

The synthesis and characterization of nanotube titanium dioxide

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The nano TiO₂ and nanotube TiO₂ catalysts were synthesized by a sol-gel and hydrothermal method. The crystalline structure and morphologies of the powder have been characterized by XRD, BET, zetasizer and TEM. The X-ray patterns of the synthesized nano TiO₂ and nanotube TiO₂ catalysts were in very good accordance with the structures (anatase and rutiles) proposed by earlier workers. The grain size of TiO₂ powders were obtained 10~30 nm by controlling the process conditions.