NGHIÊN CỨU TỔNG HỢP ZNMN2O4 KÍCH THƯỚC NANOMET BẰNG PHƯƠNG PHÁP ĐỐT CHÁY GEL

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TÓM TẮT:

ZnMn2O4 powder has been synthesised at low temperature (5000C) by the combustion of gel prepared from polyvinyl alcohol (PVA), manganese nitrates, and zince nitrates.

Factors affecting on process synthesis of nanometer oxides ZnMn2O4 including temperature of gel formation, molar ratio of concentration of ion metal and the concentration of polyvinyl alcohol, temperature of calcining on structure and sizes were investigated.

The crystalline process and the morphology of oxides particles were considered by X-Ray diffraction (XRD), Scanning Electron Microscopy (SEM), Transmission Electron Microscopy (TEM). Surface areas of oxides were determined by the BET (Brunaure-Emmet-Teller) method. Further thermal treatment at 400-7000C in 3h yields the single phase ZnMn2O4. It specific surface area is 48,4 m2/g for ZnMn2O4. ZnMn2O4 powders with crystallite size 20 nm have been prepared.