Special Issue

Trends in Nonlinear Optical Materials

Message from the Guest Editor

Nonlinear optics (NLO) started to be explored by Franken et al., in 1961, with the discovery of second-harmonic generation (SHG) or frequency doubling. That happened right after the construction of the first laser by Maiman in 1960, of which the electric field intensity was sufficient to induce the nonlinear response of matter. The interest in this field has led to the synthesis of several compounds over the years, both organic molecules and coordination complexes, in order to provide coherent light of different wavelengths, materials interaction through multi-photon absorption (photodynamic therapy in medicine, optical power limiting applications, etc.), advanced spectroscopy and materials analysis, possible applications to communications and sensors, and so on. This Special Issue aims to collect new advances in the synthesis, and experimental and theoretical characterization of new materials, ranging from purely organic derivatives to transition metal and lanthanide complexes, coordination polymers and hybrid systems, and description of their linear and nonlinear optical properties, such as SHG, multi-photon absorption, etc.

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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