

Special Issue

The 20th Anniversary of Hydrolytic Nanozymes: New Insights and Developments

Message from the Guest Editors

Twenty years ago, the term “nanozyme” was introduced in the chemical literature in relation to a functional nanoparticle able to cleave phosphate diesters bonds with high efficiency and with a mechanism mimicking that of natural phosphate cleaving enzymes. Since then, the term nanozyme has been developed and extended to nanosystems able to perform the most diverse reactions with mechanisms and with efficiencies like those of natural proteins. Hydrolysis is one of the most important reactions catalyzed by natural enzymes. Hydrolytic enzymes process food, edit DNA and RNA and convert complex molecules into simple ones. In order to be carried out under mild conditions of pH and temperature, a hydrolytic process requires a catalyst that has been very carefully designed to optimize nucleophilic and electrophilic catalysis and often operates in a concerted way. We are looking for contributions that deal with hydrolytic processes catalyzed by nanosystems including micellar and vesicular systems, polymers, metal nanoparticles, nanoclusters, and metal organic frameworks. Prof. Paolo Scrimin

Guest Editors

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano–alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

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