# 229<sup>th</sup> ECS MEETING





## **Call for Papers**

### May 29 - June 3, 2016

Hilton San Diego Bayfront & San Diego Convention Center

For all details about the 229<sup>th</sup> Meeting in San Diego, please visit **www.electrochem.org**. For the full San Diego Call for Papers, see **www.electrochem.org/meetings/biannual/229**.

## 229th ECS MEETING

May 29 - June 3, 2016 • Hilton San Diego Bayfront & San Diego Convention Center

#### **General Information**

The 229<sup>th</sup> ECS Meeting will be held from May 29 – June 3, 2016. This major international conference offers a unique blend of electrochemical and solid-state science and technology; and serves as a major forum for the discussion of interdisciplinary research from around the world through a variety of formats, such as oral presentations, poster sessions, exhibits, and tutorial sessions.

#### Abstracts are due no later than December 11, 2015.

Note: Some abstracts may be due earlier than December 11, 2015. Please carefully check the symposium listings for any alternate abstract submission deadlines. For complete details on abstract submission and symposium topics, please see www.electrochem. org/meetings/biannual/229/.

#### **Abstract Submission and Deadlines**

Submit one original meeting abstract electronically via the ECS website, no later than **December 11, 2015**. Faxed abstracts, e-mailed abstracts, and late abstracts will not be accepted. In February of 2016 all presenting authors will receive an e-mail notifying them of the date, time, and location of their presentation. Only presenting authors with non-U.S. addresses will receive a hardcopy acceptance letter. Other hardcopy letters will be sent only upon request to abstracts@electrochem.org.

Meeting abstracts should explicitly state objectives, new results, and conclusions or significance of the work. Regardless of whether you submit as a poster or an oral presentation, it is at the symposium organizers' discretion whether it is scheduled for an oral or poster presentation. Programming for this meeting will occur in February 2016.

#### **Paper Presentation**

All authors selected for either oral or poster presentations will be notified in February 2016. Oral presentations must be in English. Both LCD projectors and laptops will be provided for oral presentations. **Presenting authors MUST bring their presentation on a USB flash drive to be used with the laptop that will be provided in each technical session room.** Speakers requiring additional equipment must make written request to the ECS headquarters office at least one month prior to the meeting and appropriate arrangements will be worked out, subject to availability, and at the expense of the author. Poster presentations should be displayed in English, on a board approximately 3 feet 10 inches high by 3 feet 10 inches wide (1.17 meters high by 1.17 meters wide), corresponding to the abstract number and day of presentation in the final program.

#### Manuscript Publication

*ECS Meeting Abstracts*—All meeting abstracts will be published on the ECS website, copyrighted by ECS, and all abstracts become the property of ECS upon presentation.

*ECS Transactions*—All full papers and posters presented at ECS meetings are eligible for submission to the online proceedings publication, *ECS Transactions* (ECST). The degree of review to be given each paper is at the discretion of the symposium organizers. Some symposia will publish an "enhanced" issue of ECST, which will

Some symposia will publish an "enhanced" issue of ECST, which will be available for sale at the meeting and through the ECS Digital Library. Please see each individual symposium listing in the full Call for Papers to determine if there will be an "enhanced" ECST issue. In the case of symposia publishing "enhanced" issues, submission of a full-text manuscript to ECST is mandatory and required in advance of the meeting.

is mandatory and required in advance of the meeting. Some symposia will publish a "standard" issue of ECST for which all authors are encouraged to submit their full-text papers. Please see each individual symposium listing in the full Call for Papers to determine if there will be a "standard" ECST issue. Upon completion of the review process, papers from the "standard" issues will be published shortly after their acceptance. Once published, papers will be available for sale through the ECS Digital Library. Please visit the ECST website (ecsdl.org/ECST/) for additional

Please visit the ECST website (ecsdl.org/ECST/) for additional information, including overall guidelines, deadlines for submissions and reviews, author and editor instructions, a manuscript template, and more.

Authors presenting papers at ECS meetings, and submitting to ECST, are also encouraged to submit to the Society's technical journals: the *Journal* of *The Electrochemical Society, ECS Journal of Solid State Science and Technology.* Although there is no hard deadline for the submission of these papers, it is considered that six months from the date of the symposium is sufficient time to revise a paper to meet the stricter criteria of the journals. "Instructions to Authors" are available from the ECS website.

If publication is desired elsewhere after presentation, written permission from ECS is required.

#### **Financial Assistance**

Many ECS divisions offer travel grants to students, postdoctoral researchers, and young professionals to attend ECS biannual meetings. Applications are available online at www.electrochem.org/travel\_grants and must be received no later than the submission deadline of Friday, February 12, 2016. Additional financial assistance is very limited and generally governed by the symposium organizers. Individuals may inquire directly to the organizers of the symposium in which they are presenting their paper to see if funding is available. For general travel grant questions, please contact travelgrant@ electrochem.org.

#### Letter of Invitation

Individuals requiring an official letter of invitation should write to the ECS headquarters office; such letters will not imply any financial responsibility of ECS.

#### Hotel Reservations — Deadline April 25, 2016

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The 229<sup>th</sup> ECS Meeting will be held at the San Diego Convention Center and the Hilton San Diego Bayfront. Please refer to the meeting website for the most up-to-date information on hotel availability and information about the blocks of rooms where special rates have been reserved for participants attending the meeting. **The hotel reservation deadline is April 25, 2016**.

#### Meeting Registration

All participants—including authors and invited speakers—are required to pay the appropriate registration fees. Hotel and meeting registration information will be posted on the ECS website as it becomes available. The deadline for discounted early-bird registration is April 25, 2016.

#### Short Courses

A number of short courses will be offered on Sunday, May 29, 2016 from 9:00AM-4:30PM. Short courses require advance registration and may be cancelled if enrollments are too low. As of press time, the following short courses are tentatively planned for the meeting: Electrochemical Applications to Biotechnology, Advanced Impedance Spectroscopy, Hydrodynamic Electrochemistry Using Rotating Electrodes, and Nanobiosensors.

#### Technical Exhibit

The 229<sup>th</sup> ECS Meeting in San Diego will include a Technical Exhibit, featuring presentations and displays by over 40 manufacturers of instruments, materials, systems, publications, and software of interest to meeting attendees. Coffee breaks are scheduled in the exhibit hall along with evening poster sessions.

#### **Sponsorship Opportunities**

ECS biannual meetings offer a wonderful opportunity to market your organization through sponsorship. Sponsorship opportunities include unparalleled benefits and provide an extraordinary chance to present scientific products and services to key constituents from around the world. Sponsorship allows exposure to key industry decision makers, the development of collaborative partnerships, and potential business leads. ECS welcomes support in the form of general sponsorship at various levels: Platinum: \$10,000+, Gold: \$5,000, Silver: \$3,000, and Bronze: \$1,500.

Sponsors will be recognized by level in *Interface*, the Meeting Program, meeting signage, and on the ECS website. In addition, sponsorships are available for the plenary and keynote talks and other special events. These opportunities include additional recognition, and may be customized to create personalized packages. Special event sponsorships will be assigned by the Society on a first-come, first served basis. Advertising opportunities—in the Meeting Program as well as in *Interface*—are also available. Please contact Becca Jensen Compton at 1.609.737.1902, ext. 102 for further details.

#### **Contact Information**

If you have any questions or require additional information, contact ECS.



www.electrochem.org



### Symposium Topics

A01—	Joint General Session: Batteries and Energy Storage -and- Fuel Cells, Electrolytes, and Energy
A02—	Future and Present Advanced Lithium Batteries and Beyond – a Symposium in the Honor of Prof. Bruno Scrosati
A03—	Large-Scale Energy Storage 7
A04—	Battery Modeling and Computation
A05—	Electrochemistry and Batteries for Safe and Low-cost Energy Storage
B —	Carbon Nanostructures and Devices
B01—	Carbon Nanostructures for Energy Conversion
B02—	Carbon Nanostructures in Medicine and Biology
B03—	Carbon Nanotubes - From Fundamentals to Devices
B04—	Endofullerenes and Carbon Nanocapsules
B05—	Fullerenes - Chemical Functionalization, Electron Transfer, and Theory
B06—	Graphene and Beyond: 2D Materials
B07—	Inorganic/Organic Nanohybrids for Energy Conversion
B08—	Porphyrins, Phthalocyanines, and Supramolecular Assemblies
B09—	Engineering Carbon Hybrids - Carbon Electronics 2
<b>C</b> —	Corrosion Science and Technology
C01—	Corrosion General Session
D —	Dielectric Science and Materials
D01—	Dielectrice for Nanosystems 7. Materials Science, Processing, Reliability, and
	Manufacturing -and- Solid State Topics General Session
D02—	Manufacturing -and- Solid State Topics General Session Chemical Mechanical Polishing 13
D02— D03—	Manufacturing -and- Solid State Topics General Session Chemical Mechanical Polishing 13 Dielectrics for Interconnect, Interposers, and Packaging 2
D02— D03— D04—	Manufacturing -and- Solid State Topics General Session Chemical Mechanical Polishing 13 Dielectrics for Interconnect, Interposers, and Packaging 2 Thermal and Plasma Processes for Materials (or Nanomaterials) Synthesis and Processing
D02— D03— D04— E—	Manufacturing -and- Solid State Topics General Session Chemical Mechanical Polishing 13 Dielectrics for Interconnect, Interposers, and Packaging 2 Thermal and Plasma Processes for Materials (or Nanomaterials) Synthesis and Processing Electrochemical/Electroless Deposition
D02— D03— D04— E01—	Manufacturing -and- Solid State Topics General Session Chemical Mechanical Polishing 13 Dielectrics for Interconnect, Interposers, and Packaging 2 Thermal and Plasma Processes for Materials (or Nanomaterials) Synthesis and Processing Electrochemical/Electroless Deposition Electrophoretic Deposition
D02 D03 D04 E01 E02	Manufacturing -and- Solid State Topics General Session Chemical Mechanical Polishing 13 Dielectrics for Interconnect, Interposers, and Packaging 2 Thermal and Plasma Processes for Materials (or Nanomaterials) Synthesis and Processing Electrochemical/Electroless Deposition Electrophoretic Deposition Three-Dimensional Electrodeposition and Electroless Deposition
D02— D03— D04— E01— E02— <b>F</b> —	Manufacturing -and- Solid State Topics General Session Chemical Mechanical Polishing 13 Dielectrics for Interconnect, Interposers, and Packaging 2 Thermal and Plasma Processes for Materials (or Nanomaterials) Synthesis and Processing Electrochemical/Electroless Deposition Electrophoretic Deposition Three-Dimensional Electrodeposition and Electroless Deposition Electrochemical Engineering
D02— D03— D04— E01— E02— F01—	Manufacturing -and- Solid State Topics General Session Chemical Mechanical Polishing 13 Dielectrics for Interconnect, Interposers, and Packaging 2 Thermal and Plasma Processes for Materials (or Nanomaterials) Synthesis and Processing Electrochemical/Electroless Deposition Electrophoretic Deposition Three-Dimensional Electrodeposition and Electroless Deposition Electrochemical Engineering Industrial Electrochemistry and Electrochemical Engineering General Session
D02— D03— D04— E01— E02— F02— F01—	Manufacturing -and- Solid State Topics General Session Chemical Mechanical Polishing 13 Dielectrics for Interconnect, Interposers, and Packaging 2 Thermal and Plasma Processes for Materials (or Nanomaterials) Synthesis and Processing Electrochemical/Electroless Deposition Electrophoretic Deposition Three-Dimensional Electrodeposition and Electroless Deposition Electrochemical Engineering Industrial Electrochemistry and Electrochemical Engineering General Session Engineering the Interface between Catalysis and Electrocatalysis
D02 D03 D04 E01 E02 F01 F01 G G —	Manufacturing -and- Solid State Topics General Session Chemical Mechanical Polishing 13 Dielectrics for Interconnect, Interposers, and Packaging 2 Thermal and Plasma Processes for Materials (or Nanomaterials) Synthesis and Processing Electrochemical/Electroless Deposition Electrophoretic Deposition Three-Dimensional Electrodeposition and Electroless Deposition Electrochemical Engineering Industrial Electrochemistry and Electrochemical Engineering General Session Engineering the Interface between Catalysis and Electrocatalysis Electronic Materials and Processing
D02 — D03 — D04 — E01 — E02 — F01 — F01 — G01 —	Manufacturing -and- Solid State Topics General Session Chemical Mechanical Polishing 13 Dielectrics for Interconnect, Interposers, and Packaging 2 Thermal and Plasma Processes for Materials (or Nanomaterials) Synthesis and Processing Electrochemical/Electroless Deposition Electrophoretic Deposition Three-Dimensional Electrodeposition and Electroless Deposition Electrochemical Engineering Industrial Electrochemistry and Electrochemical Engineering General Session Engineering the Interface between Catalysis and Electrocatalysis Electronic Materials and Processing More-than-Moore 3

G02—Silicon Compatible Materials, Processes, and Technologies for Advanced Integrated Circuits and Emerging Applications 6

H —	- Electronic and Photonic Devices and Systems
101—	-Wide Bandgap Semiconductor Materials and Devices 17
102—	-Solid-State Electronics and Photonics in Biology and Medicine 3
103—	-Properties and Applications of 2-Dimensional Layered Materials
I —	- Fuel Cells, Electrolyzers, and Energy Conversion
01 —	-State-of-the-Art Invited Tutorials on Model/Experiment Coupling in Low Temperature Fuel Cells
02 —	-Ionic and Mixed Conducting Ceramics 10
03 —	-Hydrogen and Oxygen Evolution Catalysis for Water Electrolysis 2
04 —	-Mechano-Electro-Chemical Coupling in Energy Related Materials and Devices 2
05 —	-Heterogeneous Functional Materials for Energy Conversion and Storage
К —	- Organic and Bioelectrochemistry
(01—	-12 <sup>th</sup> Manual M. Baizer Memorial Symposium on Organic Electrochemistry
(02—	-Bioelectrochemistry: Analysis and Fundamental Studies
L —	-Physical and Analytical Electrochemistry, Electrocatalysis, and Photoelectrochemistry
.01 —	-Physical and Analytical Electrochemistry, Electrocatalysis, and Photoelectrochemistry General Session
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.05 —	-Supramolecular Materials
.06—	-Ionic Liquids as Electrolytes
.07 —	-Renewable Fuels via Artificial Photosynthesis or Electrolysis
.08—	-Electrochemistry in Geochemical Environments
м —	-Sensors
И01—	-Sensors, Actuators, and Microsystems General Session
Л02—	-Medical and Point-of-Care Sensors
Z —	- General Topics
201 —	-General Society Student Poster Session
202 —	-Nanotechnology General Session featuring Nanoscale Luminescent Materials 4
203 —	-Grand Challenges in Energy Conversion and Storage
204—	-Nature-inspired Electrochemical Systems 2
205 —	-Sustainable Materials and Manufacturing
206 —	-Modeling: From Elucidation of Physical Phenomena to Applications in Design

Z07 — The Brain and Electrochemistry