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Organic-Inorganic Shish-Kebabs: Nanocrystal Kebabs Periodically Assembled on Stretched Flexible Polymer Shish ZHIQUN LIN, Georgia Inst of Tech, HUI XU, Xiamen University, YUCI XU, Ningbo University, XINCHANG PANG, YANJIE HE, JAEHAN JUNG, Georgia Inst of Tech, HAIPING XIA, Xiamen University — We report an unconventional yet general strategy to craft an exciting variety of 1D necklace-like nanostructures comprising uniform functional nanodisks periodically assembled along a stretched flexible polymer chain by capitalizing on judiciously designed amphiphilic worm-like diblock copolymer as nanoreactors. These nanostructures can be regarded as organic-inorganic shish-kebabs, in which nanodisk kebabs periodically situated on a stretched polymer shish. Simulations based on self-consistent field theory reveal that the formation of organic-inorganic shish-kebabs is guided by the self-assembled elongated star-like diblock copolymer constituents constrained on the highly stretched polymer chain.

Zhiqun Lin
Georgia Inst of Tech

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