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Dynamic Structure Formation in Evaporating Bound Diblock Copolymer Solutions SUCK WON HONG, ZHIQUN LIN, Department of Materials Science and Engineering, Iowa State University, Ames, IA 50011 — Drying of diblock copolymer solutions in the sphere-on-flat geometry is investigated. The synergy of controlled self-assemblies of diblock copolymers via irreversible solvent evaporation and their destabilization mediated by the interfacial interaction between the polymer and the substrate lead to the spontaneous formation of gradient concentric rings with fingering instabilities at the edge of the rings. Subsequent solvent annealing transforms them into well-ordered punch-hole-like structures.

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