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Editorial

A Przegorzaly resort at Cracow outskirts, southern Poland, was the setting for the 4th International Workshop on Surface Modification for Chemical and Biochemical Sensing SMCBS' 2009 (http://science24.com/event/smcbs2009/), 6–10 November 2009, organized under auspices of the International Society of Electrochemistry. The Workshop continued the activity initiated within the Surface Phenomena and Reactions, SURPHARE, (Contract No. G5MA-CT-2002-04034) Centre of Excellence in Competitive and Sustainable Growth (Grow-2001-5.2). This Centre was active within the 5th Frame Programme of the European Commission at the Institute of Physical Chemistry of the Polish Academy of Sciences in Warsaw (http://ichf.edu.pl/surphare/main.htm) from 2002 to 2005. Promotion of research activities and dissemination of new findings to a broad audience through scientific meetings, like the present Workshop, and publications, like those collected in the present Special Issue of Bioelectrochemistry, were major goals of this Programme. Consequently, the main objective of the SMCBS series of Workshops is to encourage cross-cutting discussions between different scientific fields of surface science, between fundamental and applied studies with respect to broad aspects of chemical and biochemical sensing, and related topics.

The Workshop attracted distinguished scientists as well as graduate students, postdoctoral fellows, and all those who were willing to enter the field or just to update their knowledge on recent developments in the area of surface modification for chemical and biochemical sensing. A group of 125 participants representing 20 countries and 73 academic and industrial institutions enjoyed 8 invited tutorial lectures of distinguished scientists, 17 keynote lectures of internationally recognized specialists as well as 41 short oral and 38 poster communications of early stage researchers and graduate students.

A vital part of a chemo and biosensor is its recognition element responsible for selective sensing of a target analyte. In series to this element, a signal transducer is connected that transforms a chemical signal into a measurable, typically electrical, detection signal. In this regard, the scientific interest of the Workshop was focused on the following main themes:

- SECM surface imaging of advanced resolution and utility.
- Surface characterization using electrochemical impedance spectroscopy.
- Advances in molecular imprinting, particularly with respect to selectivity of the resulting polymer materials.
- Biofuel cell system advances, served by developments in interface design, with glucose oxidase and O_2 dominating.
- Surface management of biological molecules and systems, including (i) wiring bacteria with redox polymers, (ii) DNA as a sensing molecule, (iii) chemical and magnetic control of materials.
- Multiple phase boundaries controlling redox chemistry by providing excellent localization of electrochemically mediated growth.

The participants well received and highly appreciated all of the contributions.

For the present Special Issue, the authors of 15 contributions have recapitulated their presentations in the form of articles exemplifying studies and applications of different sensor matrices. The assistance of colleagues involved in timely reviewing the manuscripts submitted for publication in this Special Issue is gratefully acknowledged. Our hope is that not only the Workshop participants, but also all readers will find the papers both relevant and interesting. These papers reflect the open and interactive spirit of the Workshop, vivid discussions and exchange of ideas, which certainly were stimulated by stunning social events, like a trip to the Europe unique Wieliczka salt mine, among others. All these activities would not have been possible without financial support of the Workshop sponsors, including the International Society of Electrochemistry, the eDAQ Europe, the IJ Cambria Scientific, Ltd., the nLab, the Karia, and the Palm Instruments BV. Participants and organizers are grateful to this organisation and companies as well as to Elsevier for publishing the present Special Issue of Bioelectrochemistry.

The International Scientific Advisory Board (ISAB), composed of renowned scientists in the field,

Renata Bilewicz (Warsaw University, Warsaw, Poland)
Francis D'Souza (Wichita State University, Wichita KS, USA)
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Sabine Szunerits (LEPMI, St Martin d'Heres, France)
Gunther Wittstock (Carl von Ossietzky, Universität Oldenburg, Oldenburg, Germany)

decided on the workshop programme. Debate within ISAB on the present status and future directions of SMCBS was actively encouraged. The response was that SMCBS Workshops are becoming more exciting and important, so that its activity should further be developed.

Therefore, it is my great honour and pleasure to invite all interested researchers to actively participate in the next, i.e. the 5th SMCBS' 2011 Workshop, which will be held in the Gdansk area at the Baltic Sea shore on 4th through 8th of November, 2011.

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