Special Issue

Fracture Toughness and Flame Retardancy of Polymer Materials

Message from the Guest Editors

The poor fire safety of most polymer materials, as well as the toxic fumes produced by polymer combustion, seriously threaten human life and property. The effective flame retardancy of polymers can be achieved by introducing a flame retardant to slow the pyrolysis rate of polymers, reduce the combustible gas produced during pyrolysis, inhibit the combustible gas formed by pyrolysis from reaching the combustion zone, or inhibit and dilute the supply of oxygen. However, the addition of a large number of flame retardants could introduce defects to the polymer, resulting in a sharp decrease in its fracture toughness. Therefore, it is of great significance to realize the synchronous improvement of fracture toughness and heat resistance of polymers. In general, this Special Issue is aimed at high performance and flame retardant polymer composites, including the innovation of materials, the innovation of microstructure and the innovation of the toughening and flame retardant mechanism of composites.

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Since its foundation in 2009, *Polymers* has developed into an internationally renowned, extremely successful open access journal. The editorial team and the editorial board dedicatedly combine open-access publishing and high-quality rigorous peer reviewing. The performance of the journal has proven this strategy to be well-suited and highly successful. This is reflected in the increasing impact factor of *Polymers*, the most recent one being 4.7.

I would like to invite you to contribute to the success of the journal by sending us your high quality research papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

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