

عنوان مقاله:

Synthesis and Structure Characterization of the Serials $\text{Sm}_{2-x}\text{Bi}_x\text{Sn}_2\text{O}_7$ ($x = 0 - 2.0$) Nanocrystals by Hydrothermal Method

محل انتشار:

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خلاصه مقاله:

Pyrochlore-type oxides are adopted by many binary metal elements having the general formula $\text{A}_2\text{B}_2\text{O}_7$ where A is a $2+$ or $3+$ ion and B is a $5+$ or $4+$ ion [1] and crystallize in the cubic space group $\text{Fd}\bar{3}\text{m}$. The pyrochlore phase is stable up to $r_A: r_B = 1.8$ and beyond this value the fluorite structure becomes more favorable [2]. The exact formula for this oxide is $\text{O}_2\text{OBA}'_2\text{O}_2$, has eight molecules in the unit cell [3]. Pyrochlore oxides can display a remarkable variety of properties. They are interest for numerous applications including high efficiency catalysis [4], conduction of electricity, photoluminescence [5], resistance to radiation damage [1], and gas sensor [5]. In this study we have established a simple hydrothermal technique to prepare of a series of $\text{Y}_2\text{O}_3\text{SnBiSm}_x$ ($x = 0, 0.1, 0.2$) pyrochlore nanocrystals by a low temperature hydrothermal method.

کلمات کلیدی:

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