

Synthesis and Characterization of Mesoporous Ni-Co-Ce-doped Silicas

진다솔, 조은범[†]
서울과학기술대학교
(echo@seoultech.ac.kr[†])

Metal-doped mesoporous silica structures have fascinating properties that provide high surface area and mesoporosity. Therefore, this material can be applied to many fields including adsorption and storage properties through excellent molecule accessibility. In this study, we present an easy method for preparing mesoporous silica particles doped with a series of metals (Ni, Ce, Co) using the sol-gel method. The shape of petal-shaped microspheres was confirmed through transmission electron microscopy (TEM) and scanning electron microscopy (SEM) analysis. In addition, detailed nanostructure and physicochemical properties of the mesoporous samples were analyzed using X-ray analysis (XRD) and X-ray photoelectron spectroscopy (XPS).