

Special Issue

Acoustofluidics for Chemical, Biological, and Medical Applications

Message from the Guest Editors

Acoustofluidic devices use acoustic waves to manipulate the fluid and particles or bubbles in the fluid in a label-free and contactless manner, with biocompatibility, an adjustable wavelength, programmability, high resolution and precision, and wide ranges of particle size, which accelerate chemical, biological, and medical applications. Acoustofluidic devices include lithium niobate-based surface acoustic wave devices, PZT-based bulk acoustic wave devices, and piezoelectric resonant diaphragm devices such as micromachined ultrasonic transducers (MUTs). Recent work has demonstrated new concepts, devices, and scenarios, such as manipulating particles of tens of nanometers, fusing acoustic holography, metamaterials and reconfigurable waveguides, hydrogel patterning, acoustofluidic printing, etc. Therefore, this Special Issue aims to showcase research papers, short communications, and review articles that focus on novel principles and advanced devices of acoustofluidics, as well as its applications in fundamental biology, analytical chemistry, and medical diagnosis.

Guest Editors

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