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Flow and clogging of colloids in microfluidic devices HANS WYSS, Harvard University, DANIEL BLAIR, Harvard University, DAVID WEITZ, Harvard University — We study the flow and clogging of colloidal particles in porous materials by using microfluidic devices. Our experiments aim at getting a better understanding of the mechanisms that lead to flow-driven jamming of colloids in porous materials. The dynamics of the clogging process is investigated in terms of the dependence on particle size, colloid volume fraction, pressure gradient, as well as particle-particle interactions. We present results that show the influence of these parameters on the dynamics and nature of the clogging process.

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