new members are college students and nonmember attendees at our technical meetings. While recruitment initiatives currently exist, they could be improved. We must actively develop long-term relationships with universities, government agencies, and industrial sectors; and enhance initiatives to

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## Susko

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attract young talent to our Society. We need to continue focus with our international technical community through co-sponsorship of worldwide topical symposia and the formation of new ECS sections. Equally important is the retention of current ECS members. Our members are experiencing increased budgetary constraints in industry, government, and academia. By providing excellence in the papers we publish, the symposia we sponsor, the strategic technology initiatives we pursue as a Society, and the benefits we offer—both technical and professional—a member can justify their participation in ECS.

The goals discussed above cover a wide range of topics. I strongly believe they are essential to the growth and long-term success of ECS and will professionally benefit our current and future members. I believe my broad business, management, financial, and technology experience will help achieve these goals and keep the Society the leader in electrochemistry and solid-state science and technology for the twenty-first century.

I believe The Electrochemical Society is strong at this time because of a long history of dedicated member leadership and an outstanding headquarters staff. As such, I feel honored to be nominated for the position of Treasurer of the ECS; and, if elected, will execute the duties of the office to the best of my abilities. I would consider it a great honor to be asked by the membership to help guide the future of this Society. ■

## Looking for Student News

ECS takes an active interest in the affairs of its Student Members, and we are always interested in hearing from you about your interests, activities, and accomplishments.

Send all correspondence to:

The Electrochemical Society  
**INTERFACE**

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E-mail: [interface@electrochem.org](mailto:interface@electrochem.org)

[www.electrochem.org](http://www.electrochem.org)

## Advertisers Index

## ECS Co-sponsored Conferences

In addition to the regular ECS biannual meetings, ECS and its Divisions also co-sponsor meetings and symposia organized by individuals and/or other organizations, of interest to the technical audience ECS serves. The following is a list of the co-sponsored meetings for 2006.

- **2006 IEEE Workshop on Microelectronics and Electron Devices**, April 2006 (Idaho, USA)
- **12th Meeting on the Symposium for Polymer Electronics**, May 3-5, 2006 (Delaware, USA), [www.symposiumonpolymers.com](http://www.symposiumonpolymers.com)
- **The 6th International Advanced Automotive Battery & Ultracapacitor Conference**, May 17-19, 2006 (Maryland, USA), [www.advancedautobat.com/AABC](http://www.advancedautobat.com/AABC)
- **The 11th International Conference on Electroanalysis**, June 11-15, 2006 (Bordeaux, France), [eseac2006.fontismedia.com](http://eseac2006.fontismedia.com)
- **The Second PEAKS Conference on Electrochemical Processing for Microelectronics**, June 20-23, 2006 (Montana, USA)
- **Sohn International Symposium on Advanced Processing of Metals and Materials: Principles, Technologies, and Industrial Practice**, August 27-31, 2006 (California, USA), [www.tms.org](http://www.tms.org)
- **The Fifth International Conference on Electrocatalysis**, September 10-14, 2006 (Serbia and Montenegro)
- **The 2006 Fuel Cell Seminar**, November 13-17, 2006 (Hawaii, USA), [www.fuelcellseminar.com](http://www.fuelcellseminar.com)

To request an ECS co-sponsorship of your technical event, please contact Amir Zaman, Associate Director of Development, at [amir.zaman@electrochem.org](mailto:amir.zaman@electrochem.org) or 609.737.1902, ext. 103.

# ECS