

Abstract Submitted
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Hierarchically Structured Regioregular Conjugated Polymer via Evaporative Self-Assembly¹ MYUNGHWAN BYUN, ROBYN LASKOWSKI, Iowa State University, FENG QIU, The Key Laboratory of Molecular Engineering of Polymers at Fudan University, Shanghai, China, 200433, MALIKA JEFFRIES-EL, ZHIQUN LIN, Iowa State University — Regioregular conjugated polymers, poly (3-hexylthiophene) (P3HT) toluene solution was confined in a sphere-on-flat geometry. The geometrically constrained P3HT solution led to the formation an axially symmetric liquid capillary bridge, from which the consecutive “stick-slip” motion of the contact line of the solution due to the solvent evaporation was effectively regulated. As a result, hierarchical “snake-skin” like structures of high regularity were yielded, namely, the microscopic structures were composed of P3HT nanofibers. This facile, *one-step* technique based on evaporative self-assembly opens up a new avenue for organizing semicrystalline conjugated polymers into two-dimensional patterns in a cost-effective and nondestructive manner

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