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Evaporation induced hierarchical structure formation using diblock copolymers SUCK WON HONG, JUN XU, ZHIQUN LIN, Material Science and Engineering Department, Iowa State University, Ames, IA 50011 — We present a study of the formation of the hierarchically ordered structures produced from the combination of two self-assembling processes on different length scales, i.e., the dynamic self-assembly via irreversible solvent evaporation in restricted geometries at the microscopic scale and the spontaneous self-assembly of diblock copolymer (e.g., PS-b-PMMA) at the nanoscale. This approach utilizes concurrent self-assemblies as a means to organize unique nanomaterials into spatially ordered structures.

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