Special Issue

Advances in Nanomaterials: Synthesis, Characterization and Application

Message from the Guest Editors

Nanocrystals and nanomaterials are considered ideal building blocks or nano-tools for the fabrication of more complex functional materials and functional devices. Their applications span form fine chemical manufacturing to greenhouse gas mitigation. Thus, their development has been continuously investigated. Even though tremendous progress has been made for nanomaterial synthetic approaches that are able to exert rigorous control over size, shape, and composition in solution-processable nanocrystals, together with a post synthetic surface science, they are still limited in technology and real-life applicability to industrial conditions. In this respect, colloidal nanocrystals are presented as powerful building blocks for functional materials. Various assembly, processing, or deposition techniques of the nanocrystals can be arranged for operative architectures over several orders of length scales. Moreover, by combining different nanocrystals, properties can be fine-tuned or selected for a specific application, opening up fascinating opportunities to create specific functionalities.

Guest Editors

Dr. Riccardo Scarfiello
CNR NANOTEC—Institute of Nanotechnology c/o Campus Ecotekne, University of Salento, Via Monteroni, 73100 Lecce, Italy

Dr. Armando Genco
Dipartimento di Fisica, Politecnico di Milano, Piazza Leonardo da Vinci 32, 20133, Milano, Italy

Deadline for manuscript submissions

20 January 2026

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/235317

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

mdpi.com/journal/applsci

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/journal/applsci

MDPI

About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)