

## Special Issue

# High-Temperature Behavior of Polymers and Composites

### Message from the Guest Editors

Polymer composites are currently used in a variety of structural and thermal protection applications, including aerospace, marine automotive, civil infrastructures, chemical processing, sporting goods, and consumer products, due to their outstanding physical, chemical, and mechanical properties. However, high flammability is one of the main drawbacks as material characteristics are profoundly modified at high temperatures, typical of a fire scenario. Thus, new composites are continuously formulated and tested to understand the fundamentals of thermal and oxidative decomposition, fire development, and propagation. Predictive mathematical models can help to explain the physical and chemical mechanisms that control the thermo-chemical conversion and support the multidisciplinary design of practical appliances and expensive fire testing reduction. This Special Issue seeks innovative experimental and numerical studies on the high-temperature response of polymers and composites within the scope of improving the design of reliable and efficient thermal protection systems. Studies on both a microscopic (TGA) and a macroscopic (fire testing) scale are encouraged.

### Guest Editors

Prof. Dr. Antonio Galgano

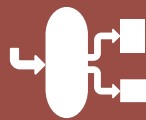
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### Deadline for manuscript submissions

20 September 2025



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