Special Issue

Programmable Materials: From Molecular to Extended Systems

Message from the Guest Editor

This Special Issue, titled ***'Programmable Materials: From Molecular to Extended Systems***,' seeks to explore the vast potential of these materials across all scales—from atomistic and nano to the microscale. We invite contributions that utilise computational modelling, synthetic and experimental research, and advanced data-driven methods to forge new pathways in the development and application of programmable materials. General topics of interest include, but are not limited to, the following: **Foundational Structures and Principles:** Exploring the foundations of self-organised biological or synthetic materials with focus on nanotechnology, metamaterials, and advanced materials for innovative applications.
Programming Mechanisms and Implementation: Investigating how materials can be programmed for dynamic functionality, emphasising operations beyond equilibrium, the possession of multiple stable states, and adaptability through logical operations.
Systems and Design Engineering: Insights from computational and data-driven strategies on how existing and newly developed programable materials systems can be developed or exhibit new functionalities for custom-designed applications.

Guest Editor

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Deadline for manuscript submissions

closed (31 December 2025)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/211576

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Message from the Editorial Board

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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