**NGHIÊN CỨU TỔNG HỢP VẬT LIỆU PrFeO3 BẰNG PHƯƠNG PHÁP SOL–GEL VÀ ỨNG DỤNG**

TO RESEARCH ON THE SYNTHESIS OF PrFeO3 MATERIAL BY SOL-GEL METHOD

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**SUMMARY**

The PrFeO3was prepared at 7000C by the sol-gel method using polyvinyl alcohol (PVA) and metal nitrates. PrFeO3 nanoparticles were characterized by thermogravimetric and differential thermal analysis (TG-DTA), X-ray diffraction (XRD), scanning electron microscopy (SEM), transmission electron microscopy (TEM) and UV-Vis spectroscopy. The process conditions such as solution metal/PVA, pH, calcination temperature are carefully controlled. The PrFeO3 material is well-shaped, spherical, with a relatively uniform particle size of 30-50 nm, porous foam pockets formed by nanoparticles, which are well suited for use in handling environment.