

Special Issue

Hydrogen and Carbon Production by Methane Catalytic Cracking

Message from the Guest Editors

The energy transition from fossil fuels is occurring at an unexpectedly rapid pace. Green hydrogen is the agreed path forward to facilitate this transition. Mega projects are being planned for the decades ahead, and hence, the necessary infrastructure and logistics need to be developed to achieve the free availability of hydrogen in the market. The topics of interest for this Special Issue include, but are not limited to, the following:

- Development of a catalyst that offers high conversion and stability for methane cracking
- Characterization and quantification of carbon nanostructures formed through the cracking of methane
- Separation of carbon nanostructures from the catalyst
- Kinetics and mechanism of the methane cracking reaction
- Separation of hydrogen and methane
- Regeneration and recycling of the catalyst
- Techno-economic feasibility of the methane cracking process
- Application of the carbon nanostructures formed through methane cracking

Guest Editors

Prof. Dr. Chandrasekar Srinivasakannan
Chemical and Petroleum Engineering, Khalifa University of Science and Technology, Abu Dhabi P.O. Box 127788, United Arab Emirates

Prof. Dr. Mohammad Mozahar Hossain
Department of Chemical Engineering, King Fahd University of Petroleum & Minerals, Dhahran 31261, Saudi Arabia

Deadline for manuscript submissions

closed (15 October 2025)



Processes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5



mdpi.com/si/207894

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))