



an Open Access Journal by MDPI

# **Multiphase Flows and Heat & Mass Transfer**

Guest Editors:

### Dr. Feifei Qin

Institute of Extreme Mechanics and School of Aeronautics, Northwestern Polytechnical University, Xi'an 710072, China

### Dr. Jianlin Zhao

College of Petroleum Engineering, China University of Petroleum-Beijing, Beijing 102249, China

#### Prof. Dr. Li Chen

School of Energy and Power Engineering, Xi'an Jiaotong University, Xi'an 710049, China

Deadline for manuscript submissions:

20 August 2024



mdpi.com/si/170750

### Message from the Guest Editors

Dear Colleagues,

Both multiphase flows and heat & mass transfer are ubiquitously observed in nature, daily life and engineering fields, such as rain droplet impact, water boiling, oil recovery, cooling of integrated chips, etc. It is a complex process coupled with multiple physical phenomena. Numerous studies have been conducted to improve our understanding of this area by means of theoretical, numerical and experimental approaches. This Special Issue summarizes the recent progresses on this topic. The interested research areas include but are not limited to:

- Droplet impact on liquid and solid surface with different microstructures;
- Liquid boiling of different regimes, with different microstructures;
- Evaporation of liquid under isothermal/non-isothermal conditions;
- Evaporation of colloidal suspension and nanoparticle transport;
- Vapor condensation of different types;
- Multiphase flows and phase change in porous media;
- Enhanced heat & mass transfer;
- Various applications in oil recovery, chip cooling, microfluidics, fuel cells, carbon capture, utilization and storage, etc.







an Open Access Journal by MDPI

# **Editor-in-Chief**

### Message from the Editor-in-Chief

**Prof. Dr. Giulio Nicola Cerullo** Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

# **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), Inspec, CAPlus / SciFinder, and other databases.
Journal Rank: JCR - Q2 (*Engineering, Multidisciplinary*) / CiteScore - Q1 (*General Engineering*)

# **Contact Us**

Applied Sciences Editorial Office MDPI, St. Alban-Anlage 66 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/applsci applsci@mdpi.com X@Applsci