

Abstract Submitted
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Microfluidic devices for droplet injection DONALD AUBRECHT, ILKE AKARTUNA, DAVID WEITZ, Harvard University
— As picoliter-scale reaction vessels, microfluidic water-in-oil emulsions have found application for high-throughput, large-sample number analyses. Often, the biological or chemical system under investigation needs to be encapsulated into droplets to prevent cross contamination prior to the introduction of reaction reagents. Previous techniques of picoinjection or droplet synchronization and merging enable the addition of reagents to individual droplets, but present limitations on what can be added to each droplet. We present microfluidic devices that couple the strengths of picoinjection and droplet merging, allowing us to selectively add precise volume to our droplet reactions.

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