

---

---

# PHYSICAL AND ANALYTICAL ELECTROCHEMISTRY DIVISION (PAED) NEWSLETTER

---

---

December 2012

---

---

*Division Website:* [www.electrochem.org/ecs/tia/paed/paed.htm](http://www.electrochem.org/ecs/tia/paed/paed.htm)

## **Division Officers (2011-2013)**

<b>Chair:</b>	Dr. Shelley Minter <a href="mailto:minter@chem.utah.edu">minter@chem.utah.edu</a>
<b>Vice-Chair :</b>	Dr. Robert Mantz <a href="mailto:Robert.a.mantz@us.army.mil">Robert.a.mantz@us.army.mil</a>
<b>Secretary:</b>	Dr. Pawel Kulesza <a href="mailto:pkulesza@chem.uw.edu.pl">pkulesza@chem.uw.edu.pl</a>
<b>Treasurer:</b>	Dr. Andrew Hillier <a href="mailto:hillier@iastate.edu">hillier@iastate.edu</a>
<b>Division Past Chair:</b>	Dr. Paul Trulove <a href="mailto:trulove@usna.edu">trulove@usna.edu</a>
<b>Members-at-Large:</b>	
Dr. Mark Andersen	<a href="mailto:mande126@kennesaw.edu">mande126@kennesaw.edu</a>
Dr. Plamen Atanasov	<a href="mailto:plamen@unm.edu">plamen@unm.edu</a>
Dr. Robert Calhoun US Naval Academy	<a href="mailto:calhoun@usna.edu">calhoun@usna.edu</a>
Dr. David Cliffl	<a href="mailto:d.cliffl@vanderbilt.edu">d.cliffl@vanderbilt.edu</a>
Dr. Allanah Fitch	<a href="mailto:afitch@luc.edu">afitch@luc.edu</a>
Takashi Ito	<a href="mailto:ito@ksu.edu">ito@ksu.edu</a>
Dr. Alice Suroviec	<a href="mailto:asuroviec@berry.edu">asuroviec@berry.edu</a>

**Newsletter Editors:** Pawel Kulesza and Shelley Minter

## INSIDE THIS ISSUE

### PAGE

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

## Recent Activities

### Symposia

The division was a very active sponsor and co-sponsor of symposia during the last year. At the 221<sup>st</sup> Spring Meeting in Seattle, Washington (May 6<sup>th</sup>-11<sup>th</sup>, 2012), the PAED division sponsored or co-sponsored 13 symposia, and at the 222<sup>nd</sup> Fall Meeting in Honolulu, Hawaii (October 7<sup>th</sup>-12<sup>th</sup>, 2012), the division sponsored or co-sponsored 14 symposia. The division also provided over \$10,000 in supporting funds to help organizers assist in the travel of speakers. A list of these symposia appears later in this newsletter. The PAED also has broad plans to support and organize numerous symposia during the next few ECS meetings: 223<sup>rd</sup> ECS Meeting in Toronto, Ontario, Canada (May 12<sup>th</sup>-17<sup>th</sup>, 2013); 224<sup>th</sup> ECS Meeting in San Francisco, California (Oct. 27<sup>th</sup> – Nov. 1<sup>st</sup>, 2013); 225<sup>th</sup> ECS Meeting in Orlando, Florida (May 11<sup>th</sup>-16<sup>th</sup>, 2014); 226<sup>th</sup> ECS Meeting in Cancun Mexico (Oct. 5<sup>th</sup>-14<sup>th</sup>, 2014).

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

From the left: Pawel Kulesza (Secretary), Paul Trulove (Immediate Past Chairman), Shelley Minter (Chairman) and Hugh DeLong (Past Chairman).



**The last PAED Luncheon was held in Seattle, Washington. The next luncheon will be held in Toronto, Ontario, Canada.**

## **Students Awards**

### **Student Travel Award Winners for the ECS Meeting in Seattle**

- **Lindsey Pelster** – University of Utah
- **Garett Lee** - University of Iowa
- **Andreas Lesch** - University of Oldenburg
- **Gustavo Ciniciato** - Universidade de Sao Paulo
- **Chi K. Tang** - University of Connecticut

### **PAED Student Travel Award Winners for the ECS Meeting in Boston**

- **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 recipient is Rick McCreery (Presentation will be during 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 award 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 consists of a certificate, and the recipient 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 recipient is Derek Frey (Presentation was during the 222<sup>nd</sup> ECS Meeting in Honolulu, Hawaii)*

## Symposia

### **PAED Sponsored or Co-Sponsored Symposia at the 221st Meeting, Seattle, WA, May 6-11, 2012:**

B6 - Tutorials on Special Topics in Low Temperature Fuel Cells (T. Zawodzinski, S. Mukherjee, P. Strasser)

C3 - Progress in Fundamental and Applied Bioelectrochemistry (J. Rusling)

I1 - Physical and Analytical Electrochemistry General Session (R. Mantz)

I2 - Biological Fuel Cells 5 (S. Calabrese Barton, S. Minteer, N. Mano, K. Kano)

I3 - Electroanalytical Chemistry Applied to Biomedical Applications (D. Cliffel, J. Burgess, M. Carter)

I4 - Electrocatalysis Applied to Fuel Cells and Electrolyzers (P. J. Kulesza, A. M. Chaparro, R. Narayan)

I5 - Exploiting Magnets in Electrochemistry (J. Leddy)

I6 - Fundamental Aspects of the Electrochemical and Interfacial Properties of Carbon Nanostructures (H. Martin, B. Y. Liaw)

I7 - Recent Advances in Spectroelectrochemistry (A. Wieckowski, S. Mukerjee)

I8 - Electrochemical Impedance Spectroscopy: Modeling and Interpretation (P. Vanysek, D. Hansen, V. Lvovich, M. Orazem)

J3 - Sensors for Safety and Security (E. Brosha, M. Carter, B. Chin, J. Li, S. Minteer, A. Simonian)

## **PAED Sponsored or Co-Sponsored Symposia at 222nd Meeting, Honolulu, HI, October 7<sup>th</sup>-12<sup>th</sup> 2012**

B02 - Electrochemical Capacitors (J. Long, D. Belanger, T. Brousse, C.-H. Hu, K. B. Kim, P. J. Kulesza, M. Morita, K. Naoi, P. Simon, W. Sugimoto, Y.-Y. Xia)

B08 - Non-Aqueous Electrolytes for Lithium Batteries (M. Ue, W. Henderson, R. T. Jow, M. Ishikawa, B. Lucht, P. Trulove)

B09 - Polymer Electrolyte Fuel Cells 12 (H. Gasteiger, ..., R. Mantz)

B10 - Renewable Fuels from Sunlight and Electricity (N. Wu, K. Domen, H. Dinh, P. J. Kulesza, A. Manivannan, Z. Zou, S. R. Narayan, R. Subramanian, H. Wang, X.-D. Zhou)

E09 - Fundamentals and Applications of Microfluidic and Nanofluidic Devices, Electronics and Photonics (H. Baumgart, ..., R. Calhoun)

F1 - Bio-enabled Materials, Processes and Devices (J. Harb, ...)

I1 - Physical and Analytical Electrochemistry General Session (R. Mantz)

I2 - Bioelectroanalysis and Bioelectrocatalysis (S. Minteer, ...)

I3 - Molten Salts and Ionic Liquids 18 (M. Reichert, H. De Long, ..., R. Mantz, M. Mizuhata, P. Trulove)

I4 - Electrocatalysis 6 (G. Brissard, ..., A. Wieckowski)

I5 - Electrochemical Atomic Layer Epitaxy and Quantum Confinement (N. Dimitrov, J. Stickney)

I6 - Electrochemistry in Geochemical Environments (A. Fitch)

J4 - Microfabricated and Nanofabricated Systems for MEMS/NEMS 10 (P. J. Hesketh, ..., P. Vanysek, N. Wu)