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Surface-Tension-Driven Flows for Shaping and Fragmenting Matter on the Submillimeter Scale

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Message from the Guest Editor

A multitude of technological applications demand the shaping and fragmentation of a continuous phase (gas, liquid, or solid) down to the submillimeter scale in a controlled manner. This fragmentation can be produced by gently deforming, stretching, and splitting matter in its fluid form. The flows arising in these microfluidic processes involve an ample variety of complex phenomena in which the interfacial/surface tension always plays a major role. While microfluidics researchers typically pay attention to the development and characterization of techniques for the purposes mentioned above, fluid dynamicists focus on rather fundamental questions in the quest to reveal the physics involved. This Special Issue aims to present modern microfluidic technologies for shaping and atomizing liquids and gases. It also considers advances in the understanding and modeling of the physical mechanisms underlying those technologies. It is my pleasure to invite you to submit a manuscript for this Special Issue. Full papers, communications, and reviews are all welcome.

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