Special Issue

Structural and Luminescence Properties of Glass

Message from the Guest Editor

Comparatively to silicate glasses, the phosphate glasses network can include luminescent (rare-earth, transition) ions in higher concentrations, with increased energy of emitted radiation. Boron oxide-based glasses exhibit a large glass formation range and high properties like enhanced transparency, together with thermal, chemical, and radiation stability. Zinc-tellurite glass has received widespread attention lately due to its promising potential as a rare-earth elements host for lasers or optical fibers. New interesting vitreous systems for luminescence purposes such as bismuthate and germanate systems are being studied nowadays. Between the recent glass structure models, the molecular dynamic simulation seems the most appropriate. Luminescence studies include absorption and emission spectra; photoluminescence excitation; temperature-dependent and time-dependent photoluminescence; luminescence decay spectra; and, if more than one luminescent ion is involved, the energy transfer process. The main applications of luminescent glasses are energy harvesting, lasers, and optoelectronics.

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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