

## Dedicated to Heterogenous Catalysis Research done by Mexican Groups, Special Issue

Catalysis has a tremendous impact on our day-to-day lives. It is estimated that catalysts are present in more than 80% of all manufactured products. For example, the petrochemical industry depends strongly on the existence and development of new catalytic materials, placing catalysis at the core of the world's economic development. In fact, the importance of catalysis goes beyond the synthesis of chemical products, as it is also involved in many crucial aspects associated with modern industrial processes and their sustainability. For instance, catalysis has the potential to provide active materials to mitigate the environmental challenges raised by climate change and global warming. Furthermore, one of the most typical examples of the application of catalysts is their use to produce more efficient and ultra-clean fuels.

Research on catalysis is vibrant, and recent decades have witnessed its evolution towards multidisciplinary approaches that benefit from the advances in organic synthesis, spectroscopy, nanoscience, and reactor design, among other fields. In Mexico, research on catalysis covers a wide range of subjects, from the discovery of new materials for the hydrothermal treatments of fuels to the elucidation of mechanistic routes for the transformations of CO<sub>2</sub>, SO<sub>x</sub>, and NO<sub>x</sub> on catalytic surfaces. There are approximately 30 different institutions with research groups working on a wide variety of catalysis topics across the country. Many of these groups participate and interact with the global catalytic community. This year, the Mexican Catalysis Academia (ACATA.C.) organized several courses, conferences, and the Iberoamerican Congress of Catalysis. The vast majority of its affiliates are involved in heterogeneous catalysis. The Mexican Chemical Society also has a Catalysis division, and in this case, the great majority of its affiliates are focused on homogeneous catalysis.

This Special Issue gathers a few examples of the research that is carried out by Mexican groups. We bring you topics of great interest approached from the point of view of catalysis, framed in the United Nations agenda for the peace, dignity, and equality on a healthy planet and sustainable development objectives. The papers presented in this special issue address dry methane reforming, ethanol steam reforming, proton-exchange membrane fuel cell, hydrodesulfurization, methanol to olefins, and selective catalytic reduction of NO.

We know that this is not a comprehensive review of all the work that is covered nationwide, but one could get a clear idea of the overall picture and the quality of the contributions in this area.

We thank all authors for their contributions to this volume. We also thank professor Alberto Vela-Amieva (editor-in-chief) and Adriana Vazquez for their help during the editorial process. We hope that the papers presented on this issue will motivate new generations of Mexican scientists to work in the fascinating field of catalysis.

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