Special Issue

Emerging Photonic and Electromagnetic Materials and Devices

Message from the Guest Editors

The rapid advancement of photonic and electromagnetic materials and devices is revolutionizing modern technologies and fostering breakthroughs in communication, sensing, computing, and medical domains. Integrated photonic platforms, including silicon nitride, lithium niobate, and plasma systems, are redefining high-speed optical communication and compact photonic chips to address the exponential rise in data traffic. Upconversion nanoparticles and quantum photonic systems have showcased transformative potential in near-infrared electronics, implantable medical devices, and secure quantum communication. Progress in intelligent electromagnetic materials, such as liquid metal composites, offers tunable shielding and sensing capabilities, which are essential for adaptive Internet-of-Things applications and electromagnetic protection.

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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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