

Abstract Submitted
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Formation of clogs under ultrasound excitation: a microfluidic study ERIN BARNEY, EMILIE DRESSAIRE, Trinity College — Acoustic waves and more specifically ultrasound are commonly used in microfluidic devices to focus, separate and mix particles. We study the influence of ultrasound on the formation of clogs of colloidal particles in microchannels. In particular we focus on the role played by the flow properties and the characteristics of the acoustic wave (frequency and amplitude). We show that the ultrasound excitation delays the formation of clogs and interpret our results with a simple force balance on the colloidal particle.

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