

Special Issue

Advances in Multiphase Fluid Separation Technology

Message from the Guest Editor

Multiphase fluid separation plays a pivotal role in a wide range of industrial sectors, including petroleum and petrochemical engineering, chemical processing, environmental engineering, and emerging green technologies. With the increasing complexity of multiphase flow fields, characterized by strong phase interactions, interfacial dynamics, turbulence and phase transition phenomena, traditional separation approaches are facing growing challenges. This Special Issue aims to provide a comprehensive platform for disseminating recent theoretical, experimental, and computational advances in separation science and engineering within complex multiphase systems. We welcome contributions covering diverse separation mechanisms and devices, including, but not limited to, the following: cyclonic and centrifugal separation, flotation and bubble-based techniques, membrane and porous-media separation, electrostatic and acoustic methods, phase-interface regulation, and hybrid separation technologies. Studies addressing applications in petroleum and petrochemical industries, energy systems, environmental protection, carbon capture, and other industrial domains are particularly encouraged.

Guest Editor

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Message from the Editor-in-Chief

Separations offers the scientific community a high-quality, open-access journal option with rapid time-to-publication without any sacrifice of a rigorous peer-review process. We invite contributions ranging from fundamental characterization and instrumentation development through application of techniques to shed light on a broad spectrum of separation science needs. Since inception, *Separations*, has become unique in its combination of rapid publication and thorough scientific content. We invite you to consider us for your next contribution.

Editor-in-Chief

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