



Production and Characterization of TiO₂ fiber structure

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Abstract:

Since the photocatalytic reactions often occur on the surface of a catalyst, increasing the surface to volume ratio of the catalyst used is an effective way to increase the rate of decomposition of organic compounds. In this study, the structure of TiO₂ fibers and tubes are made by the natural template. It is carried out by the deposition solution containing TiO₂ nanoparticles on natural fibers and removal of the substrate. Properties of fiber and powder samples were studied by analysis (SEM, XRD, BET, FTIR and UV-vis). SEM images prove of TiO₂ hollow microfibers. The FTIR and UV-vis spectra confirm the expected composition.

Keywords: *FIBER STRUCTURE, HOLLOW FIBERS, TITANIUM DIOXIDE*

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