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

Dr. Silvia Hernández-Ainsa

- 1. Institute of Nanoscience of Aragon, University of Zaragoza, 50018 Zaragoza, Spain
- 2. Institute of Material Science of Aragon (CSIC-University of Zaragoza), 50009 Zaragoza, Spain
- 3. Aragonese Agency for Research and Development (ARAID), 50018 Zaragoza, Spain

Deadline for manuscript submissions

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Nanomaterials
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
nanomaterials@mdpi.com

mdpi.com/journal/ nanomaterials





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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 nanometerscale 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.

Editor-in-Chief

Prof. Dr. Shirley Chiang
Department of Physics, University of California Davis, One Shields
Avenue, Davis, CA 95616-5270, USA

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