

Mesoporous mixed oxide materials as a new class of SO₂ resistant catalysts for hydrocarbon oxidation

This invention relates to ternary mesoporous mixed oxide materials which comprise lanthanum, a metal M selected from the group consisting of Cr, Mn, Fe, Co, Ni, Cu and Zn, and zirconium or cerium. The mesoporous mixed oxides of the present inventions are a new class of SO₂ resistant catalysts for hydrocarbon oxidation. They are characterized by having substantially uniform pore size, high surface area, high component dispersion, and nano-crystalline channel walls after calcinating at a temperature superior to 450° C., having high activities for hydrocarbon oxidation, and good resistance against poisoning agents. This invention also relates to a method for preparing these mesoporous mixed oxide materials.
