



## RACI Electrochemistry Division

# Newsletter

**No.2**

**December 1996**

### Editorial

Welcome to the second (bumper) issue of the EDRACI Newsletter. The response to the first issue was very positive...thank you to those who forwarded encouraging comments and to those who have registered on either the email or postal list. The newsletter is now being distributed to our electrochemist colleagues in New Zealand by Alison Downard, and a copy is being sent to Andy Abbott, the Editor of the Newsletter of the Electrochemistry Group of the RSC in the UK.

Even bigger thanks to the folk who have sent in information and ideas. I am delighted with the diverse range of information in this issue, including a job advertisement, significant Divisional information, and some valuable suggestions. Please keep the information flowing.

The Division decided to mail this second edition to everyone who listed Electrochemistry as one of their first two Divisional interests, to provide a final opportunity for them to register for subsequent issues. After this issue, only those who have registered will continue to receive the newsletter. To register, send your postal address or your email address to me (my contact details are at the end) with a covering note.

### Equipment Exchange

It has been suggested that this newsletter could be used to match any equipment lying disused in a dusty store room with those who could use it productively. There are many small research groups or educational institutions which are in desperate need of equipment for research and teaching. If you have any equipment which is surplus to your needs, please consider placing a brief note in the newsletter so that others may be able to use it.

### Australasian News

The A.J. Parker CRC for Hydrometallurgy in Perth has established an electrowinning project. Dr. Sheryl Robertson has been appointed to work on the project. She has recently been working at the Copper Research Centre of the University of Arizona.

The Parker Centre has also advertised recently for two postdoctoral fellows in electrochemistry, one in pressure leaching and one in bioleaching.

### 10th Australasian Electrochemistry Conference (10AEC)

Planning for 10AEC, the Division's major conference, is progressing apace. The theme is "Electrochemistry at the Edge", and the conference will be held at the Ramada Hotel in Surfers Paradise from February 4-7, 1997. AECs occur about every 4 years, and have an international reputation for electrochemical and social events (who could forget the musical feast provided by electrochemists at the dinner in Wollongong??).

Registrations are flowing in and the program comprises some 59 oral and 35 poster presentations. A draft program can be found at [http://www.sct.gu.edu.au/sci\\_page/conferences](http://www.sct.gu.edu.au/sci_page/conferences) (note that the address has changed since the last newsletter).

For more details, visit the web site, see p.318 in the July *Chem.Aust.*, or contact Greg Hope (G.Hope@sct.gu.edu.au) or David Druskovich (D.Druskovich@cqu.edu.au).

### Electrochemistry Education Group (EEG) Update

The Electrochemistry Education Group (EEG) is collating information about resources used in undergraduate electrochemistry education and will be seeking to add to this database at 10AEC. The information we are seeking is: where is electrochem. taught in the course, how many contact hours are allocated to it, what is the syllabus, what electrochem. text is used (if any), what are the titles of electrochem. experiments, and what teaching methods/strategies are being used.

Anyone with information to contribute is asked to bring it to 10AEC or email it to [bruce.verity@unisa.edu.au](mailto:bruce.verity@unisa.edu.au). If you want to join the discussion list, the necessary software arrangements are being made, so in the meantime, email your name to [bruce.verity@unisa.edu.au](mailto:bruce.verity@unisa.edu.au) to join the EEG discussion group.

The EEG has planned a forum at 10AEC, consisting of two parts: a symposium in which speakers will address the following issues in chemistry education:

- \* teaching in laboratories
- \* technology and teaching
- \* industrial perspectives on education
- \* postgraduate supervision
- \* getting students thinking

and a workshop where the participants will try to identify issues of relevance in electrochemistry education (e.g. tricky concepts in electrochem. education). An important outcome of the forum will be the selection of an issue for ongoing dialogue by the EEG (using the email list), e.g. one possibility is the production of a booklet of electrochemistry experiments or lecture demonstrations.

## **Job Advertisement**

### *Corrosion scientist/electrochemist – New Zealand*

A corrosion scientist or electrochemist is required by Materials Performance Technologies Division of Industrial Research Limited to conduct long and short term research contracts. The primary focus of the research is into the performance of stainless steel in the food and related industries aimed at a fundamental understanding of processes such as microbiologically influenced corrosion, fouling and cleaning of stainless steel surfaces. The ideal applicant will be qualified to PhD level with post doctoral research experience, although recent PhD graduates will be considered. Research interests or experience could include microbiologically influenced corrosion, interfacial electrochemistry, or passive film behaviour. Experience with transient electrochemical techniques or in situ surface characterisation techniques such as ellipsometry, laser confocal microscopy and/or atomic force microscopy would be an advantage.

A knowledge of materials performance issues related to plant and equipment used in the food industry would be an advantage but is not essential.

The successful applicant must be able to work independently, but also feel comfortable contributing as a member of a team when more complex problems require input from a range of areas of expertise; good oral and written communication skills are required.

Salary will depend on qualifications and experience.

Enquiries can be made to Dr Peter Wilson

Telephone +64-4-569-0043 : Fax +64-4-569-0431

Email [p.wilson@irl.cri.nz](mailto:p.wilson@irl.cri.nz)

Materials Performance Technologies

PO Box 31-310

Lower Hutt

New Zealand

Applications close 15 December 1996 and should be sent with a CV to the above address to the attention: Human Resources Manager

Industrial Research Ltd adheres to an Equal Employment Opportunities policy.

## **Electrochemistry Division Awards**

The Division awards two medals at each of its national conventions. The awards will be presented to the recipients at the awards session at 10AEC. Details of the awards and recipients are as follows.

#### *1997 Breyer Medal*

The Breyer Medal and Lecture commemorates the late Dr Bruno Breyer, who was born in Czechoslovakia, educated in Germany, and later became a pioneer of AC polarography in Australia. The medal is in recognition of international contributions in the field of electrochemistry. Past recipients include G.J. Hills, J.O'M. Bockris, F.T. Bacon, R. Parsons, A.J. Bard, M. Fleischmann, H. Gerischer and A. Hill. The 1997 Breyer Medal has been awarded to Professor Royce Murray in recognition of his distinguished international contributions in several areas of electrochemistry, and particularly in the last two decades in the area of chemically modified electrodes.

Professor Murray gained his Ph.D in 1960 from the Northwestern University in Evanston, Illinois (USA). Prior to being appointed a Professor of Chemistry at the University of North Carolina (UNC) in 1969, he held a number of positions as an instructor, assistant professor and associate professor at the same University. Since then he has held several positions which include Vice Chairman and Chairman of the Department of Chemistry at UNC and Program Director for Chemical Analysis at the National Science Foundation. He was appointed the Kenan Professor of Chemistry at UNC in 1980 and he is also currently the Chair of Curriculum in Applied Sciences at the university. He has been a Distinguished Lecturer/Visiting Professor in several states in USA and Canada. Also, he has given several plenary and keynote lectures at conferences around the world.

Professor Murray's current electrochemical research activities include chemically modified electrodes, solid state voltammetry, electroactive polymers and electron self-exchange dynamics. He has published over 300 papers in scientific journals and books. He has been the recipient of several other prizes and awards including the Distinguished North Carolina Chemist award (1987), the Electrochemical Society Carl Wagner Memorial award (1987), Charles N. Reilley Award of the Society for Electroanalytical Chemistry (1988), Electrochemical Group Medal of the Royal Society of Chemistry (1989), Eleventh North Carolina ACS Section Distinguished Speaker Award (1989), ACS Division of Analytical Chemistry Award in Electrochemistry (1990), ACS (Fisher) Award in Analytical Chemistry (1991). He is a Fellow of the American Institute of Chemists, American Academy of Arts and Sciences and American Association for the Advancement of Science. He is also a member of the National Academy of Sciences and National Research Council Board on Chemical Sciences and Technology. He has been the Editor of Analytical Chemistry since 1990 and has in the past been the Editor of several books and journals.

#### *1997 Stokes Medal*

The R.H. Stokes Medal is for distinguished research carried out mainly in Australia in the field of electrochemistry. The 1997 Stokes Medal has been awarded to Professor Ian Ritchie in recognition of his distinguished research into the electrochemistry of metals and mineral processing.

Professor Ritchie gained his Ph.D from the University of Melbourne in 1966 and was appointed a lecturer at the university in the same year. He was promoted to a Senior Lecturer in Chemistry in 1968 and subsequently to Associate Professor of Chemistry in 1972. He moved to his present position at Murdoch University as a Professor of Chemistry in 1984. Since then he has been Acting Dean, Pro Vice Chancellor (Research) and currently Director of A.J. Parker Cooperative Research Centre for Hydrometallurgy at the same university. He has held the position of Visiting Professor at the University of Utah and has been Visiting Researcher/Consultant in U.K. and South Africa. He was Bayliss (W.A. Youth) Lecturer in Chemistry (1975, 1983), P.F. Thompson Memorial (Aust. Corros. Conf.) Lecturer (1979) and South Australian Youth Lecturer (1985). Also, he has been invited/plenary lecturer at several conferences around the world.

Professor Ritchie's research interests include metal-gas reactions, metal-solution reactions, metal displacement reactions, metal dissolution and corrosion reactions, and mineral processing. He has published about 130 scientific papers in international journals, books and proceedings. He was the recipient of Grimwade Prize for Industrial Science (1972) and Australasian Corrosion Medal (1979).

He is a Fellow of the Royal Australian Chemical Institute, Australian Academy of Technological Sciences and Engineering, and Australian Institute of Mining and Metallurgy. He was a member of the Scientific Advisory Committee to the W.A. Clean Air Council, Mining Industry Education Advisory Council and Physical Sciences Panel of the Selection Committee for Cooperative Research Centre.

Sam Adeloju, Division Chair

**In the Next Issue (March, 1997)...**

- Review of 10AEC

**Deadline for material: February 28, 1997.**

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