Special Issue

Development and Simulation of Coalescing Technology in Efficient Separation Processes

Message from the Guest Editors

High-efficiency filtration and separation are essential for sustainable industrial production. Coalescing is an effective technique for separating dispersed liquid phases from gas or liquid streams, but its performance depends on operating conditions, liquid properties, and filter media structures. A deeper understanding of coalescing mechanisms is therefore needed to optimize separation efficiency. This Special Issue focuses on recent advances in coalescing technologies for industrial separation, including experimental studies, modeling, and the development of gas–liquid and liquid–liquid separation processes. Contributions on novel materials, innovative separation media, and advanced simulation and optimization methods are particularly welcome. Topics include aerosol separation, oil–water separation, coalescing material and filter design, and process simulation and optimization.

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