

MicroEchem 2015: Second Summer School in Molecular Electrochemistry

In this special issue of the *Journal of the Mexican Chemical Society*, a number of invited contributions regarding the Second Summer School in Molecular Electrochemistry MicroEchem 2015, are presented. The event took place during June 29th to July 2nd, 2015, at Hacienda La Muralla, in Amealco, Queretaro, Mexico. This issue continues the tradition of generating a “written memory” of these events (following publications as special issues of *Electrochemical Acta* and *Procedia Chemistry*). These meetings have been devoted to describe how, from first-principles molecular electrochemistry, new materials and processes can be developed, either at the laboratory or at industrial scale, highlighting the connecting role of molecular electrochemistry between different areas of knowledge. Also, they have been instrumental to consolidate the development of Molecular Electrochemistry in Mexico, which began as a series of organized meetings back in 2001 and now took the form of MicroEchem meetings. Also, with a continuous support from the International Society of Electrochemistry, these events have allowed sharing the scientific work in Mexico with colleagues from other countries, providing a series of fruitful discussions and creating new international and exciting collaborations. We sincerely thank the kind acceptance and disposition of all the tutorial lecturers: Prof. Elena Ferapontova, Prof. Flavio Maran, Prof. Jiri Ludvik, Prof. Hanna Radecka, Prof. Jerzy Radecki, Prof. Andrew Doherty and Prof. Annia Galano. In the same way, we would also like to thank the invited lecturers to this School, Prof. Felipe González Bravo, Prof. Bernardo Frontana Uribe and Prof. René Antaño-López and to all the participants which have participated and shared their scientific experiments at this event. During this three-year span, MicroEchem meetings have attracted over 120 people, between students and researchers, proving that this has been a commendable effort.

In this Special Issue, the reader will find a good selection of the topics presented at the meeting, including extensive and detailed reviews of the theoretical methods employed for describing electron and proton transfer during antioxidant transformations and also one regarding the electron transfer of quinones in ionic liquids. Two critical reviews are also present, providing an up-to-date status of development of new classes of genosensors. Also, contributions dealing with the electron transfer properties of inorganic compounds, with potential properties as electrocatalyzers, and surface-bound proteins appear as original contributions. Finally, one short communication describes the use of electrochemistry to analyze the influence of defects during corrosion processes, providing a connection between nanoproperties of materials and their macroscopic features.

We thank the authors for their participation and particularly to Prof. Ignacio González, editor of the *Journal of the Mexican Chemical Society* and Prof. Lena Ruiz Azuara, former president of the *Sociedad Química de México*, for their kind help and facilities in order to make this edition possible. Again, we hope that this Special Issue provides the reader with new insights on the use of Molecular Electrochemistry and its crucial role for developing new and groundbreaking applications

Sincerely

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