

Abstract Submitted
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Parametric study of Newtonian droplet entering smaller confinement- a numerical study ZHIFENG ZHANG, Washington State Univ, JIE XU, University of Illinois at Chicago, XIAOLIN CHEN, Washington State Univ, COMPUTER AIDED ENGINEERING LAB TEAM, XU GROUP: MICROFLUIDICS LAB COLLABORATION — Model of droplet entering a micro-confinement has wide applications in either design of microfilter or understanding of biological process such as Circulating Tumor Cell metastasis/ capillary blockage et al. In present numerical study, we explore the transient behavior of soft matter being squeezed through a micro-confinement by Newtonian droplet model. Parameter study quantify the relation between squeezing pressure under different channel/droplet size, channel geometry influence (circular, square, triangular) and flow velocity variance.

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