

METAL NANOPARTICLES STABILIZED ON MONTMORILLONITE CLAY: SYNTHESIS AND REACTIVITIES

ABSTRACT : In situ generation of metals Cu⁰-, Rh⁰- and Au⁰-nanoparticles into the pores of modified natural Montmorillonite clay and their characterization have been carried out. The modification of Montmorillonite clay was carried out with mineral acids under controlled conditions for generating nanopores on the surface of the clay. Powder XRD, TEM, N₂ adsorption, UV-visible Spectroscopy etc. analyses were carried out to characterize the solid materials. The stabilized metals-nanoparticles are found very active as heterogeneous catalysts and exhibit antimicrobial activities.
