



## Advances in the Smoothed Particle Hydrodynamics (SPH) Method for Complex Flows

Guest Editors:

**Dr. Xiangwei Dong**

**Dr. Man Hu**

**Dr. Long Feng**

Deadline for manuscript  
submissions:

**20 December 2024**

### Message from the Guest Editors

SPH is a purely Lagrangian mesh-free numerical method that has unique advantages in dealing with complex flow problems containing free surfaces or multi-phase interfaces. With the continuous improvement of computational accuracy and stability, the SPH method has been widely used in many fields of science and engineering. This Special Issue, entitled "Advances in Smoothed Particle Hydrodynamics (SPH) Method for Complex Flows," aims to cover recent advances in the development and application of SPH for complex flows. Topics will include, but are not limited to, methods and/or applications in the following areas:

- The application of the SPH method to complex fluid flow problems in chemical engineering;
- Recent advances in SPH and other advanced mesh-free methods;
- Coupling of the SPH method with PD, DEM, MPM, and other methods to solve complex flow problems;
- Applications of SPH for the simulation of soft materials, fluid–structure interaction, geomechanics, fluid–particle interaction, multi-phase interactions, additive manufacturing, nano-, non-Newtonian, and visco-elastic fluids, etc.





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Giancarlo Cravotto**

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

## Message from the Editor-in-Chief

*Processes* (ISSN 2227-9717) provides an advanced forum for process/system-related research in chemistry, biology, material, energy, environment, food, pharmaceutical, manufacturing and allied engineering fields. The journal publishes regular research papers, communications, letters, short notes and reviews. Our aim is to encourage researchers to publish their experimental, theoretical and computational results in as much detail as necessary. There is no restriction on paper length or number of figures and tables.

## 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:** JCR - Q2 (*Engineering, Chemical*) / CiteScore - Q2 (*Chemical Engineering (miscellaneous)*)

## Contact Us

---

Processes Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/processes](http://mdpi.com/journal/processes)  
[processes@mdpi.com](mailto:processes@mdpi.com)  
[X@Processes\\_MDPI](https://twitter.com/Processes_MDPI)