Special Issue

Discrete Element Method (DEM) and Its Engineering Applications

Message from the Guest Editor

With the rapid advancement of computational capabilities and parallel algorithms, the discrete element method (DEM) has been extensively utilized across a range of industries to explore both fundamental and engineering issues related to granular materials. The strength of DEM lies in its capacity to elucidate the complex macroscopic response of granular assembles from a particle-scale perspective by directly incorporating particle properties. Despite its widespread adoption in both fundamental and engineering research communities, DEM simulations still face challenges, such as computational efficiency, contact force models, and the representation of real particle morphology. This Special Issue aims to publish original scientific research and review articles devoted to the development of DEM and its application in simulating engineering processes. The list of topics given below provides a summary of this Issue. The list is illustrative, and the contributions are not restricted to these topics:

- Models and algorithms;
- Integration of DEM with other methodologies;
- Rheology of Granular flows;
- Mixing, packing, and transportation of granules.

Guest Editor

Prof. Dr. Xiaoxing Liu

State Key Laboratory of Mesoscience and Engineering, Institute of Process Engineering, Chinese Academy of Sciences, Beijing, China

Deadline for manuscript submissions

15 May 2026

Processes

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.5

mdpi.com/si/253873

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))

MDPI