

Special Issue

Nanomaterials for Membranes, Membrane Reactors and Catalyst Systems

Message from the Guest Editor

The impact of nanomaterials upon membrane science and technology continues to give an excellent argument to amplify the theoretical and experimental studies.

Membranes and membrane processes represent the core high-technology domain in which nanomaterials have been capitalized for their entire physical, chemical, and technical-economic potential. Increasingly sophisticated membrane requirements such as: chemical and photochemical oxidation resistance; high selectivity; sensitivity to physical, chemical, and biological parameters; high flow at low pressures; and longer lifetime have led to the transition from classical material membranes to composite or liquid membranes based on reactive and/or functional nanomaterials. We welcome the submission of full papers, communications, and reviews. Potential topics include, but are not limited to:

- Membrane nanomaterials (nanoparticles, nanocarriers, functional and/or reactive nanospecies, etc.);
- Membrane processes based on nanomaterials;
- Membrane reactors and catalyst systems;
- Selective separation and sensing;
- Nanomaterial-based cleaning technologies;
- Nanomaterial membrane applications.

Guest Editor

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About the Journal

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.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones

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