ISE - Division 2 - BIOELECTROCHEMISTRY
Report 2007

- **Topics**
  Aspects of electrochemistry and electroanalysis characterizing biological processes at the molecular level and relevant to the mechanisms of biological regulation of cells.

- **Membership:** 279 (260 in 2006)

- **Division officers**
  Chair: Wolfgang Schuhmann, Past Chair: Ana Maria Oliveira Brett, Chair Elect: Lo Gorton, Vice-Chairs: Baohong Liu and Woonsup Shin

- **Divisional Meeting**
  In order to improve the activity of our division and to discuss future activities divisional lunch meetings were established during the ISE-Annual Meetings. All division members were invited to participate in the divisional lunch meetings which was held during the ISE-Annual Meeting 2007, in Banff, Canada. The lunch meeting of division 2 was very well accepted by the members of the division (about 35 participants). Divisional issues such as awards, participation at ISE meetings, suggestions for sponsorship etc were discussed in detail with all members. Due to the great success it is intended to hold a divisional lunch meeting also during the following meetings such as in Sevilla, 2008.

- **Activities at Annual Meetings**
  Participation in the organization of the ISE-Annual Meeting 2007, in Banff, Canada: Symposium 1, Bioelectrochemistry (Ana Maria Oliveira Brett, Dan Bizzotto, Wolfgang Schuhmann, George Wilson), Symposium 4, Electrochemical Nanoscience and Nanotechnology (Ezequiel Leiva, Kim Daasbjerg, Andrew Gewirth, Flavio Maran, Roberto Salvarezza, Mark Workentin), Symposium 6, Electroanalysis and Electrochemical Sensors (Johna Leddy, Lo Gorton, Ovadia Lev, Hasuck Kim). Especially symposium 1 was very well accepted by the participants despite the strong competition with symposia 4 and 6.

- **Organization of Spring Meetings**
  Participation in the organization of the ISE-Spring Meeting 2007, Dublin, Ireland: Nanostructured materials: biosciences and molecular electronics applications, was held in Dublin, Ireland. Wolfgang Schuhmann and Lo Gorton were involved in the program committee. The participation of division 2 in this spring meeting gave rise to some additional money for the division from the surplus from the meeting.

- **Current activities for future ISE meetings**
  Division 2 is participating in the organization of the Symposium 1 (From Single Biomolecule Electrochemistry to Biosensors and Biofuel Cells). Symposium organizers are: Ana Maria Oliveira-Brett (coordinator), Renata Bilewicz, Ernesto Calvo, Lo Gorton, Wolfgang Schuhmann. Topics will include:
  - Imaging biological and biomimetic charged interfaces
  - Electron transfer pathways between proteins, redox enzymes and cells (prokaryotic and eukaryotic) and electrode surfaces
  - Biosensors - novel sensor architectures and immobilization strategies of enzymes, cells, and tissues
  - Biofuel cells - cathodes and anodes, limitations of the present devices and challenges
  - In vivo electrochemical sensing

- **Meetings sponsored by Division 2**
- XIX International Symposium on Bioelectrochemistry and Bioenergetics, Toulouse, France, 1-4 April 2007
- 4th World Congress on Biomimetics, Artificial Muscles & Nano-Bio, Cartagena, Spain, October 2007

- **Awards**
  The Katsumi Niki Prize for Bioelectrochemistry will be awarded for the third time in the ISE-Annual Meeting 2008, in Sevilla, Spain. The award will be received by Prof. Dr. Phil Bartlett, University of Southampton, UK, for his contribution to the field of bioelectrochemistry. A new Bioelectrochemistry award was initiated which will be awarded in every even year. The Bioelectrochemistry award of division 2 allows self nomination and the first prize winner will be selected in spring 2008 (see http://www.ise-online.org/awards/index.php#division2)

- **Future actions**
  Division 2 will continuously participate in the organization of symposia of the forthcoming ISE-Annual Meetings. One symposium and a tutorial was proposed for the annual meeting in Beijing 2009.