

ETUDE DES PROPRIETES PHYSICO-CHIMIQUES DES OXYDES DE TITANE OBTENUS PAR VOIE SOL-GEL

Abderrazak HAMAM

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Abstract : In this work, simple and composite xerogels based alcoxides of titanium and silicon to knowing the titanium tetraisopropoxide $Ti[OCH(CH_3)_2]_4$, tetramethoxysilane $Si(CH_3)_4$: were prepared by sol-gel processing. The solutions were prepared in acid, basic and neutral mediums. The gelation of these solutions whereas it varies between 5 hours and 9 days for the simple xerogels while it varies between 3-9 days for the composite xerogels. The gel obtained was dried at ambient temperature. The microstructural evolution of the simple and composite xerogels was followed by the differential thermal analysis (DTA), thermogravimetry (TG) and by Fourier transforms infrared spectroscopy (FTIR).

Keywords : Sol-Gel, Xerogels, titanium, composite, thermal analysis, FTIR