

SYNTHESIS OF CORE-SHELL SiO₂@TiO₂ MESOPOROUS PARTICLES

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Rod-like mesoporous TiO₂-SiO₂ particles were synthesized by coating of large pore mesoporous silica by a TiO₂ layer. First, due to avoid collapsing of pores by TiO₂ layer, large pore mesoporous silica by using Hexane as a pore expander was prepared. Then, the synthesized particles were coated with TiO₂ by stirring them in a TiO₂ solution for 1 hour. The prepared materials were characterized by X-ray diffraction (XRD), Small-angle X-ray scattering (SAXS), scanning electron microscopy (SEM) and N₂ adsorption-desorption experiments. The results show that anatase phase is distributed on the mesoporous SiO₂ particles.

Keywords: Mesoporous materials-SiO₂-TiO₂**Author did not supply full text of the paper.**