

Focusing and Continuous Separation of Particle and Cell via Synergetic Combination of Elasticity-, Inertia- and Deformability-induced Migration in Straight Microchannels

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In this talk, we will present our recent works to manipulate particulate systems in microfluidics utilizing weakly elastic fluids. In our previous work, we showed that our novel 'elasto-inertial focusing' technique can be applied to focus or separate particles in a straight microchannel. We will show that the method finds diverse applications such as focusing and separation of solid particles and cells.