
PHYSICAL AND ANALYTICAL ELECTROCHEMISTRY DIVISION (PAED) NEWSLETTER

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Division Website: www.electrochem.org/ecs/tia/paed/paed.htm

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INSIDE THIS ISSUE

PAGE

1	Division Officers
2	Recent Activities
3	Student Travel Awards
4	Divisional Awards
7	Symposia

Recent Activities

Symposia

The division (PAED) is very active in organizing, sponsoring and co-sponsoring various symposia during the Electrochemical Society meetings. The PAED sponsored 5 symposia and co-sponsored 10 symposia during 223rd ECS Meeting in Toronto (May 12th -17th, 2013). More recently PAED have sponsored or co-sponsored the following symposia 224th ECS Meeting in San Francisco (Oct. 27th – Nov 1st, 2013): A3 - The Energy-Water Nexus; B4 - Computational Science of Battery Materials; B6 - Electrochemical Synthesis of Fuels II; B7 - High Temperature Experimental Techniques and Measurements; B9 - Interfacial Phenomena in Battery Systems; B11 - Polymer Electrolyte Fuel Cells 13; D2 - Atmospheric Corrosion; F5 - Emerging Opportunities in Electrochemical Deposition for Nanofabrication; H1- Carbon Nanostructures 4 - Fullerenes to Graphene; I1 - Physical and Analytical Electrochemistry

Division General Session; I2 - Symposium in Honor of Adam Heller on his 80th Birthday; I3 - Photoelectrochemistry and Photoassisted Electrocatalysis; I4 - Physical and Analytical Electrochemistry in Ionic Liquids 3; I5 - Electrode Processes VIII; J2 - Impedance Techniques, Diagnostics, and Sensing Applications; J4 - Microfluidic MEMS/NEMS, Sensors and Devices; J5 - Sensors and Imaging Techniques Based on Fluorescence, SPR, SERS and Photoelectrochemistry. The division typically provides over \$10,000 in supporting funds to help organizers assist in the travel of speakers. The PAED has also broad plans to support and organize numerous symposia during the next few ECS meetings: 225th ECS Meeting in Orlando, Florida (May 11th-16th, 2014); 226th ECS Meeting in Cancun Mexico (Oct. 5th-14th, 2014).

Individuals wishing to submit symposia topics for future meetings should contact Robert Mantz, PAED Chair (robert.a.mantz@us.army.mil), or Pawel Kulesza, PAED Vice-Chair (pkulesza@chem.uw.edu.pl).

Students Awards

Student Travel Award Winners for the 223rd ECS Meeting in Toronto (May 2013)

- **Krysti Knoche** – University of Iowa
- **Jonathan Strobl** – University of Victoria
- **Adriel Jebaraj** – Case Western Reserve University
- **Gabriel LeBlanc** – Vanderbilt University

PAED Student Travel Award Winners for the 224th ECS Meeting in San Francisco (October 2013)

- **Megan Damm** – Georgia Institute of Technology
- **Samar Gharaibeh** - University of Calgary
- **Swetha Puchakayala** - Vellore Institute of Technology
- **Adriel Jebaraj** - Case Western Reserve University
- **Akinbayowa Falase** - University of New Mexico
- **Florina-Maria Cuibus** - Technische Universität Ilmenau

The PAED Division Awards

David C. Grahame Award

The David C. Grahame Award is one of two awards given by the Physical and Analytical Electrochemistry Division. It was established in 1981 through the sponsorship of General Electric and the Ford Foundation to encourage excellence in the physical electrochemistry research. The award is given in the spring of odd-numbered years and consists of a scroll and prize of \$1,500. The Award Rules specify that, "The David C. Grahame Award shall be granted to a currently Active Member of the Society upon some recent outstanding scientific contribution to physical electrochemistry. For the purpose of the Award, currently active is to be measured by publication of more than one paper in the Journal and attendance at more than one Society meeting, as a member of the Society, within the previous five years."

*The 2013 Grahame Award went to Rick McCreery
(presentation was at the ECS Meeting in Toronto, Canada.)*

Max Bredig Award in Molten Salt Chemistry

The Max Bredig Award in Molten Salt Chemistry is the other award given by the Physical and Analytical Electrochemistry Division. It was established in 1984 through the sponsorship of ARCO Metals Company and the Aluminum Company of America in order to recognize excellence in molten salt chemistry research and to stimulate publication of high quality research papers in this area in the Journal of The Electrochemical Society. The awarded is granted to a scientist working in the area of molten salt chemistry to recognize important scientific contribution(s) to molten salt chemistry. The Award will consist of a certificate the recipients receives a check payable to him or her for the sum of at least \$1,500. The recipient is required to attend the Society meeting at which the Award is given and to present an Award lecture, which will be given at the International Molten Salt Symposium sponsored by the Physical and Analytical Electrochemistry Division at that meeting.

The 2012 Bredig Award went to Derek Frey (presentation was at 222nd ECS Meeting in Honolulu, Hawaii.

Last PAED Luncheon was held during the ECS Spring Meeting in Toronto, Canada (May, 2013).

The two pictures below were taken during the Luncheon and they show Shelley Minter (at that time PAED Chair; presently PAED Past-Chair) with two student travel grants award winners

Next PAED Luncheon will be held during the ECS Spring Meeting in Orlando, Florida (May, 2013).





Symposia

PAED will sponsor or co-sponsor symposia during 225th ECS Meeting in Orlando (May 11-16, 2014).

B4 – Ubiquitous Sensing, Energy Harvesting and the Internet of Things (Sensor Division / Physical and Analytical Electrochemistry Division); organizers: Mike Carter (KWJ Engineering), Peter Hesketh (Georgia Tech), Jing Li (NASA), Gary Hunter (NASA), Shelley Minter (Univ of Utah), Ajit Khosla (Simon Fraser Univ), Scott Calabrese Barton (Michigan State Univ).

E – Electrochemical Engineering; E1 – Electrolysis and Electrochemical Processes (Industrial Electrochemistry and Electrochemical Engineering / Physical and Analytical Electrochemistry); organizers: Gerri Botte (Ohio Univ), John Weidner Univ South Carolina, Kathy Ayers (Proton OnSite).

F- Fuel Cells, Electrolyzers, and Energy Conversion; F1- Characterization of Interfaces and Interphases (Energy Technology Div / Battery Div / Industrial Electrochemistry and Electrochemical Engineering Div / Physical and Analytical Electrochemistry Div); organizers: Trung Nguyen (Univ of Kansas), Plamen Atanassov (Univ of New Mexico), Robert Kosteki (Lawrence Berkeley National Lab); F-2 Computational Studies on Battery and Fuel Cell Materials (in Honor of Prof. Ishikawa) (Energy Technology Division / Battery Division / High Temperature materials Div / Physical and Analytical Electrochemistry Div); organizers: Carlos R. Cabrera (Univ Puerto Rico), Deryn Chu (Army Research Office), Juan Santana (Univ. California, Berkeley), Donald A. Tryk (Univ Yamanashi), Shirley Meng (Univ. California, San Diego); F-5 Materials for Low Temperature Fuel Cells (Energy Technology Div / Physical and Analytical

Electrochemistry Div); organizers Minhua Shao (UTC Power), P. Atanassov (Univ New Mexico); F-6 – Solar Fuels and Photocatalysis III (Energy Technology Div / Industrial Electrochemistry and Electrochemical Engineering Div / Physical and Analytical Electrochemistry Div); organizers: N. Wu (West Virginia Univ), P. J. Kulesza (Univ Warsaw), R. Subramanian (Univ of Nevada), A. Manivannan (National Energy Technology Lab), K. Domen (Univ Tokyo), J. Lee (Konkuk Univ), H. Dinh (NREL); F-7 – State of the Art Tutorial on Durability in Low Temperature Fuel Cells (Energy Technology Div / Industrial Electrochemistry and Electrochemical Engineering Div / Physical and Analytical Electrochemistry Div); organizers: Adam Weber (LNBL), Thomas Zawodzinski (Univ Tennessee), Thomas Schmidt (Paul Scherrer Institute), Jim Fenton (Florida Solar Energy Center), Rod Borup (Los Alamos NL).

G-2 Characterization of Porous Materials 6 (Industrial Electrochemistry and Electrochemical Engineering Div / Battery Div / Energy Technology Div / Physical and Analytical Electrochemistry Div); organizers: John Staser (Univ South Carolina), V. Birss (Univ Calgary), Jeff Gostick (McGill Univ), Jie Xiao (Pacific Northwest National Lab); G-4 Membranes for Electrochemical Systems (Industrial Electrochemistry and Electrochemical Engineering Div / Battery Div / Energy Technology Div / Physical and Analytical Electrochemistry Div); organizers: Peter Pintauro (Vanderbilt Univ), Richard Wycisk (Vanderbilt Univ), Kunal Karan (Univ of Calgary), Brett Lucht (Univ Long Island); G-5 Students in Bio-Electrochemistry (Organic and Biological Electrochemistry Div / Physical and Analytical Electrochemistry Div / Sensor Div); organizers: Jim Burgess (from Organic and Biological Electrochem Div); G-6 Timely Challenges in Bioelectrochemistry: Unprecedented Analysis

and Bioenergy (Organic and Biological Electrochemistry Div / Energy Technology Div / Physical and Analytical Electrochemistry Div / Sensor Div); organizers: Mekki Bayachou (from Organic and Biological Electrochem Div), Zoraida Aguilar (Ocean Nanotech), Scott Calabrese Barton (Michigan State Univ).

H – Physical and Analytical Electrochemistry, Electrocatalysis and Photoelectrochemistry; H-1 PAED General Session; (Physical and Analytical Electrochemistry Div); organizers: Pawel J. Kulesza (Univ Warsaw); H-2 Symposium in Honor of Andrzej Wieckowski (Physical and Analytical Electrochemistry Div); organizers: P. Zelenay (Los Alamos National Lab), D. J. Myers (Argonne National Lab), R. R. Adzic (Brookhaven National Lab), P. Atanassov (Univ New Mexico), S. Gottesfeld (CellEra), J. Inukai (Univ Yamanashi), P. J. Kulesza (Univ Warsaw), N. M. Makovic Argonne National Lab), S. Mukerjee (Northeastern Univ), M. Neurock (Univ Virginia), A. Lewenstam (Abo Akademi Univ); H-3 Biofuel Cells VI (Physical and Analytical Electrochemistry Div, Energy Technology Div / Organic and Biological Electrochemistry Div); organizers: S. Calabrese Barton (Michigan State Univ), P. Atanassov (Univ New Mexico), S. Minter (Univ Utah), N. Mano (Res. Center Paul-Pascal); H-4 Charge Transfer; Electrons, Protons and Other Ions (Physical and Analytical Electrochemistry Div); organizers: Stephen Paddison (Univ. Tennessee), Vito di Noto (Univ Padova); H-5 Physical Electrochemistry of Electrolytes (Physical and Analytical Electrochemistry Div / Battery Div); organizers: Paul Trulove (US Naval Academy), Pawel J. Kulesza (Univ Warsaw), Petr Vanysek (Northern Illinois Univ); H-6 Rare-Earth and Actinide Electrochemistry (Physical and Analytical

Electrochemistry Div); organizers: P. Motsegood (Argonne National Lab); H-7 Scanning Probe II (Physical and Analytical Electrochemistry Div); organizers: Dave Cliffler (Vanderbilt Univ), Robert Calhoun (US Naval Academy), Mark Anderson (Kent State Univ); H-8 Spectroelectrochemistry 2 (Physical and Analytical Electrochemistry Div); organizers: Sanjeev Mukerjee (Northeastern Univ), Vito Di Noto (Univ Padova); H-9 Symposium in Honor of Richard Buck (Physical and Analytical Electrochemistry Div); organizers: Petr Vanysek (Northern Illinois Univ), A. Levenstam (Abo Akademi Univ).

M- Carbon Nanostructures and Devices; M-6 – Fullerenes, Chemical Functionalization, Electron Transfer and Theory (Fullerenes, Nanotubes and Carbon Nanostructures Div / Physical and Analytical Electrochemistry Div); organizers: Frank D'Souza (Univ North Texas) Dirk Guldi (Univ Erlangen), Shunichi Fukuzumi (Osaka Univ); M-9 Porphyrins, Phtalocyanines and Supramolecular Assemblies (Fullerenes, Nanotubes and Carbon Nanostructures Div / Physical and Analytical Electrochemistry Div); organizers: K. Kadish (Univ Houston), Roberto Paolesse (Univ Rome).