Special Issue

Electronic Structure of Luminescent Materials

Message from the Guest Editor

The importance of luminescent materials in our daily life cannot be underestimated. This leads to an increasing need for new and more specialized luminescent compounds which demand a thoughtful engineering of materials. Materials properties can be tweaked by adding one or several optical dopants changing the host crystals or by manipulating native or charge-compensating defects. In the case of nanomaterials, the modification of the dimensions and shapes of the nanostructures can strongly affect the physical properties. This means that a huge parameter space needs to be explored, something which cannot be done efficiently unless reliable structure–property relations are available. A lot of electronic structure methods are being applied to this means, often strongly differing in methodology and assumptions. This Special Issue aims at providing a forum to discuss the strengths and weaknesses of the entire zoo of electronic structure techniques and how they are combined with experimental studies in the quest for new and improved luminescent materials.

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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