Special Issue

Structural Design and Performance Optimization of High-Performance Composites

Message from the Guest Editor

This Special Issue will address current challenges, novel advances, and groundbreaking insights related to microstructure design methods and property optimization technologies. It will focus on a range of relevant technologies, including multidisciplinary optimization, multiscale architectural modeling and design, reliability-based design, microstructure shape and topology optimization, material parameter and property identification, inverse design, uncertainty optimization, machine learning, artificial intelligence, and Bayesian optimization. Furthermore, the scope of this Special Issue will feature an array of innovative materials and structures, lightweight high-performance structural materials, lightweight efficient thermal protection materials, thermal management materials, new multifunctional composite materials, extreme temperature-resistant functional materials, nanocomposites, intelligent composites, metamaterials, 3D-printed materials, and 4D-printed materials. Submissions including, but not limited to, the abovementioned material systems and optimization technologies are welcome.

Guest Editor

Dr. Shuyuan Zhao

School of Astronautics, Harbin Institute of Technology, Harbin 150001, China

Deadline for manuscript submissions

31 October 2025

MDPI

Processes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5

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))