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Long-Range Order in Cylindrical Block Copolymer Thin Films using Graphoepitaxy MARK DADMUN, SCOTT FONTANA, University of Tennessee, DOUG LOWNDES, Oak Ridge National Laboratory — A block copolymer thin film of polystyrene and methyl methacrylate on a neutral surface forms cylinders that are removed by UV exposure and rinsing, creating a template for the deposition of nickel nanodots, which are subsequently used to grow carbon nanofibers. Additionally, graphoepitaxy is used to successfully induce long-range order in hexagonally packed cylinders. The kinetics of the ordering process, limitations on this technique, and specific sample preparation conditions for successful transfer of the porous template to the deposited nanodots will also be discussed

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