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Robust Self-Assembly of Highly Ordered Complex Structures by Controlled Evaporation of Confined Microfluids ZHIQUN LIN, MYUNGHWAN BYUN, SUCK WON HONG, Iowa State University — We demonstrate a robust, one-step method of evaporating polymer solutions in curve-on-flat geometries to create versatile, highly regular microstructures in a precisely controlled environment, as well as offering a comprehensive study of the influence of different upper surfaces on complex structure formation via controlled evaporation. Our method further enhances current fabrication approaches to creating highly ordered structures in a simple and cost-effective manner, with the potential to be tailored for use in photonics, electronics, optoelectronics, microfluidic devices, nanotechnology, and biotechnology.

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