

Synthesis and catalytic performance of the metal pillared ilerite

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The metal pillared ilerites were synthesized with good crystalline structures and characterized by XRD, BET, NH_3 -TPD and NMR. The X-ray patterns of the synthesized ilerites were in very good accordance with the structures proposed by earlier workers. The metal pillared ilerite catalysts were evaluated in a wastewater treatment via a wet oxidation process employing hydrogen peroxide as an oxidant. The reaction was carried out in a 3-necked round flask reactor under rather mild conditions with the metal pillared ilerite catalysts, the conversion of phenol was about 100% and the selectivity to catechol was about 20%. This catalyst could be used several times without any change in its catalytic activity.