

Preparation of Mesoporous Materials with Antioxidants

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We present the synthesis and characterization of mesoporous materials with antioxidants such as cerium and manganese and so on. Several kinds of synthesis methods were employed to incorporate metallic antioxidants inside the mesoporous silica frameworks. ICP analysis showed mesoporous materials have high amounts of cerium/manganese up to around 0.5 compared with Si atom maintaining hexagonal (p6mm) and bi-continuous cubic (Ia3d) nanostructures. Nitrogen adsorption and TEM analyses also showed the antioxidant-incorporated materials have highly ordered mesostructures.