

Toluene combustion over copper oxide supported on mixed supports

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The catalytic incineration of toluene over CuO/ZrO₂, SnO₂ catalysts in the temperature range of 160–400°C was investigated employing a fluidized bed flow reactor.

A binary CuO/ZrO₂–SnO₂ catalyst exhibits the lowest light-off temperature and the most active in incineration of toluene.

Physicochemical characterization of catalysts was carried out using X-ray diffraction, temperature-programmed reduction, temperature-programmed oxidation, temperature-programmed desorption, X-ray photoelectron spectroscopic techniques.