

Preparation of Al-Cu Pillared Clay Catalysts for the Catalytic Wet Oxidation of Reactive Dyes

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Al-Cu pillared clays were prepared by direct introduction of Al-Cu pillaring solution into the dilute bentonite suspension. Al-Cu pillared clays had d001 spacing of about 18Å and had surface area of about 140m²/g or higher. Al-Cu pillared clays showed excellent activity toward the catalytic wet peroxide oxidation of reactive dyes. Complete removal of reactive dyes could be achieved within 20min at atmospheric pressure and 80°C which are extremely milder operation condition when compared with the conventional catalytic wet oxidation process. The pillared clays were also stable against the leaching out of Cu.