

Chemistry in modern materials

Daily, great advances are being achieved in several research fields. A good example of this is the development in materials science. Every day, we are in contact with new materials that make our life easier and more comfortable. Science was behind the development of these materials. We are constantly in contact with new materials, although sometimes we only appreciate the final result upon application; for instance, the newest smartphones are only possible through the development of materials, mainly lithium ion batteries, nanoscale integrated circuits and liquid crystals. Materials science is also crucial in engineering processes to obtain a valuable product; the most representative example is drinking water. Thus, material chemistry and science are very important research fields and we take this opportunity to present some selected papers within these topics in this issue of the *Journal of the Mexican Chemical Society*.

In this Issue, the reader will find three excellent articles concerning materials science topics, one of them is devoted to magnetic composite materials obtained from Fe, Ni, Co metals and a thermosetting polymer. Another article describes how the

biocide properties of an organic molecule can be improved by merging these properties with the dispersive properties of a layered double hydroxide; the resulting hybrid materials are exceptional bactericides for *E. coli* and *S. typhi*. The third paper describes the morphological modification that rapid solidification produces in Al-Ni alloys. Changes of the Al-Al₃Ni eutectic are described in detail. A critical review is also included in this issue, providing an up-to-date status of development of porous coordination polymers and their use for gas storage. These materials have had the largest number of publications within the last 15 years, in the materials science field.

Recognition is due to the authors for their support and particularly to Prof. Ignacio González, editor of the Journal of the Mexican Chemical Society, for his help and for the facilities to make this edition possible. Again, we hope that this issue provides the reader with new insights on the materials science, even though the articles and review only represent a very small part of the diversity of materials that we use and require at present.

Sincerely
Enrique Lima
Guest editor