

AWARDS

2001 H. H. Uhlig Award of the Corrosion Division



Digby D. Macdonald received the H. H. Uhlig Award of the ECS Corrosion Division during the Corrosion Division Luncheon and Business Meeting on Tuesday, September 4, 2001.

Professor Macdonald has published approximately 570 papers to date in chemistry, electrochemistry, thermodynamics, corrosion science, and engineering. His work has ranged from the highly theoretical to the applied and has covered practical topics such as fuel cell and battery development through nuclear power. In particular, he has carried out extensive work on the electrochemistry of high temperature aqueous solutions, the theory of stress corrosion cracking, the theory of passivity, and on the deterministic prediction of corrosion damage. Professor Macdonald was among the first to measure the kinetics of charge transfer reactions at temperatures above 100°C. He and his colleagues, were among the first to measure pH, electrochemical emissions ("noise"), and polarization data in supercritical aqueous systems. Along with his colleagues, Professor Macdonald has carried out electrochemical studies, including the measurement of pH, in aqueous solutions at temperatures as high as 530°C, an achievement that has opened up a new area of research in electrochemistry and corrosion science. Of particular significance is his development of the Point Defect Model (PDM) for the growth and breakdown of passive films on metal surfaces. This theory provides the first deterministic

description of the nucleation of localized corrosion. His work on the theory of localized corrosion cavity growth, including pitting corrosion, stress corrosion cracking, and corrosion fatigue has emphasized the need to constrain the solutions to the constitutive equations by application of the natural laws, specifically the conservation of charge. This required consideration of the consumption of the coupling current on the external surfaces by the appropriate cathodic reaction(s). The resulting "coupled environment" models for pit growth, crack growth, and corrosion fatigue crack growth require minimal calibration (generally, a single cavity growth rate) and have become the mainstay of damage prediction. Professor Macdonald was instrumental in combining the PDM with the coupled environment cavity growth rate models to formulate the theoretical framework within which damage predictions are made. This framework is now referred to as Damage Function Analysis (DFA), which represents the first truly deterministic methodology for predicting corrosion damage.

Dr. Macdonald is a Fellow of ECS, NACE International, the Royal Society of Canada, and the Royal Society of New Zealand. He was awarded the Whitney Award by NACE International, the Wagner Award by ECS, and the W. B. Lewis Lecture by Atomic Energy of Canada, Ltd. He was only the sixth recipient of the latter award, which was given for his contributions to the development of nuclear power in the service of mankind. He recently served as a member of the U.S. Air Force Scientific Advisory Board and had previously served on the Board of Visitors for the Office of Naval Research. ■

Call for Nominations



Edward Goodrich Acheson Award

Nominations are solicited for the 2002 Edward Goodrich Acheson Award, to be presented at the 2002 Fall Meeting in Salt Lake City, Utah. This award, established in 1928, recognizes a person who, in the judgment of the Directors of the Society, has made contributions to the advancement of any of the Society's objectives, purposes, or activities as to merit special notice. Such contributions may consist of, but are not limited to, a discovery pertaining to electrochemistry, electrometallurgy, or electrothermics; an invention of a plan, process, or device, or research evidenced by a paper embodying information useful, valuable, or significant in the theory or practice of electrochemistry, electrometallurgy, or electrothermics; or distinguished service rendered to the Society.

This award consists of a gold medal, a wall plaque, and \$10,000. Please send nominations with supporting documents before May 1, 2002 to: Dr. Barry R. MacDougall, National Research Council, Inst. for Environmental Chemistry, Ottawa, ON, Canada K1A 0R6, tel: 613.993.8573, fax: 613.941.2529, or e-mail: barry.macdougall@nrc.ca.



Solid State Science and Technology Award

One of the Society's most prestigious Awards, the Solid State Science and Technology Award, honors an individual who has made distinguished contributions to the field of solid-state science and technology.

This award, consisting of a silver medal, a wall plaque, and \$7,500, will be presented next at the Spring 2003 Meeting in Paris, France, at which the winner must deliver an address to the Society on a subject related to the contributions for which the award is presented.

As this is one of the Society's highest honors, we urge all members to give serious consideration to possible candidates. To suggest or nominate a candidate, please contact the chairman of the award subcommittee: Frederick J. Strieter, 7814 Fallmeadow Lane, Dallas, TX, 75248-5328, USA, tel: 972.239.8514; fax: 972.503.7210; e-mail: fredstrieter@att.net. Nomination forms are also available from Society Headquarters. If more information is needed for consideration, the nominator will be contacted. Please submit all nominations by May 1, 2002 to facilitate consideration by the committee. Nominations close at the beginning of the Spring 2002 Meeting of the Society.



The Electrochemical Society Fellows

Nominations are now being accepted for the 2002 Class of Fellows of The Electrochemical Society. Selection as a Fellow is one of the highest honors bestowed on a member of the Society, acknowledging that the recipient is distinguished by outstanding contributions to the advancement of science and technology in the areas of electrochemistry and/or solid-state sciences, leadership in the advancement of electrochemical or solid-state science and technology, and current active participation in the Society's affairs. All members are urged to give serious consideration to nominating possible candidates.

Those candidates selected as Fellows will be recognized by the awarding of a certificate and a lapel pin at the Society Honors and Awards Session at the 2002 fall meeting of the Society, announcement in *Interface*, listing as a Fellow when an author of a *Journal* or *Letters* article, and notation on the identification badge at Society meetings. Fellows are elected at a rate of up to 20 per year. Deadline for submission of candidates is January 15, 2002.

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For more information or for nomination forms, please contact: ECS Headquarters or Daniel Schwartz, Dept. of Chemical Engineering, Box 351750, University of Washington, Seattle, Washington 98195-0001, USA, tel: 206.685.4815, fax: 206.685.3451, or e-mail: dts@u.washington.edu.

H. H. Uhlig Award of the Corrosion Division

The H. H. Uhlig Award of the Corrosion Division, previously known as the Outstanding Achievement Award, was established by the Society's Corrosion Division to recognize excellence in corrosion research and outstanding technical contributions to the field of corrosion science. The 2002 award will be presented at the fall Society meeting in Salt Lake City, Utah, USA.

The recipient of this award will receive a scroll and \$1,500 and will be required to attend the Society meeting at which the award is given and to present an award lecture to the Corrosion Division. If necessary, financial assistance for travel expenses to the meeting will also be made.

All nominations must be accompanied by supporting documents, such as a biography, list of publications, professional activities, and a brief summary of the outstanding contributions on which the award is to be based. Five (5) copies of each nomination with supporting documents should be submitted to the award committee chairman: Hugh S. Isaacs, Brookhaven National Lab., DAS, Bldg. 480, P.O. Box 5000, Upton, New York 11973-5000, USA, tel: 631.344.4516, e-mail: isaacs@bnl.gov. The deadline for receipt of nominations is December 15, 2001.

David C. Grahame Award

Nominations are now being accepted for the 2003 David C. Grahame Award of the Society's Physical Electrochemistry Division.

This award recognizes Active Members of the Society who have made outstanding contributions to the field of physical electrochemistry and who have enhanced the scientific stature of the Society by the presentation of well-recognized papers in the *Journal* and at Society meetings.

The recipient will receive a certificate, a stipend of \$1,500, and, if required, financial assistance toward travel expenses to the Society meeting at which the award is presented. The winner of this award will be required to attend the meeting and to present an award lecture in one of the sessions or symposia sponsored by the Physical Electrochemistry Division.

To be eligible for the award, applicants must be Active Members of the Society who have published at least two papers in the *Journal* and have attended a Society Meeting within the past five years.

To be considered, nominations must be accompanied by supporting documents, such as a biography, list of publications, professional activities, and a brief summary of the recent outstanding contributions on which the award is based. Letters of support by scientists well recognized in the area of physical electrochemistry will also be considered. Six copies of each nomination should be submitted to the Award Committee Chairman: Robert A. Osteryoung, North Carolina State University, Department of Chemistry, Box 8204, Raleigh, NC 27695-8204, tel: 919.515.6970, fax: 919.515.5486, e-mail: cherao@chemdept.chem.ncsu.edu. Deadline for receipt of nominations is December 31, 2001.

Battery Division Research Award

Members of The Electrochemical Society are invited to nominate candidates for the Research Award of the Battery Division. The award recognizes outstanding contributions to the science and technology of primary and secondary cells and batteries, and fuel cells. Of particular interest are advances in the understanding of mechanisms, introduction of a new theory, and development of new materials.

The award consists of a check for \$1,000, lifetime membership in the Battery Division, and a scroll describing the award.

Nominations, in the form of a letter detailing the accomplishments of the nominee(s), should be submitted before March 15, 2002 to the chairman of the award committee: R. Bugga, Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109, USA; tel: 818.354.0110, fax: 818.393.6951, or e-mail: ratnakumar.v.bugga@jpl.nasa.gov. The letter should be accompanied by a list of all supporting publications, at

least one of which must have appeared in the *Journal* or another Society publication.

Battery Division Technology Award

Members of the Society are invited to nominate candidates for the Technology Award of the Battery Division. The award honors members of the Society who have made noteworthy practical contributions to battery and/or fuel cell technology. Their contributions may consist of novel/practical designs, the development of new or established systems with improved performance or safety, improved manufacturing methods, or improvements in the environmental aspects of battery/fuel cell technologies.

The award consists of a check for \$1,000, lifetime membership in the Battery Division, and a scroll describing the award.

Please send the name(s) of your suggested candidate(s) to the award committee chairman: Dr. Arabinda Dey, 39 Poko Place, Hilo, HI 96720, USA; tel/fax: 808.934.8580. Your letter should indicate the technological contributions of the candidate(s) accompanied by a list of relevant publications, with subject titles. At least one of these papers should have appeared in a publication of the Society. Deadline for application is March 15, 2002.

Electrodeposition Division Research Award

The Research Award of the Electrodeposition Division, presented annually, recognizes recent outstanding achievement or contribution in the field of electrodeposition. The award, consisting of a scroll and \$2,000 will be given at the fall 2002 Society meeting in Salt Lake City, Utah, to the author or co-authors who have published a paper or papers in one of the Society's publications.

Please submit nominations in a letter detailing the accomplishments of the nominee accompanied by a list of supporting publications with titles to: H. Honma, Kanto Gakuin University, 4834 Mutsuura-cho, Kanazawa-ku, Yokohama-shi, Kanagawa-Pref, 236-8501, Japan, tel: 81.45.786.7156, fax: 81.45.784.8153, or e-mail: honma@kanto-gakuin.ac.jp. The nomination deadline is April 1, 2002.

 **New Electrochemical
Technology (N. E. T.) Award**

Nominations are sought for the New Electrochemical Technology Award of the Industrial Electrolysis and Electrochemical Engineering Division. This award is intended to promote high quality applied electrochemical research, and to recognize the role of multidisciplinary teams in developing ideas into technology. The award will be presented during the business luncheon of the IE&EE Division at the Spring 2003 Meeting.

The award will be presented to the organization sponsoring the technology. Up to six key contributors to the success of the technology development, as identified by the sponsoring organization, will be recognized individually. The award consists of a commemorative plaque with appropriate inscription presented to the sponsoring organization.

The primary award criterion is technological impact on the industrial practice of electrochemistry. Award applicants will include published papers and issued patents, plus other documentation as noted on the nomination form. To be considered, the technology must

have been commercialized within 10 years of the award date. Commercial advances involving applied electrochemical science as a major development vehicle are eligible for consideration. Award preferences may be given to technological achievements in areas particularly served by the IE&EE Division.

Deadline for the receipt of nominations is May 1, 2002. More information, including nomination forms, is available from ECS Headquarters or the chairman of the award committee: Clifford W. Walton, FMC Corp., Chemical Process Technology, PO Box 8, Princeton, NJ 08543-0008, USA, tel: 609.951.3189, fax: 609.951.3836, e-mail: clifford_walton@fmc.com. ■

Fellows of The Electrochemical Society

1990

Allen J. Bard
Robert B. Comizzoli
Glenn W. Cullen
Theodore I. Kamins
Paul C. Milner
Edward H. Nicollian
Robert A. Osteryoung
Arnold Reisman
Lubomyr T. Romankiw
Geraldine C. Schwartz
Ben G. Streetman
J. Bruce Wagner, Jr.

1991

Theodore R. Beck
Elton J. Cairns
Bruce E. Deal
Werner Kern
William A. Pliskin
Charles W. Tobias
Rolf Weil

1992

Richard C. Alkire
Vittorio de Nora
Jerome Kruger
Barry Miller
Dennis R. Turner
Jerry M. Woodall

1993

Richard P. Buck
Larry R. Faulkner
Dennis W. Hess
Vik J. Kapoor
Rolf H. Muller
Carlton M. Osburn
Robert A. Rapp
George L. Schnable
Y. H. Wong
Petr Zuman

1994

George K. Celler
Sung-Nee (George) Chu
John P. Dismukes
Richard B. Fair
Adam Heller
Richard A. Oriani
Boone B. Owens
Wayne L. Worrell

1995

Fred C. Anson
Laurence D. Burke
Brian E. Conway
Robert P. Frankenthal
Karl M. Kadish
Digby D. Macdonald
Gleb Mamantov

Florian Mansfeld
Royce W. Murray
John Newman
Yutaka Okinaka
Howard W. Pickering
George Rozgonyi
Mordechai Schlesinger
Karl E. Spear

1996

John M. Blocher, Jr.
Hans K. Bohni
Der-Tau Chin
Hugh Isaacs
Wolfgang J. Lorenz
S. J. Pearton
Subhash C. Singhal
Venkataraman
Swaminathan

1997

James A. Amick
Denis Noel Buckley
Michel J. Froment
Eliezer Gileadi
Koji Hashimoto
Chung-Chiu Liu
Ed McCafferty
Theodore D. Moustakas
Shyam P. Murarka

Stella W. Pang
Joachim Walter Schultze
James D. Sinclair
Norman L. Weinberg
Lawrence Young

1998

Huk Y. Cheh
Donald E. Danly
Dennis H. Evans
Funio Hine
Dennis C. Johnson
Zoltan Nagy
Katsumi Niki
Jun-ichi Nishizawa
Fan Ren
Antonio J. Ricco
David A. Shores
William H. Smyrl
George Thompson

1999

Eric Brooman
Stanley Bruckenstein
Kathryn Bullock
Shimshon Gottesfeld
Yue Kuo
Dieter Landolt
Jerzy Ruzyllo

Norio Sato
Ralph E. White
William B. Yen

2000

Cammy Abernathy
K. M. Abraham
John C. Angus
W. Ronald Fawcett
David S. Ginley
Yasuhiko Ito
Howard Huff
Robert F. Savinell
Roger Staehle
Charles W. Struck
Sergio Trasatti

2001

Dieter M. Kolb
David Lockwood
James McBreen
Patrick Moran
Shohei Nakahara
William O'Grady
Supramanian Srinivasan