

## Mexican Chemist Overseas, Special Issue

During the last quarter of the 20<sup>th</sup> century, Mexico underwent profound socioeconomic transformations whose outcome seemed far from certain. On the political front, the country was about to become truly democratic for the first time in more than a century. On the economic front, Mexico joined the North American Free Trade Agreement, which directly accelerated trade and other exchanges with the United States, Canada and, indirectly —through competition— with other regions of the world, particularly Japan, Europe, and China. Growing up in those challenging times, many of us found comfort in the rigor and beauty of chemistry and the rest of the physical sciences. The promise of reaching a predictable set of unifying rules for understanding nature became a fantastic escape from the chaotic realities of a country that was rapidly redefining itself. Many of us, including the two undersigning guest editors, benefited from participating in the Mexican Science Olympiad program, which was spearheaded by the Mexican Academy of Sciences (AMC from its initials in Spanish). Others, through the financial support of the National Council of Science and Technology (Conacyt from its initials in Spanish) or our host countries and universities, went abroad to pursue their training and careers in the chemical sciences and engineering. With the advent of democracy at the turn of the century and following the mass retirement of the Mexican baby boomers who were first hired in the 1960's and 1970's, some of those newly minted scientists had an opportunity to be hired and returned home. They brought with them a continuous flow of new knowledge and ideas that have greatly expanded the scope of chemical research in Mexico and beyond.

During this process, a growing number of Mexican chemists have also been taking up permanent positions overseas. They are tenure-track assistant professors, tenured

associate, and full professors, distinguished, and named professors, and industrial scientists in chemistry, engineering, materials science, pharmacy, and R&D departments and divisions across the globe. Some of these scientists set up their bases in developed countries in North America and Western Europe. Others have found long term career opportunities in developing nations too. A majority of us received at least a fraction of our graduate education outside of Mexico, and we have lived and been away for many years. This diaspora of Mexican chemists has put down roots in their adoptive communities, as scientists, and as a people. They serve both as ambassadors for some of the best that Mexico has to offer, as well as stewards to build a more diverse and inclusive society. In this context, this special issue of the *Journal of the Mexican Chemical Society* seeks to present and highlight top-notch chemical research performed by Mexican academics overseas, as well as to identify and provide a forum for Mexican chemists in permanent faculty positions outside of Mexico.

The contributions to this special issue range from materials chemistry and chemical catalysis, to electrochemistry, physical organic, and synthetic organic chemistry. In the area of materials chemistry, Carlos Martínez-Huitl from the Federal University of Rio Grande do Norte in Brazil presents his work on titanium oxide supported on montmorillonite clays for environmental applications. In turn, Javier Vela from Iowa State University in the U.S. talks about his collaborative work toward synthetic control of photoluminescence stability in organolead halide perovskites. In the area of chemical catalysis, Nicolás Alonso-Vante of the University of Poitiers in France reviews the hydrogen evolution reaction on nanostructured molybdenum disulfide. Homero Castaneda from Texas A&M University in the U.S. describes the electrochemical impedance

characterization of  $\text{LiMnPO}_4$  electrodes with different additions of multiwalled carbon nanotubes in an aqueous electrolyte. Dino Villagrán from the University of Texas El Paso in the U.S. reports the electrocatalytic production of hydrogen gas by a cobalt formamidinate complex. Mario Alpuche-Aviles from the University of Nevada in Reno, U.S. provides evidence for radical intermediates during the electrochemical oxidation of iodide. On the mechanistic side of organic chemistry, Alejandro Bugarin from the University of Texas Arlington in the U.S. communicates methylene linked aromatic iminium salts. Finally, Horacio Olivo from the University of Iowa in the U.S. reviews the synthetic applications of sulfur-based chiral auxiliaries in asymmetric syntheses.

The present issue thus contains a small but diverse cross-section of some of the research work of dozens of Mexican chemists currently working abroad. We hope that this special issue will help connect and improve communication among chemistry academics working within and outside the national borders, offer the opportunity to Mexican faculty and students

to identify potential collaborations and research opportunities around the globe, and inspire students about the unlimited career opportunities available to young chemistry scientists — the sky is the limit.

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