Special Issue

Advanced Fluidic Microcomponents and Microsystems

Message from the Guest Editors

There have been long-standing efforts to develop continuous micro-scale fluidic devices for a variety of applications in biology, chemistry, and engineering. Such efforts, incorporated in the science and technology of microfluidics, involve the study of the behaviors of fluids in channels with typical dimensions of tens to hundreds of micrometers, where surface and hydrodynamic effects dominate the effects of gravity. The known advantages of microstructured devices in intensifying chemical processes are the low consumption of the sample, high heat and mass transfer rates owing to the enhanced surface-area-to-volume ratio, and the significantly reduced diffusion distances that are not usually observed at macroscale. Accordingly, this Special Issue seeks to showcase research papers and review articles that focus on novel methodological developments in fluidic microcomponents and microsystems:

- microfluidic system
- chemical process in microchannels
- modeling and simulation of micro-systems
- experimental investigation of micro-systems

Guest Editors

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