Special Issue

Neutron Scattering Studies in Materials Science

Message from the Guest Editor

Neutron scattering is one of the most useful probes to analyze the properties of materials. Scattering both magnetic and nuclear is used for determining unknown structures. Neutron spectroscopy gives insight into the fundamental excitations of the underlying lattice. The high penetration of neutrons allows the construction of extreme sample environment allowing to probe materials at ultra-low temperatures, high magnetic fields, extreme pressures, high temperatures and sometimes a combination of them. The increase in flux brilliance on neutron sources combined with event mode collection further facilitates experiments in-situ and in-operando. Neutron scattering in materials sciences is and has been fundamental to understand structures of materials, their textures, the associated strains in bulk. In-operando techniques reveal the evolution of these over time and allow the informed design of improved materials. The special issue of Neutron Scattering studies in Materials Science aims to present state of the art applications for neutron scattering in materials science and an outlook into the future impact of neutron scattering in materials science using tiime-resovled techniques.

Guest Editor

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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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