

NGHIÊN CỨU TỔNG HỢP CoAl_2O_4 KÍCH THƯỚC NANOMET BẰNG PHƯƠNG PHÁP ĐỐT CHÁY GEL

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TÓM TẮT:

CoAl_2O_4 powder has been synthesised at low temperature (500°C) by the combustion of gel prepared from polyvinyl alcohol (PVA), cobalt nitrates and aluminum nitrates.

Factors affecting on process synthesis of nanometer oxides CoAl_2O_4 including temperature of gel formation, molar ratio of concentration of ion metal and the concentration of polyvinyl alcohol, temperature of calcining and heating time 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) and Transmission Electron Microscopy (TEM). Further thermal treatment at 500-700°C in 3h yields the single phase CoAl_2O_4 . CoAl_2O_4 powders with crystallite size 30 nm have been prepared.