Special Issue

Controlled Hydrodynamic Cavitation: An Emerging Class of Greener Processing Technologies

Message from the Guest Editor

Controlled hydrodynamic cavitation has a tremendous potential, based on its power to focus the bulk energy of the processed single or multi-phase liquid, or liquid-solid and liquid-gas mixture, into myriads of hot spots, in turn sites of unique physical and chemical phenomena on the micro and nanoscale. All of this, while preserving a relative simplicity in construction and operation. However, the well-deserved spread at the industrial level is lagging behind, mainly due to a persistent lack of standardization, affecting the process-specific choice of the suitable devices, the structural and working parameters, the dependence of process yields on concentration and doses, just to name a few. This Special Issue is aimed at providing an up-to-date picture of recent advances and breakthroughs in controlled hydrodynamic cavitation technologies and processes, both fundamental, including modeling and experiments, and applicative in any relevant technical field, with special focus on comparative process yields, compliance with green chemistry and green extraction principles, process-specific standardization, and scalability up to the industrial level.

Guest Editor

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