

**HIERARCHICAL SELF-ASSEMBLED STRUCTURES FROM BLOCK
COPOLYMER/METAL NANOPARTICLES HYBRID MATERIALS
INDUCED BY VUV LIGHT**

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Thin films of block copolymer/iron metal nanoparticles hybrid organic-inorganic materials were prepared by a combination of wet chemistry, involving metal nanoparticle formation in block copolymer micellar templates and physical processing via casting or spin coating and laser illumination in the far VUV region. A variety of self-assembled structures in the nanometer to micrometer scale were observed by imaging techniques, including TEM, SEM and AFM. Investigations show a closely related hierarchy of the structures formed in the different length scales. These self-assembled structures hold a large potential for nano-technological applications.