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Towards an easy way to fabricate small clusters with microfluidic device BINGQING SHEN, MATHILDE REYSSAT, PATRICK TABELING, ESPCI ParisTech, CNRS, MMN, UMR CNRS 7083, ESPCI PARISTECH TEAM — We present a novel approach of clusters elaboration by utilizing microfluidic devices with a T junction combined with a step emulsification generator. The droplets in colloidal size can be directly assembled into clusters in a reproducible manner within a shear flow environment. The shear stress is evidenced to influence the clusters morphology: at low shear, the clusters adopt equilibrium configurations that maximize the number of contact points, consistently with observations made in fluids at rest; at high shear, diverse non-equilibrium configurations are observed.

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