

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

Dipartimento di Ingegneria Chimica, dei Materiali e della Produzione Industriale, Università degli Studi di Napoli "Federico II", P.le Tecchio 80, 80125 Napoli, Italy

Dr. Carmen Branca

Istituto di Scienze e Tecnologie per l'Energia e la Mobilità Sostenibili (STEMS), National Research Council of Italy (CNR), P.le Tecchio 80, 80125 Napoli, Italy

Deadline for manuscript submissions

20 September 2025



Processes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5



mdpi.com/si/177016

Processes
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
processes@mdpi.com

[mdpi.com/journal/
processes](https://mdpi.com/journal/processes)





Processes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5



[mdpi.com/journal/
processes](https://mdpi.com/journal/processes)



About the Journal

Message from the Editor-in-Chief

You are invited to contribute either a research article or a comprehensive review for consideration and publication in *Processes* (ISSN 2227-9717). *Processes* is published in open access format – research articles, reviews, and other content are released on the internet immediately after acceptance. The scientific community and the general public have unlimited, free access to the content. As an open access journal, *Processes* is supported by the authors and their institutes through the payment of article processing charges (APCs) for accepted papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Giancarlo Cravotto

Department of Drug Science and Technology, University of Turin, Via P. Giuria 9, 10125 Turin, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, AGRIS, and other databases.

Journal Rank:

CiteScore - Q2 (Chemical Engineering (miscellaneous))