

Capsule motion in a rectangular constricted channel

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The study of the interfacial dynamics of artificial or physiological capsules (i.e. membrane-enclosed fluid volumes) in Stokes flows has seen an increased interests recently due to their numerous applications. In this study, we investigate the motion of capsules in microfluidic channel with a rectangular constriction. The effects of capsule size and flow rate on the capsule dynamics in confined solid geometries are taken into accounts. This system is analyzed computationally by employing our three-dimensional Interfacial Spectral Boundary Element method for elastic capsules.