

## The ECS Corrosion Division Newsletter, Spring 2011

Dear Corroders:

On behalf of the Corrosion Division of the Electrochemical Society it is my pleasure to present the Spring 2011 Newsletter.

### **News**

NACE International's 2011 Corrosion meeting was held in Houston this past March. Among Division members being recognized Dave Shoemith (University of Western Ontario) was honored with the *Willis Rodney Whitney Award* which is given in recognition of significant contributions to corrosion science. Professor Shoemith was recognized for his contributions to the corrosion of materials involved in the disposal of nuclear waste. Congrats Dave. Other members receiving awards included Guy Davis (ElectraWatch), *NACE Fellow Honor*.

In other news, rumor has it that Scott Lillard will be parting ways with Los Alamos National Lab this summer to join Joe Payer and Homero Castaneda-Lopez at the University of Akron in the Dept. of Chemical and Biomolecular Engineer. The department is starting a new undergraduate program in Corrosion and Reliability Engineering.

### **Fall 2011 Meeting**

220<sup>th</sup> Meeting of the Electrochemical Society will be in Boston, October 9 -14 2011. **Abstracts are due no later than April 29, 2011.** Abstracts should be submitted online at <http://ecsmeet2.peerx-press.org/cgi-bin/main.plex>. Division sponsored / co-sponsored symposia and points of contact are listed at the end of this letter.

The Division is now accepting applications for **Student Travel Grants** for the fall meeting. These grants are intended to aid students participating in symposia (such as presenting a paper) who might otherwise not be able to attend the meeting because of financial constraints. Students who wish to apply should send applications, abstracts and a letter from their advisor stating that they are a student in good standing at their university to Nancy Missert at [namisse@sandia.gov](mailto:namisse@sandia.gov).

Uhlig Award Lecture – Greta Uhlig has expressed an interest in attending the lecture this year and plans are underway for a get-together. More information coming this summer.

### **Future Letters**

The summer installment of this letter will include an announcement of the 2011 ECS award winners as well as important information for the Boston meeting. If you have corrosion news to share with the community – ECS centric or not - and would like to appear in that letter please send it to me at the email address below.

Hope you have a pleasant spring.

With best regards,

Scott Lillard  
Secretary / Treasurer Corrosion Division, ECS  
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Los Alamos, NM  
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## **FALL 2011 CALL FOR PAPERS – CORROSION DIVISION**

### **D1- Corrosion General Poster Session**

Presentations concerning all aspects of corrosion and associated phenomena in liquid and gaseous phases are welcome. Theoretical analyses, experimental investigations, descriptions of new techniques for the study of corrosion, and analyses of corrosion products and films are of interest. Symposium organizer: S. Fujimoto, Osaka University, email: [fujimoto@mat.eng.osaka-u.ac.jp](mailto:fujimoto@mat.eng.osaka-u.ac.jp).

### **D2 - Coatings for Corrosion Protection**

This symposium deals with coatings in the perspective of the novel materials and pre-treatments, application techniques, as well as with the fundamental understanding of the protection mechanisms. You are warmly invited to contribute on topics covering any aspect of corrosion protection by coatings, including organic layers, organic-inorganic hybrid coatings, corrosion protective additives, and self-assembled monolayers. Also of interest are novel galvanic coatings and coatings applied by PVD or CVD processes, smart coatings, and coatings with self-repair or self-healing properties, as well as advanced characterization techniques and new approaches for accelerated corrosion testing. Symposium organizers: M. Rohwerder, Max-Planck- Institut fur Eisenforschung, e-mail: [Rohwerder@mpie.de](mailto:Rohwerder@mpie.de); and V. Gelling, North Dakota State University, [V.J.Gelling@ndsu.edu](mailto:V.J.Gelling@ndsu.edu).

### **D3 - Corrosion on Land, Sea, and Air**

The goal of the symposium is to address a wide spectrum of corrosion research on various environments existing on land, in and on the seas, and in the air. The meeting will provide a forum to examine the most recent ideas and advances in the understanding of corrosion processes, mechanisms, and means of corrosion prevention or control from ranging from fundamental electrochemistry through applied research. Topic areas may include, but are not limited to: (1.) general corrosion mechanisms of steels, aluminum, stainless steels, and other structural materials employed for land, air, and sea applications; (2.) atmospheric corrosion of metals and alloys in urban, industrial, and marine locales; (3.) stray current corrosion from transportation systems; (4.) underground corrosion; (5.) design, processing variables, surface preparation, and pretreatments affecting corrosion and corrosion control; (6.) environmentally compliant inhibitors, biocides, and coatings; (7.) cathodic protection and innovative anode materials; (8.) composites and other advanced materials; (9.) use of electrochemical, surface analytical, and nondestructive detection methods; and (10.) predictive and mechanistic corrosion modeling. Symposium organizers: D. Shifler, Office of Naval Research, e-mail: [david.shifler@navy.mil](mailto:david.shifler@navy.mil); Z. Aguilar, Ocean Nanotech, LLC, e-mail: [zapaguilar@yahoo.com](mailto:zapaguilar@yahoo.com); B. Hinderliter, Virginia Commonwealth University, e-mail: [brian.hinderliter@gmail.com](mailto:brian.hinderliter@gmail.com); and F. Martin, Naval Research Laboratory, e-mail: [farrel.martin@nrl.navy.mil](mailto:farrel.martin@nrl.navy.mil).

#### **D4 - Critical Factors in Localized Corrosion 7**

This symposium will deal with all aspects of localized corrosion, including passivity. The purpose of the symposium is to provide a forum for the presentation and discussion of recent advances and research in one of the most active and challenging fields in corrosion science. Both experimental and theoretical contributed papers are being solicited in the topics including, but not limited to: passive films and passivity loss on metals, alloys, and semiconductors; characterization of localized corrosion, microstructure/corrosion relationships; kinetics, stability, and morphology of localized corrosion; statistical analysis and modeling of localized corrosion; developments in understanding corrosion of engineering materials; and processes for the control of localized corrosion. Symposium organizers: N. Birbilis, Monash University, e-mail: [nick.birbilis@monash.edu](mailto:nick.birbilis@monash.edu); A. J. Davenport, University of Birmingham, e-mail: [a.davenport@bham.ac.uk](mailto:a.davenport@bham.ac.uk); and G. S. Frankel, The Ohio State University, e-mail: [frankel.10@osu.edu](mailto:frankel.10@osu.edu); J. R. Kish, McMaster University, e-mail: [kishjr@mcmaster.ca](mailto:kishjr@mcmaster.ca); and K. R. Zavadil, Sandia National Laboratories, e-mail: [krzavad@sandia.gov](mailto:krzavad@sandia.gov).

#### **D - 5 High Temperature Corrosion and Materials Chemistry 9 — A Symposium in Honor of Professor Robert A. Rapp**

Professor Robert A. Rapp of the Ohio State University is well known for his contributions to the understanding of high temperature corrosion and materials chemistry over the last five decades. His achievements have been recognized by ECS through the following awards: the High Temperature Materials Division Outstanding Achievement Award (1988), ECS Fellow (1993), the Henry B. Linford Award for Distinguished Teaching (1998), and the Olin Palladium Award (2005). The topics of the symposium include, but are not restricted to, research in the thermodynamic and kinetic study of high temperature corrosion and protection, diffusion coatings, scaling mechanisms, point defects in compounds, solid-state electrochemistry, evaporation phenomena, chemistry and electrochemistry of fused salts, reactions in the solid state, and interfacial reactions. Symposium organizers: J. Fergus, Auburn University, [jwfergus@eng.auburn.edu](mailto:jwfergus@eng.auburn.edu); P. Gannon, Montana State University, [pgannon@coe.montana.edu](mailto:pgannon@coe.montana.edu); M. Harper, Gifford, Krass, Sprinkle, Anderson & Citkowski, P.C., [mharper@patlaw.com](mailto:mharper@patlaw.com); T. Markus, Forschungszentrum Jülich GmbH, [T.Markus@fz-juelich.de](mailto:T.Markus@fz-juelich.de); T. Maruyama, Tokyo Institute of Technology, [maruyama@mtl.titech.ac.jp](mailto:maruyama@mtl.titech.ac.jp); E. Opila, University of Virginia, [opila@virginia.edu](mailto:opila@virginia.edu); V. Ravi, California State Polytechnic University, [vravi@csupomona.edu](mailto:vravi@csupomona.edu); D. Shifler, Office of Naval Research, [david.shifler@navy.mil](mailto:david.shifler@navy.mil); and E. Wuchina, Naval Surface Warfare Center, [eric.wuchina@navy.mil](mailto:eric.wuchina@navy.mil).

#### **D6 Where Metals Meet Human Tissue**

This symposium will examine all aspects of corrosion pertaining to implant alloy and device interaction with the surrounding biological environment of the host tissue. Topics of interest include but are not limited to: research that seeks to develop an understanding of the mechanisms of corrosion or degradation of material as a result of interaction of implants with the host tissue; surface treatment of materials to inhibit or control corrosion or enhance biocompatibility, in vitro, in

vivo, and ex vivo testing methods, development of alloy systems, devices and constructs, and lifetime predictions and material/device monitoring. Symposium organizers: S. Virtanen, University of Erlangen-Nuremberg, e-mail: [Virtanen@ww.uni-erlangen.de](mailto:Virtanen@ww.uni-erlangen.de); D. Hansen, University of Dayton, e-mail: [douglas.hansen@udri.udayton.edu](mailto:douglas.hansen@udri.udayton.edu); S. Hiromoto, Biomaterials Center, National Institute for Materials Science (NIMS), e-mail: Hiromoto. [Sachiko@nims.go.jp](mailto:Sachiko@nims.go.jp); B. Shaw, Pennsylvania State University, e-mail: [bashaw@engr.psu.edu](mailto:bashaw@engr.psu.edu); and A. Simonian, Auburn University, e-mail: [als@eng.auburn.edu](mailto:als@eng.auburn.edu)