

by Mary Yess



When compared with the Society's 114 years of activity, 25 years of *Interface* is a short span of time in which to rack up a lot of "markers" (articles, people, and events). In writing this article, it was impossible to list or highlight all the technical articles written for the magazine; impossible to acknowledge the many people who have graced its pages; impossible to disconnect the history of the magazine from the history of the Society itself; simply impossible to capture it all.

So many of the articles considered "accepted" science now were cutting edge when published in these pages; so many of the faces captured here were then unknown but have gone on to great things (like Nobel prizes) or are just gone; so many events continue to have tendrils in our current time.

Interface and this writer are nearly the same age—in terms of the Society's history, that is. I began my professional relationship with ECS as a consultant on *Interface*, brought in to evolve the prototype issue to a fully-fledged magazine that would serve the needs of its scientists, engineers, and other readers. Four years later, I joined the staff and was lucky to have as one of my responsibilities the role of Managing Editor for the publication, and had 18 more years to help shape its growth (and a lot of fun doing it). Thus, the optics for what's covered here are mine alone, with apologies for what's been missed. It was simply impossible to capture it all, but not impossible, I think, for readers to sense the unique position that this publication and this Society hold.

JANUARY 1992 As prototype Editor Karrie Hanson said, the new magazine would "...foster and implement ideas, achieve greater access of the members to information on matters affecting their divisional and broader interests, and to stimulate the participation of individuals in Society affairs." Functionally, the magazine would replace the "C" (or News) pages of the *Journal of The Electrochemical Society* (JES). Little did the founders know, but the magazine would soon be publishing significant articles of technical interest to the community, with contributions from authors who would soon become renowned in their fields.



WINTER 1992 The magazine was off to an auspicious start, with Rudy Marcus gracing the first cover. Paul Kohl, the first Editor of *Interface*, explained "Why *Interface*." Also of note in that premier issue: Vittorio de Nora was named an ECS Fellow; and Society members were already talking about electric vehicles.



SPRING 1993 When viewed on a shelf with the other issues, this one stood out because it had 316 pages alone dedicated to the 1993 Hawaii Meeting Program. It wasn't until a few meetings later that this meeting would be renamed PRiME (Pacific Rim International Meeting on Electrochemistry), and years after that when the program was no longer published in *Interface* because it would be available online.

SUMMER 1993 From the Perkin Medal Address, "Think Small, One Day It May Be Worth a Billion," by Luby Romankiw, to a recap of the Hawaii plenary lecture, "Global Warming: Past, Present, and Future," by Fred Mackenzie, this issue ranged from the extremely small, important technical devices to policy issues on a world-wide scale.

FALL 1993 Herbert Uhlig, Honorary Member, Past President, past Editor of JES, and winner of both the Palladium and Acheson awards, received a special obituary notice. Uhlig was also the Editor of a monograph on corrosion, now named after him, and which is still a best-seller.

WINTER 1993 "Tech Highlights" debuted, a new column that would summarize important scientific or technological developments published in JES. The column has since expanded to include the Society's other journal, *ECS Journal of Solid State Science and Technology* (JSS). The column will soon expand again, to include coverage of the new Editors' Choice and Perspective articles in the journals. The issue also noted that the Society held its first Student Poster Session at the fall 1993 ECS meeting.



SPRING 1994 Yet another new feature for *Interface* premiered: "ECS Classics." This first one was written by Norman Hackerman, long-time JES Editor. The issue was a lively one, for it also saw publication of the first "Free Radicals," an invited guest column. Its first author was Dale Hall, who would write many columns over a wide range of topics, with both scientific and popular culture themes. There must have been something in the air that season, because the issue also noted the formation of a new Group, the Fullerenes.



SUMMER 1994 James Amick's "From the President" column covered new directions for the Society, in which he wrote about energy technology: "The rapid deployment of alternative, cleaner energy sources is desperately needed. Our Society can and should play a major role in fostering the development of these technologies."—for over 20 years since, ECS's meetings and publications have certainly taken up the call.

FALL 1994 Charles Tobias was one of the Society's, and electrochemistry's, most notable and beloved figures. As Dick Alkire noted in his introduction to the story, "Tobias initiated the discipline of electrochemistry in the United States, and has played a central role in its development for the better part of 50 years." Tobias' family tree was presented in a colorful graphic. The issue also celebrated the 50th anniversary of the Society's Division now known as the Industrial Electrochemistry and Electrochemical Engineering Division.



WINTER 1994 Past is prologue... the issue, which covered sensor science and technology, was guest edited by Petr Vanýsek, who currently serves as one of the Co-Editors of *Interface*. There was an unusual invited guest column, with Micha Tomkiewicz musing about a different organizational structure for ECS in an article called "Divisional Recycling."



SPRING 1995 With Paul Kohl newly appointed to the JES Editor position, Lee Hunt took over as Interim Editor of *Interface*. The big story was the announcement that the Society "went online." Going online meant the Society began using e-mail, set up a Web page, and would soon launch an online abstract submission service. The article charmingly noted there were about 30 million users of the Internet; by the time this article is published, that number will be ca. 3.5 billion.



SUMMER 1995 Society News was a department for *Interface* from the beginning, and through the years, there have always been interesting tidbits to be found. This issue noted that the Society published its 300th proceedings volume. That may have prompted the Society to begin a relationship with the Chemical Heritage Foundation, which would go on to house "40 linear feet of archival material" belonging to the Society.

FALL 1995 Jan Talbot was the next Editor of *Interface*, and as she stated in her column, her own interests were often "at the interface of electrochemical and solid state science and technology." In a very early prelude to open access, guest columnist Jerry Woodall wrote about



how the new e-mail technology heralded a sea change. "We are now more open," he said, and "This improved communication has led to more trust, which, in turn, has resulted in a widespread increase in effective collaborations..."

WINTER 1995 Roque Calvo, ECS's Executive Director marked his 15 years of service to ECS in a wide-ranging conversation. In these first 15 years, Calvo was responsible for implementing a number of initiatives: *Interface*, the highly-collaborative joint meetings in Hawaii in 1987 and 1993, and improved membership services and growth.

SPRING 1996 The Society's ad hoc Committee on Visibility and Prestige provided a summary report of their work for *Interface*. The committee recommended what must have seemed like an earth-shattering decision to "change the name of the Society to 'ECS'." Calling the Society "ECS" was already in common use and is still the moniker of choice in order to properly convey both the the electrochemical and solid state activities.

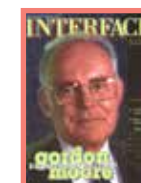
SUMMER 1996 "Cracking the Seal" was the latest "ECS Classics" article to show a little Society history. Then-Historian Dennis Turner gave us a look at the Society's corporate seals over the years and before the Society's logo was created to become the common representation of the organization. "The Society on Wheels" covered the Society's broad range of science and technology through all the parts of a car and was part of the ECS Education Committee's initiatives aimed at enhancing the visibility of the Society's education activities.

FALL 1996 The issue featured physical electrochemistry science and technology, and one of the articles had an author who would go on to deliver a plenary lecture at an ECS meeting. That was Nate Lewis, who would give The ECS Lecture on "Scientific Challenges in Sustainable Energy Technology" in 2005.

WINTER 1996 "Currents" was a new feature for *Interface*, and the first in this periodic series was excerpted from a report given by the president of the Federation of Materials Societies, of which ECS was a member. The new column was created to report on ECS's involvement with, and activities of, several organizations that assist in informing technology policy leaders, and which facilitate the exchange of technical information among societies such as ours.



SPRING 1997 Rarely does *Interface* feature a person on its cover, but 1997 was a great opportunity to show off the Society's relationship with one of the most recognized names in our field, and that was Gordon Moore. It was a "solid" (and solid state) issue: there was an interview with Moore, the announcement that Moore would deliver the plenary talk at the spring meeting, an article about the invention of the transistor (turning 50), and a fun sidebar showing a MEMS version of Frank Lloyd Wright's famous Fallingwater house.



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Winter 1992



Winter 1993



Spring 1994



Winter 1994



Spring 1995



Winter 1996

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SUMMER 1997 Once again the heft of the issue was indicative of the meetings activity and growth of the Society's technical programming. It contained the program for the fall 1997 joint international meeting in Paris, France, another new location for ECS meetings. Submissions were the largest to date (2,463) so far for any ECS meeting. President Barry Miller remarked that this meeting, and the activities of large Sections in Japan and Europe in particular, recognized "our mutual interdependence and responsibility across the globe."

FALL 1997 In another prelude to *Interface's* and the Society's future, this issue featured the Energy Technology Division. The guest editor, Krishnan Rajeshwar, would later become the magazine's Editor and go on to serve as Society President (2016-2017). The Society's Energy Technology Division had its genesis as a group back in the 1970s, the era of acute energy shortage. The spark was provided by Jerry Woodall (ECS President, 1990-1991), and the flames fanned by other members such as S. Srinivasan and J. McBreen.

WINTER 1997 Only hinted at in the summer issue, the Society formally announced the launch of *Electrochemical and Solid-State Letters* (ESL), a new, peer-reviewed, rapid-publication, electronic journal. Given the time constraints of paper + electronic publishing, ESL was a sorely needed resource because of the pace of research and discovery.

SPRING 1998 Wow, five years of *Interface* blew by and the magazine celebrated with a cover design featuring all the past covers as well as a brief history. Another marker observed in the magazine was the Society's celebration of 20 years of the Vittorio de Nora Award. Recipients listed were a veritable Who's Who, including Adam Heller, Charles Tobias, Earnest Yeager, Robert Baboian, and Walter Grot.

SUMMER 1998 "Currents" published the plenary lecture of C. Judson King, Provost and Senior Vice-President of Academic Affairs for the University of California. It was a timely talk, addressing "The Research University of the Twenty-First Century," covering such topics as "the onslaught of information technology" (little did we know how much an onslaught that would be!), and "financing research and judging its worth"—a clear call to start a discourse on what today is being addressed by conversations and actions around open access and the journal impact factor.

FALL 1998 "A Tradition of Voting with Your Feet for Highly Effective Meetings" gave Society members a look at all the variables involved in planning successful meetings: a desire to hold all components of meetings under one roof while accommodating a technical program that was bursting at the seams; rotating locations throughout the world to provide all constituents equal access to the incredible talks and posters; providing good value in hotel accommodations and meeting registration fees; and dealing with current market conditions, in multiple currencies.

WINTER 1998 The ECS Lecture at the Boston meeting was given by John Horgan, author of "The End of Science." In addition to discussing the physical limits, Horgan further explained that the limits of science were political and economic as well. It was one of the livelier plenary sessions the meetings have seen, and the debate with Horgan continued well into the coffee break.

SPRING 1999 *Interface* said farewell to Jan Talbot, who moved on to become a Society VP, and said hello to Krishnan Rajeshwar, or "Raj" as he is known. JES announced a number of changes: the table of contents now reflected the true scope of the technical material (the content would be categorized by what would become known as the Society's Topical Interest Areas), the page layout was updated to be more functional, and JES became available online.



SUMMER 1999 What now seems antiquated was news then: JES would become available on CD-ROM. "IndustryWatch" became a new feature, and this one covered "green" automobiles and hybrid cars, among other topics.

FALL 1999 The new "JapanWatch" noted that lithium ion battery shipments to Japan were on the upswing and called out the benefits of the battery. The issue also published a lengthy obituary of Honorary Member Harold Read, former President of ECS. He was a pioneer in electroplating, served as the first technical Editor of JES, and was the Society's only individual Sustaining Member.



WINTER 1999 The issue carried the announcement that the ECS journals were now searchable on the Department of Energy's PubScience, a free online search service, long since supplanted by a number of other DOE services.

SPRING 2000 As Yogi Berra said, "Prediction is very hard, especially when it's about the future." But try *Interface* did, with a far-ranging and extensive article on "Technology in the Next Century: Reflections on Electrochemistry and Solid State Science and Technology." A companion article, on "Landmark Discoveries of the Past Century" also appeared, calling out many ECS notables. A report from an ad hoc long range planning committee, appropriate as everyone planned for the next century, closed out the issue.

SUMMER 2000 The first Student Chapter was formed, at the University of Central Florida, under the auspices of the Georgia Section. The 1999 Annual Report was entitled, "A Year of Change" and it reported on the Society's new headquarters. The move allowed for room for growth and enabled staff to better serve its constituents.

FALL 2000 While the Society's official name did not change, it officially adopted its acronym, ECS, and unveiled a new logo to match. The New Technology Subcommittee, begun in 1970, at its symposium featured a keynote by Adam Heller. At that same meeting, The



ECS Lecture was given by Carl Djerassi, entitled "NO on Electrochemistry." Djerassi remained after the plenary to sign copies of his "science-in-fiction" book entitled "NO," which dealt with the biotech industry.

WINTER 2000 "The Heartbeat of Science" was an article created from excerpts of the Acheson Award Address given by Larry Faulkner at the fall 1999 meeting. Faulkner, a past ECS President, commented that electrochemistry and solid state science have certainly had a golden age, were probably still in it, and went on to say how a "new" golden age could be achieved.

SPRING 2001 The issue was devoted to "Global Climate Change." The issue collected articles that focused on possible solutions coming from the ECS community. JES made the transition to a true, dynamic online journal, with article-at-a-time publishing, full-text HTML with internal linking, and external reference linking, among other features. To get ready for the Society's 100th anniversary celebrations, *Interface* began publishing "Centennial Moments," with the first one asking, "What does the ancient Greek goddess, Pallas Athene, have to do with ECS?"



SUMMER 2001 ECS was not the only organization celebrating 100 years, and was happy to help NIST celebrate their centennial. Formerly the National Bureau of Standards (founded in 1901), NIST has had major impact through its services, research, and measurement tools.

FALL 2001 *Interface* finally went "nano" with a special issue on nanoscience and nanotechnology. On a larger scale, ECS held its first meeting in China, the International Semiconductor Technology Conference. The meeting was honored to have its plenary address given by Jack Kilby, winner of the Nobel Prize in Physics in 2000 for his invention of the integrated circuit.



WINTER 2001 The issue was filled with references to September 11, from the Editor's column to "From the President." In the shadows of that terrible event, ECS announced its plans for a hopeful centennial celebration. "Meeting Highlights" reported on the first joint internal meeting just held in San Francisco, with the International Society of Electrochemistry. Further looking toward Europe, the ECS European Section announced the establishment of the Heinz Gerischer Award.

SPRING 2002 The special centennial issue took readers for a stroll through 100 years of significant history of the Society in the feature article. "Tech Highlights presented" an "All-Star" collection of the top 25 most significant articles appearing in the Society journals. A special two-page spread featured drawings of notable ECS scientists and engineers, mainly from the pen of electrochemist and artist José Zagal. The final note was a sad one, an obituary on the passing of Ernest B. Yeager, internationally known for his pioneering contributions to the fundamental understanding of electrochemical reactions.



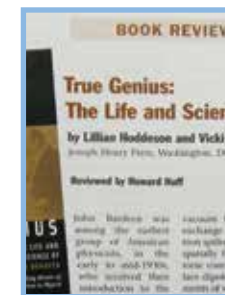
SUMMER 2002 Scenes from the centennial celebration: Rudolph Marcus, 1992 Nobel laureate in Chemistry delivered two talks; and Nobel laureate Sir Harold Kroto (Chemistry, 1996) gave several talks at symposia organized by the newly-minted Fullerenes, Nanotubes, and Carbon Nanostructures Division. What do you call a gathering of Past Presidents? There's a picture of 21 of them, as well as photos of representatives from sister societies from around the world. And there was some poetry too: "The Body Electric," a poem about ECS and electrochemistry and even Walt Whitman, was written by Mollee Kruger. There was a "roast" of ECS delivered by Barry MacDougall, with his usual wit and panache. Even "Ben Franklin" stopped by to help celebrate.

FALL 2002 ECS Saving Trees! Attendees of ECS meetings would begin receiving *ECS Meeting Abstracts* on CD-ROM only. Long-term supporters would now be recognized by the new Leadership Circle Award, given to Contributing Members that continued their support for 5 or more years. ECS launched its first significant fundraising effort with a Centennial Campaign. The purpose was to raise funds and awareness so the Society could better meet its stated objectives and the needs of its constituents.

WINTER 2002 Nobel laureate Gerd Binnig was announced to deliver The ECS Lecture at the Society's upcoming meeting in Paris. Binnig received the prize in 1986 for his invention of the scanning tunneling microscope.

SPRING 2003 In keeping with the European setting of the Society's 203rd meeting, *Interface* collected a series of perspectives under the department head, "NanoWatch Europe." The issue closed with a 152-page Paris Meeting Program, the 203rd meeting held that spring.

SUMMER 2003 One of the rare book reviews to appear in *Interface*, this one covered *True Genius: The Life and Science of John Bardeen*. Bardeen was the only winner of two Nobel prizes in physics, one for the invention of the transistor (in 1956, with Walter Brattain and William Shockley), and the second in 1972 (with Leon Cooper and J. Robert Schrieffer) for his description of the fifty-year "riddle" of superconductivity.



FALL 2003 The Society took another step toward an "all-electronic" state for its publications with the introduction of Peer X-Press, an online submission tool built by the American Institute of Physics for its affiliated publishers like ECS. The system would provide a tightly-integrated system for submission, editorial process tracking, and peer review management.

WINTER 2003 The Society announced the appointment of Dennis Hess as the new Editor for *Electrochemical and Solid-State Letters*. Hess served as a Divisional Editor for JES and was President of the Society (1996-1997). Eliezer Gileadi delivered the Palladium Award Address at the fall meeting in Orlando, Florida, providing "Some Observations on Conducting Research in the Digital Era."

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Winter 1997



Spring 1999



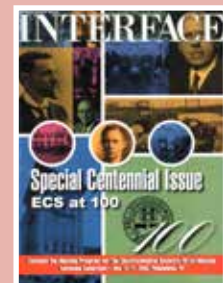
Fall 1999



Summer 2000



Fall 2000



Spring 2002



Fall 2002



Winter 2002



Summer 2003



Winter 2003



Spring 2004



Summer 2004

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SPRING 2004 “Free Radicals” this issue was entitled “A Weekend Trip to Mars—Nuclear Fusion: Energy for the Future.” Written by Wilson Greatbatch, the column was a fascinating “off-topic” musing by the inventor of the first successful implantable pacemaker. In a “state-of-the-union” on ECS publications, the Society was already thinking about open access: “The dynamic aspects of the Internet have become a driving force in the movement for content to be free of all barriers (fees and copyright).”

SUMMER 2004 *Modern Electroplating*, the Society’s first monograph, was translated into Chinese. “The Chalkboard” made its debut, with an article on “The Glass pH Electrode.” This new series of tutorials would be written by experts for the non-specialist audience.

FALL 2004 One of the functions of *Interface* is to provide news about and to members, so obituaries are a regular part of the magazine. In this issue, we noted the passing of Supramaniam Srinivasan. “Sri,” as he was known, was very active in the Society. In 1977, he and Jerry Woodall founded what would become the Energy Technology Division.

WINTER 2004 Possibly the first time a tractor appeared on the pages of any ECS publication, in this case the picture in question was of John Stickney, guest editor of the issue on electrodeposition. The reason for the tractor? In his “about the author,” Stickney said “he still manages to do some surface modification in his spare time.”

SPRING 2005 “Throwback Thursday”? The Student News section had an item on Vijay Ramani receiving the IE&EE Division’s H. H. Dow Memorial Student Award. Flash forward to 2014, when Ramani was named Co-Editor of *Interface*.



SUMMER 2005 ECS co-sponsored a special symposium at the Chemical Heritage Foundation on “Moore’s Law at 40.” Long-time member Gordon Moore himself addressed the gathering. The Society welcomed a new Student Chapter: the Cleveland Section/Yeager Center for Electrochemical Sciences.

FALL 2005 More changes for publications: ECS announced the launch of *ECS Transactions*, an online database of papers from ECS meetings and ECS-sponsored meetings. This new publication replaced the old proceedings volume series and added significant improvements to the availability and usability of the content from the meetings. Another sad notice was the passing of past President Paul Milner.

In addition to his contributions as President (1984-1985) and Secretary (two terms, 1974-1980), he was very active on many committees, and he wrote specialized software for ECS to manage its manuscript submissions, membership, and subscriptions.

WINTER 2005 Nathan Lewis (California Institute of Technology) delivered The ECS Lecture at the fall meeting in Los Angeles. Lewis spoke about “Scientific Challenges in Sustainable Energy Technology.” Plenary session attendees also had a chance to applaud Roque Calvo, who was recognized for his 25 years of service.

SPRING 2006 Previously published stand-alone, the topic of “What Is Electrochemical and Solid State Science?” was given full treatment in *Interface*. The issue also featured an interview with Vladimir Bagotsky, editor of the new ECS monograph, *Fundamentals of Electrochemistry*. ECS was proud to announce the launch of its new Digital Library, which collected all of ECS’s online content in one place, and which provided numerous tools for users. Further online innovations brought members and other users a new ECS website.



SUMMER 2006 The obituary for J. Bruce Wagner, Jr. noted that he was a Divisional Editor for JES, served on many committees, and was ECS President (1983-84). A Fellow, Honorary Member, and Acheson Medalist, the Society’s HTM Division named a new award for him.

FALL 2006 Education has always been important to ECS, and the issue asked a primary question: does current electrochemical education adequately prepare students to pursue, and be leaders in, our field? The articles provided an interesting array of responses. Another first for ECS was its meeting in Cancun, Mexico; and it was the last time ECS would print a full program in the magazine, because the online editions were quickly providing a much more robust and timely interface.

WINTER 2006 The IE&EE Division organized its first, and very successful, outreach program to 65 high school and 100 undergraduate Cancun students. Four fuel cell model cars were used by the students in a competition to see who could estimate the hydrogen required to go a measured distance.

SPRING 2007 ECS expanded its Digital Library to include an additional 20 years of JES content, previously only available in print. The Fullerenes, Nanotubes, and Carbon Nanostructures Division created a new award named after Richard Smalley, a pioneer in carbon nanotubes.

SUMMER 2007 ECS announced a major gift, a charitable gift annuity, from past President Robert Frankenthal. John Weidner was named the first Editor of *ECS Transactions*. Gordon Moore was named an Honorary Member, and the Society noted the passing of another silicon research giant, Bruce Deal. Deal was known throughout the world for his work on silicon oxidation and passivation, and he worked with Gordon Moore and Andy Grove at Fairchild Semiconductor.

FALL 2007 Daniel Scherson was named JES Editor. Scherson would go on to become an ECS President. The issue noted the loss of former JES Editor, Norman Hackerman. Hackerman, also an ECS President (1957-58), was a highly-decorated ECS member who left his indelible mark on the journal.



WINTER 2007 ECS and ISE signed a “Cooperation Agreement” to intensify contacts and co-operation in the future. The Digital Library announced new alerting services. The Call for Papers for the joint internal meeting of ECS and The Electrochemical Society of Japan featured a new name and look: a distinctive icon for this ever-growing PRiME.



SPRING 2008 The ECS bookstore underwent a significant redesign, enabling users to search back to 1967 for publications. ECS announced the first collaboration with the Chinese Society of Electrochemistry: CSE would become a technical co-sponsor of the next PRiME meeting.

SUMMER 2008 In an effort to streamline the Society’s governance, the Board of Directors undertook an effort to combine the Constitution and Bylaws into one cohesive document, the “New” Bylaws. Honorary Member Jefferson Cole’s passing was noted in the issue. Long-time member and colleague of Vittorio de Nora, Cole was instrumental in establishing the Society’s de Nora Award.

FALL 2008 Member benefits have changed many times since the Society was founded in 1902, and 2008 saw a comprehensive review of benefits. One of the new benefits was a 100-article download pack for the Digital Library, which gave members access to *ECS Transactions* online for the first time.

WINTER 2008 The global electrochemical community lost a unique and remarkable person with the passing of Vittorio de Nora. He was considered a brilliant academic, but also went on to become an astute businessman who led the globalization of the chlor-alkali industry following World War II. Honorary Member and Acheson Medalist, one of the Society’s top awards is named after de Nora.

SPRING 2009 “ECS Science at Its Best” was heralded on the cover of this issue. Inside were articles on the most-cited papers from JES (“classics”), updates from the best in the field on what’s happened since the original publication of some of those JES “classics,” and an ECS “Hall of Fame” (U.S. National Medal recipients). The San Francisco Special Meeting Section highlighted a special symposium, “Grand Challenges & Opportunities in Energy Conversion and Storage,” with presentations by 16 scientists, including 12 members of the U.S. National Academies. *ECS Transactions* published its 5,000th paper.

SUMMER 2009 A new column was introduced, “Websites of Note.” Long-time ECS member Zoltan Nagy would research sites for the column; Nagy maintained several electrochemistry websites himself. Another book review was featured, this time on the new Society monograph, *Electrochemical Impedance Spectroscopy*, by Mark Orazem and Bernard Tribollet.



FALL 2009 The Society ventured to Vienna, Austria for the first time and the fall issue provided a look at the symposium topics and impressive list of featured speakers, including David Shoesmith, Dieter Kolb, Henry White, and Martin Stratmann.

WINTER 2009 Jerry Woodall, past President, challenged ECS to raise funds to significantly boost the Norman Hackerman Young Author Awards. Woodall’s gift of \$50,000 matched donations from the challenge campaign. This outstanding gift was one of the largest ever made to the Society.

SPRING 2010 “ECS Science at Its Best” was reprised in this issue, in “JES Classics Redux.” An additional seven “classic” JES articles received contemporary commentaries by members of seven ECS Divisions.




SUMMER 2010 The issue took a bit of a different tangent from the typical technical articles, and instead focused on articles around “Leadership and Education in Electrochemical Engineering,” guest edited by the IE&EE Division. The issue also showcased the IE&EE New Electrochemical Technology Award, one of the only ECS awards that recognizes team excellence.

FALL 2010 This was one of the first *Interface* issues to focus on the “smart grid.” Entitled “Lighting in a Bottle,” it covered the challenges associated with storing energy for that grid. One interesting comment from the Introduction was that “...if current trends continue, solar installations on homes and businesses will become cost-effective...” Six years after this issue, and with announcements from companies like Tesla, we’re making progress in that direction.

WINTER 2010 The Energy Technology Division announced a new award for young investigators named after Supramaniam Srinivasan, one of the co-founders of that Division. “Currents” featured an article on “Scialog: A Methodology for Accelerating Breakthroughs for Solving Complex World Issues.” In a first for *Interface*, the journal *Chemical Sensors* translated this issue into Chinese.

SPRING 2011 Another topic new to *Interface* was graphene, with an issue entitled, “Another New Kid on the Carbon Block.” Some of the words used to describe this material in the articles included “magic” and “future for semiconductors.”

SUMMER 2011 ECS President Esther Takeuchi was inducted into the National Inventors Hall of Fame. Takeuchi holds more than 140 patents and received the National Medal of Technology and Innovation in 2009.

FALL 2011 ECS received its largest-ever bequest, a cash gift of \$208,000 plus stocks, from Robert Dean Hancock, founder of the Micromanipulator Company. The fall meeting, in Boston, hosted the first  electrochemical energy summit 2011 (E2S), an international summit in support of societal energy needs. The E2S panel included speakers from around the world.

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Spring 2005



Summer 2005



Fall 2005



Spring 2006



Summer 2007



Winter 2007



Spring 2008



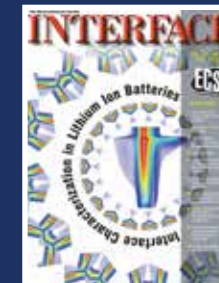
Summer 2009



Fall 2009



Winter 2010



Fall 2011



Spring 2012

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WINTER 2011 Too many leaders lost to the ECS community, were noted in this issue: Dieter Kolb, Richard Buck, Wilson Greatbatch, and James McBreen. On an upbeat note, a new Section was established in Chile.

SPRING 2012 After a period of study and reflection, ECS decided to create a spin-off from JES. The new journal, *ECS Journal of Solid State Science and Technology* (JSS) was designed to focus on just those aspects captured in its title. As an important step undertaken to prepare for the new journals, the Society created a Task Force to study the Society's Topical Interest Areas (TIAs) and ensure that all content, in publications and meetings, represented the Society's technical domain in its current state. The new position of Technical Editor was created, with each Technical Editor responsible for one of the TIAs in the journals. Readers met the members of the restructured Editorial Board for the journal; and the Society announced a new home for the ECS Digital Library on the HighWire Press platform. Sadly, more notable ECS members passed away: Arnie Reisman, Wayne Worrell, and Milan Paunovic.

SUMMER 2012 "Living in an Accelerating Frame of Reference" was the theme of ECS President Fernando Garzon's column, in which he (rapidly) detailed all the changes that the Society had implemented in just the past year (new journals, new meeting apps), while noting the increasing stresses for members (expectations of extraordinary publication rates, innovation success, fundraising, and more).

FALL/WINTER 2012 Notable was a "house ad" calling for papers for a special focus issue for one of the journals, representing a new initiative under the new journals structure. The PRiME 2012 meeting was the largest of its kind to date. Hawaii's Lt. Governor Brian Schatz (now U.S. Senator Schatz) delivered the opening remarks at the Electrochemical Energy Summit.

SPRING 2013 The ECS "Hall of Fame" added two more to its list; Allen Bard and John Goodenough were both awarded the U.S. National Medal of Science. Lubomyr Romankiw was honored for 50 years of electrochemistry with IBM. Romankiw was recognized internationally for his work on magnetic recording.

SUMMER 2013 ECS President Tetsuya Osaka noted in his column that the increase in the number of biannual meeting attendees was more than likely motivated by growing global concerns about environmental and energy issues, a core strength of ECS. Because of the highly-topical nature of the contribution, a "Currents" contribution from Adam Heller was published online first (a first for *Interface*). The article was entitled, "The G. S. Yuasa-Boeing 787 Li-ion Battery: Test It at a Low Temperature and Keep It Warm in Flight."

FALL 2013 With *ECS Transactions* (ECST) approaching almost a decade of publication, its Advisory Board conducted a wide-ranging survey and held a discussion about its future. One of the strengths noted by the respondents, and those who attended the open discussions at the spring meeting, was the flexibility that different groups (ECS symposia and outside conferences) take in publishing content in ECST. This strength would come to play a major role in the redesign of ECST ahead in 2016.

WINTER 2013 This was the issue in which we said farewell to "Raj," at least as Editor of *Interface*, as he completed 15 years of service to magazine and stepped into the role of ECS Vice-President.

SPRING 2014 With this issue, *Interface* began writing some new chapters in its history. The magazine welcomed not one, but two, new editors. Vijay Ramani would take on the Co-Editor responsibilities for the technical articles, and Petr Vanýsek would take on special interest articles (like "ECS Classics") and news. The Managing Editor mantle would be taken up by Annie Goedkoop, ECS's Director of Publications. This enabled Mary Yess, Managing Editor of the magazine from its inception, to more fully take up her role as Deputy Executive Director and Publisher, to develop content for all publications. ECS announced the launching of its first Open Access initiative, Author Choice Open Access; and Executive Director Roque Calvo wrote about the Society's future plans to *Free the Science*.



#FREE THE SCIENCE

SUMMER 2014 President Paul Kohl, in his "From the President" column, announced the formation of the Committee on the Free Dissemination of Research (CFDR), to be headed by Larry Faulkner. The CFDR was charged with the goal of raising funds to make *Free the Science* a reality. In further support of publishing high-quality content, the Society established the Deal & Grove Young Author Award, complementing the existing award named for Norman Hackerman.

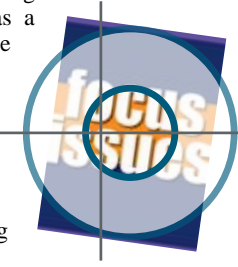
FALL 2014 In addition to its own highly successful meetings, ECS also sponsors many other meetings and manages conferences as well. The International Meeting on Lithium Batteries (IMLB) 2014 iteration, held in Como, Italy, was the latest IMLB that ECS managed. Back across the globe, ECS partnered with the Sociedad Mexicana de Electroquímica to hold a joint international meeting in Cancun, Mexico. The new Allen J. Bard Award in Electrochemical Science was announced.

WINTER 2014 The Society was very excited to announce the results of its first, and unique event, "Science for Solving Society's Problems Challenge." ECS partnered with the Bill & Melinda Gates Foundation to leverage the brainpower of the many scientists and engineers gathered at the meeting. Over 100 researchers were guided through a brainstorming session and working group sessions on the theme of improving access to better sanitation and clean water. Researchers then had 2 days to develop proposals. Four winners shared \$210,000 in seed funding for their projects.

SPRING 2015 Electric vehicles, photovoltaics, batteries, fuel cells, and the grid have been consistent themes throughout *Interface*'s history, and all of these topics were updated in this issue. While much has been written about one-way flow of power to vehicles, one of the articles touched on the aspect of V2G, or energy transfers from vehicles back to the grid.

SUMMER 2015 ECS President Dan Scherson's column centered on "Worthy Goals," which provided a rapid walk through open access issues such as governmental mandates, and through the report of the CFDR, which concluded it was the right time to move forward with a major campaign effort to help ECS reach its *Free the Science* goals.

"Focus on Focus Issues" was a new column showcasing the most recent focus issues of the ECS journals. The issue announced the addition of Altmetrics to the Society's Digital Library, providing a better way for authors to track the discussion surrounding their work.



FALL 2015 For only the third time in *Interface* history, the cover was given over to a person. This time, the magazine honored Adam Heller, celebrating 54 years of innovation. Heller delivered The ECS Lecture on "Wealth, Global Warming, and Geoengineering." Pennington Corner, this time written by ECS Publisher Mary Yess, announced the latest changes for ECS publications: streamlined offerings (four journals—two Letters-type and two "regular" journals—consolidated to two), the new Communication article type, and the new Editors' Choice designation. The ECS satellite meeting in Glasgow, Scotland was an exciting success. More than 800 attendees from over 40 countries (and more than half first-time ECS meeting attendees) participated in three main tracks on electrochemical energy conversion & storage. Society News noted the passing of Al Salkind, eminent battery scientist.

WINTER 2015 Planning for PRiME 2016 had been underway since the closing of the 2012 meeting, and the partners (ECS and ECSJ) were pleased to announce the addition of a third partner for 2016, the Korean Electrochemical Society.

SPRING 2016 Well, here we are finally, at the year in which we celebrate *Interface*'s silver jubilee. *Interface* Co-Editor Vijay Ramani wrote about the purposes of *Interface*: educate and inform, provide an archive of ECS activities, and give insights into the ongoing state-of-the-art research within every branch of the Society. He noted that *Interface* would now be a true part of the ECS Digital Library, with full archiving and indexing. "35 Years of Advancing and Freeing the Science" was an interview with ECS Executive Director Roque Calvo. The *Free the Science* initiative was formally announced. Meetings reported on a new mobile-friendly website; and the new "ECS Masters Series," a growing collection of key figures in electrochemistry and solid state science, were highlighted.



SUMMER 2016 There's Web 2.0, something or other 3.1, but how about Industry 4.0? In his column, Co-Editor Petr Vanýsek wrote on Industry 4.0, which aims to alter the way the whole manufacturing process works, with the goal of high customization and flexibility of mass production. He called out the many pros and cons (new jobs/loss of jobs, big data opportunities, and data security/loss of privacy) and noted that the initiative, which started in Germany in 2011, is now spreading throughout Europe, and is even being felt in the U.S.

FALL 2016 Society News announced the winners of the new ECS and Toyota North America Fellowships. The Battery Division announced the KM Abraham Travel Awards, established through a generous gift of \$50,000 from Dr. Abraham. *Free the Science* announced the formation of an Advisory Board to offer expertise and to forge the connections so necessary for ECS to reach its fundraising goals. The issue celebrated the 25th anniversary of the commercialization of the lithium-ion battery with articles from the researchers so instrumental in that happening.

WINTER 2016 We did it! Yes, we—all the authors, editors, advertisers, printers, photographers, writers, members, students, scientists, engineers—have made *Interface* the highly-respected, highly-valued publication that it is today. On to the next 25!



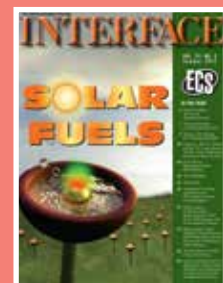
Mary Yess is the Society's Deputy Executive Director and Publisher. She was *Interface*'s Managing Editor from 1996 until 2014. Yess celebrated her own anniversary—20 years—in 2016 (see page 53).

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Summer 2012



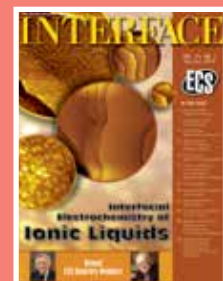
Summer 2013



Fall 2013



Winter 2013



Spring 2014



Winter 2014



Spring 2015



Summer 2015



Fall 2015



Winter 2015



Spring 2016



Fall 2016