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EDITORIAL NOTE

Commemorative Volume on the Centenary of the Brazilian Academy of Sciences: "Brazil: Frontiers of Chemical Sciences"

FRANK N. CRESPILHO

Instituto de Química de São Carlos, Universidade de São Paulo, Av. Trabalhador São-carlense, 400, Caixa Postal 780, 13560-970 São Paulo, SP, Brazil

It gives me great pleasure to introduce the first volume in chemistry, which has been compiled in commemoration of the centenary of the Brazilian Academy of Sciences (ABC). In 2016, we commenced our activities to celebrate the centenary of the ABC, by consolidating the academic and scientific efforts of our community. In 2018, we continue this commemoration of science, with a special volume in chemistry. As we all know, chemistry is an important part of modern science, and shares an interdisciplinary nature with all sciences, especially in the study of matter and its transformations.

Seven years ago, however, chemistry was perceived a challenging subject, and views were put forward that chemistry "needs to improve its relationship with the wider public" (Insight - Important questions were raised in the editorial "Chemistry beyond the bench" (Nature Publishing Group 2011), including "How can the inadequate educational resources be improved in developing countries?" In this regard, motivating discussions among post-graduates and academic researchers is of essence. Furthermore, Matlin et al. (2011) put forth an important reflection: "Chemistry needs to be taught in context — not just the context of 'applications', but also the relevance to society and contribution to meeting global challenges, while fostering skills in in cross-disciplinary working". For chemistry research in Brazil to gain an international footprint, many efforts have been invested. The next step, I believe, is to create new trends in chemistry and expand its international outreach.

Brazil is a country strongly linked to chemical science, and chemistry in Brazil has attracted tremendous interest for its origins (Filgueiras 2015), which date back to the sixteenth century, in the fields of medicines and chemical manufacturing (Filgueiras 2015). Today, chemical science research in Brazil addresses local as well as global issues, from nanotechnology for applied sciences to energy and the complexity of biota in Brazil. In this regard, I present here the special volume "Brazil: Frontiers of Chemical Sciences". We are pleased to introduce authors of the highest caliber; young academicians, researchers, senior academicians, as well as scientists, who have contributed to chemical research in Brazil. This volume has 16 scientific articles in review format, all invited, peer-reviewed, and selected for their high quality. In this volume, the authors discuss several topics of current interest; for example, carbon dioxide cycle based on enzymatic action and nanoparticles; amino for surface engineering tools; surface properties of molecules on a monolayer; medicinal chemistry and drug discovery for cancer and neglected tropical diseases; electron

transfer reactions, bioenergetics and bioelectrochemistry; bioluminescent processes; chemistry inspired by the colors of fruits, flowers, and wine; nanocatalysis; fuel cell developments; sunlight-driven water splitting; bioeconomy of natural products from Brazilian biodiversity; plasmonic biosensing; flow analysis; organic synthesis for new compounds; and enzymatic reactions.

We hope that these publications will further boost submissions of high-level articles in chemistry to AABC. We are extremely grateful to all who contributed to this special edition. We invite you to participate in this journey, and continue to build a journal with a strong scientific reputation.

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