



New Insights into Micro-Orifice/Micro-Channel Flows

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Message from the Guest Editors

Water is the most familiar fluid, and its flow mechanics has been investigated since ancient Greece.

Water is classified as a Newtonian fluid, and the Navier–Stokes equation has been recognized, under a great deal of verification, as the fundamental equation to describe the mechanics of water. Recently, however, several experimental results show that the mechanics of water is not always expressed by the Navier–Stokes equation especially for flows through micro-orifices. For example, huge reduction in pressure is necessary to let water out of micro-orifices, zero reaction of water jets issuing from micro-orifices, or organic synthesis in and around micro-orifices through which water flows. These anomalies suggest a new aspect of mechanics of water beyond the Navier–Stokes equation.

The current Special Issue calls for papers concerning new insights into micro-orifice/micro-channel flows.

