Special Issue

Advanced Methods of Flame Retardant Treatment of Polymeric Materials

Message from the Guest Editor

Flammability reduction in polymer materials, or making them non-flammable, is of a special importance on account of the serious health and life hazards due to considerable emission of smoke and toxic compounds, during their thermal decomposition and combustion. Various methods can be used to protect polymeric materials against fire. The most commonly-used approach to make thermally-stable and low-flammable materials is the incorporation of flame-retardant particles in the polymer matrix. During the last few decades, a new class of fillers, commonly known as nano-fillers, have been extensively studied. The advantage of nano-fillers is that they are miscible with polymer matrix, exploiting unique synergism between the combined materials. Among others, a number of nano-particles such as clay, silica, carbon nanotubes, graphene or polyhedral oligomeric silsequioxanes decrease the flammability of polymer composites. Research papers or reviews, presenting the latest achievements in the field of polymers or polymer composite flammability and methods of their retardation are invited for this Special Issue.

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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