Special Issue

Synthesis and Properties of Flame Retardant for Polymers

Message from the Guest Editors

Polymer materials are widely used in our daily lives. The flammability of polymer products is one of the most difficult issues. To date, a range of flame retardant (FR) additives (e.g., ammonium polyphosphate, bisphenol A bis (diphenyl phosphate), triphenyl phosphate, organic–inorganic hybrid mesoporous silica, aluminium hypophosphite) have been developed and proven to be effective to enhance the fire resistance of polymers. The current research trends in the FR domain include the synthesis of new highly efficient FRs (e.g., 1D, 2D or 3D fillers), development of bio-based sustainable FRs (e.g., phytic acid, DNA), promotion of the compatibility of FR fillers with polymer substrates, integration of FR with other functionalities (e.g., antimicrobial, antiaging, biodegradability), exploration into the FR mechanisms by aid of advanced equipment or methodologies, etc. This Special Issue covers these topics and focuses on the Synthesis and Properties of Flame Retardants for Polymers with particular interest in the demonstration of the material–process–performance relationships.

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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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