

## Environmental Electrochemistry, Special Issue

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The equilibrium of our planet has become compromised as a result of energetic demands and processing of raw materials required to satisfy modern life. This unsustainable use of environmental resources entails the release of large quantities of air, water and soil pollutants to environment. In order to mitigate this problem, technologies that could respond efficiently to the balance established between energy, security, cost and degradation rates are required. Electrochemical technologies have been successfully implemented for the abatement of typical harmful compounds (metal ions or inorganic anions), and lately, their use has been extended to the treatment of emerging pollutants such as pharmaceuticals and refractory organic compounds, dyes, oil-derived hydrocarbons and others.

Electrochemistry is implicitly present in daily life, including the technological advances to manufacture: jewelry, batteries, capacitors, fuel cells, and evaluate corrosion, water purification and metal refining. Electron and charge transfer processes are critical concerning the use of electrochemical science for the above technologies and contaminant destruction (e.g. incineration or chemical oxidation), particularly, since they draw on the use of electrons as reactant, without secondary generation of by-products, whence electrochemistry is a sustainable technology that significantly contribute to the current efforts promoted for environmental remediation.

Thus, the scope of this special issue of the *Journal of the Mexican Chemical Society* is to provide at a glance, some reviews of the state of the art for environmental electrochemis-

try, as well as research articles on the topic. Therefore, we are pleased to publish reviews from internationally renowned experts in the field from Brazil, Mexico, Spain and United States of America, which cover organic de-halogenations, treatment of industrial effluents, and advanced oxidation process using boron diamond electrodes. This issue also contains original contributions from Brazil, France, Mexico and United States of America, which show the important work that this active research community is performing to contribute with innovative solutions to the pollution problem.

We hope that the cooperative work presented in this issue of *J. Mex. Chem. Soc.* on environmental electrochemistry can assist students, academic researchers, and chemical engineers to envisage the capacities of electrochemical technologies to alleviate the serious problems of pollution. We are confident that joint efforts from the academic and technical community will pave the way to find out solutions to preserve the equilibrium of the planet.

Finally, we gratefully acknowledge to the many authors who made possible this publication. Thanks for their confidence and work to achieve this special issue, chapeau!!

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