

Special Issue

Advances in Quantum Science

Message from the Guest Editor

Quantum sciences are deeply rooted in suitably-tailored physical substrates. Materials for quantum science range from quantum computing (semiconductor host of quantum dots, superconductors, defects in semiconductors), to quantum communications (single-photon sources and detectors, respectively), to quantum metrology (absolute photon counters), and quantum sensors (solid state spins, superconductors and SQUIDs, optomechanics). Conversely, development of materials can in turn take advantage of quantum science, such as material design by quantum computers and quantum ellipsometry just to mention a few examples. Aside from traditional investigation methods, novel design methods involve deep and machine learning, quantum computers, and HPC. This Special Issue looks at covering both the development of materials to boost quantum sciences, and quantum sciences to empower the search and refinement of materials. The field is rapidly advancing into new areas of discovery. It is my pleasure to invite you to submit a manuscript for this Special Issue. Full papers, communications, and reviews are all welcome.

Guest Editor

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About the Journal

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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