

## عنوان مقاله:

Preparation and characterization of TiO<sub>2</sub>(2) -ZrO<sub>2</sub>(2) nanocomposite under ultrasonic irradiation by sol-gel route

## محل انتشار:

همایش ملی نانو فناوری و شیمی سبز (سال: 1391)

تعداد صفحات اصل مقاله: 5

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## خلاصه مقاله:

TiO<sub>2</sub>/ZrO<sub>2</sub> nano-composite powder was obtained by the solochemical technique. In this method, two separate sols containing zirconium and titanium were prepared and mixed together. The precursor sol of zirconium was prepared from an aqueous solution of ZrCl<sub>4</sub>. The precursor titanium tetra isopropoxide (TTIP) dissolved in isopropanol, to which deionized water Mixing of Titanium and Zirconium sols was resulted a yellow TiO<sub>2</sub>(2)/ZrO<sub>2</sub>(2) sol. This solution was stirred for 24 hours followed by 2 hours of ultrasonic Process. The precipitates, obtained from applying the centrifuge process on the sol, were dried for 1 hour at 200C in the oven followed for 2 hours of heating at 500C in the furnace. The obtained nano-powder characterized by X-ray diffraction (XRD), scanning electron microscopy (SEM) and Fourier transform infra-red spectroscopy (FT-IR).

## کلمات کلیدی:

Zirconia – Titana, nanocomposite, sol-gel, ultrasonic irradiation

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/203326>

