

## Special Issue

# Modern NMR Characterization of Materials at the Atomic and Molecular Level

### Message from the Guest Editor

Nuclear magnetic resonance (NMR) spectroscopy remains an important tool in the characterization of materials at atomic and molecular levels. By employing combinations of heteronuclear, multi-dimensional, multi-quantum, and dynamic nuclear polarization (DNP); relaxation filters; shaped pulses; magic angle spinning; and pulse field gradient (PFG) NMR diffusometry techniques, investigators can gain novel and valuable insights into materials. An almost endless range of material properties can be probed, including production and degradation chemistries, local- and medium-range structure, structural dynamics, binding events, surface interactions, phase transitions, morphology, kinetics, and hydrogen bond strengths, along with ion/molecular diffusion. This Special Issue will focus on the use of NMR for the characterization of real-life materials, including biomaterials, biopolymers, biofuels, biomembranes, self-assembled materials, super-molecular and stimuli-responsive polymers, polymer membranes, composites, MOFs, inorganic materials, liquid crystalline polymers, ceramics, glasses, catalyst, surface-modified nanoparticles, and electrolytes.

### Guest Editor

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### Deadline for manuscript submissions

closed (20 December 2024)



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### Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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