

Special Issue

Materials Containing Silicon, Its Inorganic Derivatives, Functional Silanes, and/or Organosilicon Polymers

Message from the Guest Editor

Silicones (polysiloxanes), containing silicon and oxygen atoms in their main chains and organic substituents bound to silicon, are a large and most important group of various inorganic-organic (hybrid) compounds and materials. Mainly poly(dimethylsiloxanes) (PDMS) are used. Silicones are applied as oils, rubbers, and resins (W. Noll, 1968; M.A. Brook, 2000). They have many unusual features – they exhibit excellent chemical, physical, and electrical properties. Even an addition of a very small amount of silicones causes a crucial improvement of properties of modified materials. Silicones increase hydrophobicity and improve water resistance and thermal stability of many materials. Other organosilicon polymers, and especially, polysilanes, polycarbosilanes, and polysilazanes, are raw materials for fabrication of polymer-derived *high-tech* ceramic materials. Silicon-based polymers and polymeric materials as well as reactive silane coupling agents are used in many fields – from industry, through everyday life commodity goods and cosmetics, to medicine. Their universal properties decide that they are very useful and attractive materials and components in a very wide range of products.

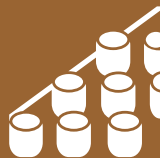
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Deadline for manuscript submissions

closed (20 August 2025)



Materials

an Open Access Journal
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Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/182054

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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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