

عنوان مقاله:

HYDROTHERMAL SYNTHESIS OF VANADUMOXIDENANORODS AND THE STUDY OF THEIR FORMATION MECHANISM

محل انتشار:

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خلاصه مقاله:

Vanadium oxide nanorods were synthesized by surfactant-assisted hydrothermal method using vanadium oxy acetylacetonate (VOAcac) as vanadium source for the first time. Using cetyltrimethylammoniumbromide (CTAB) and dodecylamine (DDA) as templates, two kinds of vanadium oxide nanorods have been prepared. The composition and morphology of the nanorods determined by X-Ray diffraction (XRD), FT-IR spectroscopy, transmission electron microscopy (TEM) and scanning electron microscopy (SEM). Vanadium oxide nanorods with mixed valency, were obtained by using CTAB template and after calcination at 400 °C for two hours, V.O.s rod-like structures obtained. Nanorods with single phase were prepared by using DDA template. The time of hydrothermal treatment is an effective factor on morphology.

کلمات کلیدی:

,vanadium oxide; hydrothermal; mechanism; nanorods

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