

Special Issue

Nanometer-Size Glyconanoparticles: Synthesis and Biomedical Applications

Message from the Guest Editor

Carbohydrates and their conjugates constitute key biomolecular entities at the origin of a plethora of cellular communications. As such, they represent a family of naturally-encoded structures, now generally placed under the blanket term “glycocodes”. In natural settings, these roles are fulfilled by glycolipids, glycoproteins, and polysaccharides, which serve as interfacial ligands between them and their cognate protein receptors. Consequently, the interplay of such inter- and intra-molecular interactions, which are often multivalent, has triggered the design of novel molecular “glyco”architectures to better decipher their biological functions. Synthetic nanomolecular materials have paved the way toward our deepening of mechanisms underlying these complex interactions. This Special Issue is dedicated to the description and recent synthetic strategies regarding novel nanomolecular carbohydrate-based architectures and their applications in therapeutic applications, such as glycohydrolases and bacterial/viral adhesion inhibitors, imaging, targeting, microarrays, and vaccines.

Guest Editor

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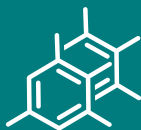


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Message from the Editor-in-Chief

As the premier open access journal dedicated to molecular chemistry, now in its 29th year of publication, the papers published in Molecules span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

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