Special Issue

Nanostructured Membranes for Health, Environment and Renewable Energy

Message from the Guest Editor

Membranes have become widely used in many separation systems for gas or liquid purification/extraction, water treatment/desalination, catalytic reactors, and various environmental/recycling applications. They also play an essential role in various systems, such as batteries, sensors, fuel cells, electrolysers and barrier layers. The aim of this Special Issue is to assemble high quality contributions on the synthesis, the modification, the characterization and the application of membranes. It will deal with the design of new nanostructured membranes by tuning the composition (polymeric, hybrid and ceramic membranes), the membrane microstructure (pore size, porous volume, pore distribution, connectivity and tortuosity), the membrane design (surface to volume ratio, hydrodynamics) as well as the surface modification (for both porous and dense membranes). The relation between these parameters, the physical–chemical properties as well as the permeability, the selectivity, the reactivity and the durability of these membranes will be explored. Novel applications in different fields will also be investigated.

Guest Editor

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Message from the Editor-in-Chief

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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