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Customizing mesoscale self-assembly with 3D printing NICOLAS VANDEWALLE, MARTIN POTY, GEOFFROY LUMAY, GRASP, University of Liege, B-4000 Liege, Belgium — Self-assembly due to capillary forces is a common method for generating 2D mesoscale structures from identical floating particles at the liquid-air interface. Designing building blocks to obtain a desired mesoscopic structure is still a challenge. We show herein that it is possible to shape the particles with a low cost 3D printer, for composing specific mesoscopic structures. Since capillary interactions can be downscaled, our method, for producing capillary multipoles, opens new ways to low cost microfabrication.

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