Special Issue

Fire and Explosion in Process Safety Prevention and Protection

Message from the Guest Editors

Fires and explosions pose substantial risks to personnel, infrastructure, and the environment within the process industries. A comprehensive understanding of the underlying physical and chemical phenomena is crucial for developing effective prevention, mitigation, and response strategies. This SI invites research that advances the state of the art in fire and explosion and preventive/protective/mitigative engineering. Contributions addressing combustion, heat transfer, fluid dynamics, and process design are sought to enhance safety within process environments. Special emphasis will be on the effectiveness probability of measures given load intensity. It includes but is not limited to:

- Combustion and explosion phenomena: flame propagation, detonation, and deflagration-to-detonation transition.
- Process safety analysis: hazard identification, consequence modeling, and risk assessment.
- Fire and explosion prevention: design for safety, inherent safety, and process intensification.
- Detection and suppression: fire detection systems, suppression technologies, and human factors in fire safety.
- Case studies: real-world examples of fire and explosion incidents and lessons learned.

Guest Editors

Prof. Dr. Hans Pasman

Chemical Engineering Department, Texas A&M University, College Station, TX, USA

Dr. Qingsheng Wang

Department fo Chemical Engineering, Texas A&M University, College Station, TX 77843-3122, USA

Deadline for manuscript submissions

closed (15 March 2025)

Processes

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.5

mdpi.com/si/213631

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

mdpi.com/journal/processes

Processes

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.5

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))