

Synthesis of Multiferroic Nanocomposites by a Polyol Method

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Abstract The material design and synthesis are of important to modern science and technology. Here, we report the synthesis of multifunctional nanomaterials with different properties: ferroelectric YMnO_3 and multiferroic materials such as $\text{CoFe}_2\text{O}_4\text{-YMnO}_3$, $\text{Fe}_3\text{O}_4\text{-YMnO}_3$, $\text{CoFe}_2\text{O}_4\text{-Cd}_{0.85}\text{Zn}_{0.15}\text{S}$, and $\text{Fe}_3\text{O}_4\text{-Cd}_{0.85}\text{Zn}_{0.15}\text{S}$ nanocomposites by using a chemical synthesis process. These results provide a simple and convenient synthesis process to produce multifunctional nanocomposites.

Keywords : Multifunctional nanocrystals, Monodisperse, Nanomaterial, Ferromagnetic, Ferrimagnetic, Polyol method