Title: Adaptive Digital Optofluidic Synthesis of Information-Rich Microparticles
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Abstract: We combine microfluidic system with digital lithography to achieve high throughput microparticle synthesis and labeling. Microfluidic system supports laminar flow, enabling multiple functional materials in one channel. By innovative application of a dynamic mask, we are able to fabricate microparticles from photocurable resin rapidly in the microfluidic channel. Microparticles with different functional units can be fabricated with the feature of microfluidics. Furthermore, particle-specific patterns can be generated in real-time, which leads to potential application of adaptive cell encapsulation and labeling.