

Special Issue on
Smart Nanostructured Materials: From Molecular Self-Assembly to Advanced Applications

CALL FOR PAPERS

Molecular self-assembly provides new and unique opportunities for designing novel materials with spatial organization into ordered nanoscale morphologies, which are able to undergo a dynamic change in their properties (in response to their environment or a stimulus) and which can be exploited for advanced applications in nanotechnology. Precise tailoring of chemical structures and an efficient use of supramolecular interactions can induce novel structural features, as demonstrated by different studies. Leading examples of self-assembly processes can be found in biological systems where assemblies of different components and their integrated actions allow the performance of highly specific functions in living organisms.

We invite researchers to contribute original research articles as well as review articles that investigate the self-assembly processes involving macromolecular block units that can be considered prominent examples of the bottom-up approach in modern nanotechnology, both in bio-related and technology fields.

More specifically, we are interested in articles concerning synthesis, characterization, and applications of macromolecular systems that, with the exhibition of various self-assembled nanostructures, may stimulate the development of a new generation of advanced functional materials in a wide range of disciplines including pharmaceutical, food, cosmetics, agricultural, catalysis, and environmental science.

Potential topics include but are not limited to the following:

- Synthesis, surface chemistry development, and characterization of novel (macro)molecules and smart nanostructured materials
- Upscaling of self-assembly processes from nano- to micro- to macrostructures
- Basic properties and self-assembly processes of macromolecules in bulk phases, surfaces, and interfaces
- Application of assembled macromolecules to drug-delivery, artificial scaffolds, and tissue engineering
- Theoretical modeling and computer simulation studies of new problems in nanomaterial self-assembly
- Novel supramolecular assemblies for nanoarchitectonic material applications, including microelectronics and energy production/storage processes

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jnm/snms/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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