Synthesis of Mesoporous Silver with 3D Meso-Structure

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Recently there are reports about synthesis and properties of metal with various nano-structure metals such as gold and silver. Especially silver is applied to bio-sensors, optics such as SERS(Surface Enhanced Raman Scattering) and antibiotic materials. But mainly metal materials are limited to external shape such as sphere, triangle and rod.
In this work, we have used surface modified mesoporous silica as a template for the fabrication of mesoporous Silver. And we successfully synthesized highly ordered mesoporous Silver. The fabricated mesoporous silver has high surface areas and well developed pores with narrow size distribution. So we applied SERS effect of mesoporous silver using benzenthiol.