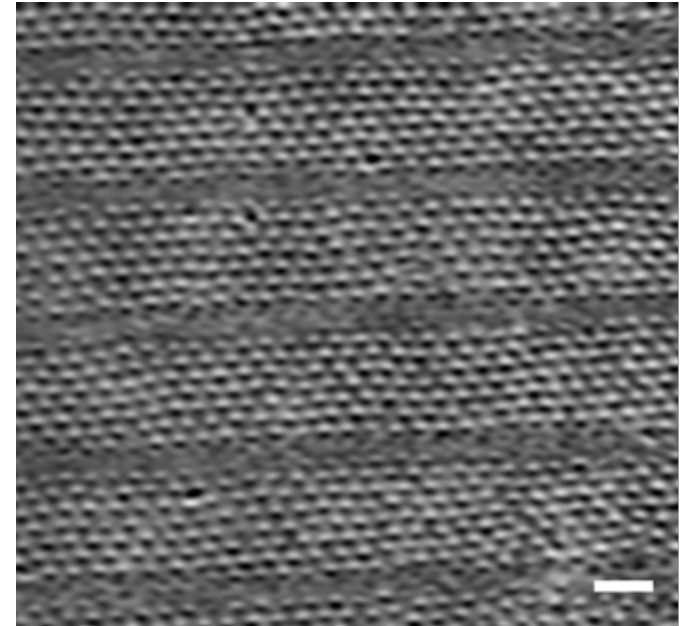


Nanoscale Patterns Made by Hierarchical Self-Assembly

CHM researchers demonstrated hierarchical patterning techniques that combine electron-beam lithography and block copolymer self-assembly for patterned data storage media. This work investigates block copolymer self-assembly under geometric constraints to produce arrays with long-range order or alternatively a precise number of elements. Enables patterned magnetic media for binary or multibit applications



Array of Ni dots patterned by BCP



Triangles containing precisely 3 BCP domains



Discrete number of BCP domains