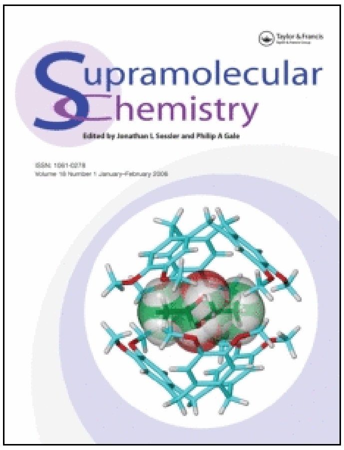

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Preface to the Special Issue of Mexican Supramolecular Chemistry

Jesús Valdés-Martínez

Supramolecular chemistry is a central field of research in the twenty-first century. The present issue of *Supramolecular Chemistry* provides a sample of the research being done in this field in Mexico or by Mexicans working in other countries. Ten research groups from different institutions doing research in fields running the gamut from solution host–guest to solid-state supramolecular chemistry kindly agreed to contribute to this special issue.

The group of Castillo and collaborators report on the conformational preferences of bispicolyl-*p-tert*-butylcalix[4]arene anions; in this study, the authors report that the yield of the isolated cone and partial cone conformers depends on the identity of the alkali metal hydride employed to deprotonate the calix[4]arene. A new water-soluble 26-membered macrocyclic pyridinophane functionalised by amide and carboxymethyl groups is reported by Medrano and co-workers. The complexation properties of these systems with the nucleobase substrates, thymine and uracil, in aqueous media as well as semi-empirical molecular modelling studies are presented in this work. Vilar and collaborators prepared a series of dipalladium complexes with thiolato ligands containing urea groups. X-ray crystallography analyses revealed interesting supramolecular interactions between the metal complexes and the corresponding counter-anions. The authors have also studied the various conformations of the complexes in solution and have supported their experimental findings with computational studies. Lara-Ochoa and Espinosa-Pérez calculated three different types of co-crystals using a quantum mechanical method and proposed a new definition for co-crystals. Padilla-Martínez and collaborators reported the solid-state photodimerisation of ethyl coumarin-3-carboxylate and some of its derivatives, as well as the methyl- and ethyl alcoholysis of the ethyl coumarin-3-carboxylate photodimer. Höpfl and co-workers presented an experimental and theoretical analysis of the hydrogen bonding motifs formed between carboxyl and carboxylate groups. As detailed in their paper, different discrete and water-expanded hydrogen bonding patterns are seen; these have been analysed systematically by theoretical calculations. In their contribution, Santillan et al. reported a solution and solid-state study of the tautomeric equilibrium between the ketoenamine and enolimine forms of a series of arylimines derived from salicylaldehyde, as well as enaminones derived from benzoylacetone and substituted anilines. Morales-Morales and co-workers have studied the crystal and molecular structure of a series of platinum thiolate complexes, and have concluded that differences in $\pi-\pi$ interactions among the aromatic rings lead to different molecular arrangements within the crystal. In their paper, García et al. reported the synthesis of the first and second generation oligophenylenevinylene dendrimers derived from a resorcinarene core; they have also studied their supramolecular complexes with fullerene, C_{60}. Valdés-Martínez and co-workers presented a solid-state analysis of the chloride complexation properties of a series of square planar salicylaldehyde thiosemicarbazone Ni(II) complexes.

Taken into consideration, the above contributions show that Mexican Supramolecular Chemistry is alive and well and that the future looks exceedingly bright for this field of study. It is hoped that this issue will contribute to further progress in this area, both within Mexico and outside its borders.

I would like to thank all authors for their contributions; Jonathan L. Sessler, co-editor of *Supramolecular Chemistry* for his invitation to put together this special issue; and Kateri Aragón for all her help in making it a reality.

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