

Special Issue

The Application of DNA Nanotechnology

Message from the Guest Editor

DNA nanotechnology is enabling the fabrication of increasingly sophisticated nanostructures. This manufacturing approach is fully programmable and reproducible as it relies on the accurate specificity of DNA base-pairing interactions. DNA sequences can therefore be rationally designed to self-assemble into constructs of well-defined dimensions, tailored shapes, and versatile functionality. Owing to this unique design adaptability, DNA nanotechnology has become a prolific source of customized nanomaterials for diverse purposes, such as drug delivery, bioimaging, single molecule detection, biomimetics, biosensing, protein scaffolding, and DNA computing. This Special Issue of *Nanomaterials* aims to gather exciting new contributions on this rapidly expanding research area. To this end, we invite researchers to submit original research articles, communications, and review articles covering recent advances on functional DNA-based nanostructures and their applications into different fields, including but not limited to biotechnology, biophysics, nanomedicine, and nanophotonics.

Guest Editor

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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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