**NGHIÊN CỨU TỔNG HỢP VẬT LIỆU NANO La2O3.Nd2O3 VÀ ỨNG DỤNG**

SYNTHESIS OF NANO La2O3.Nd2O3 MATERIAL AND APPLICATIONS

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**SUMMARY**

The nanostructured materials La2O3.Nd2O3 include nanoparticles were successfully fabricated by sol-gelsynthesis method using polyvinyl ancol (PVA) in the presence of La(NO3)3, Nd(NO3)3 molar ratio of 1/1, pH = 4, followed by the calcination at 800oC for 2 hours. The obtained sample was characterized by X-ray diffraction, IR spectra, scanning or transmission electron microscopy. The results showed that the sample was phase La2O3.Nd2O3, piece type with average size of 25-50 nm. The catalytic activity under light of the Sun of La2O3.Nd2O3 nanoparticles were evaluated by measuring the degradation of methylene blue (MB). The results showed that after 90 minutes under the light of the Sun, the MB degradation reached 83.99%. The adsorbability of solution Cr(VI) after 90 minutes by the materials La2O3.Nd2O3 nanoparticles, degradation reached 78.62%.

**Keywords:** La2O3.Nd2O3, nanostructured material, sol-gel synthesis method.