

## عنوان مقاله:

Thermally stable mesoporous anatase TiO<sub>2</sub> with high photocatalytic performance

## محل انتشار:

سومین کنفرانس نانوساختارها (سال: 1388)

تعداد صفحات اصل مقاله: 3

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## خلاصه مقاله:

Thermally stable mesoporous anatase TiO<sub>2</sub> has been prepared using a nonionic block copolymer (Pluronic P-123) as surfactant via sol-gel method. Characterizat of the product was carried out by means of X-ray diffraction (XRD), scanning electron microscopy (SEM), thermogravimetry differential scanning calorimetry (TG-DSC), Brunauer-Emmett-Teller (BET) surface areas, Barret-jiyner-halenda (BJH) pore size distribution analyses. These analyses showed that under controlled synthesis conditions, a wormlike mesostructured TiO<sub>2</sub> with high surface area (110 m<sup>2</sup>g<sup>-1</sup>) is obtained. Moreover, the pore walls of the nanostructured TiO<sub>2</sub> solid are formed by incipient crystallites of anatase, which is a significant achievement regarding its possible photocatalytic applications. The prepared photocatalyst has excellent photocatalytic efficiencies towards Congo Red azo dye removal.

## کلمات کلیدی:

Mesostructure; TiO<sub>2</sub>; Anatase; Photochemical degradation

## لینک ثابت مقاله در پایگاه سیویلیکا:

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