**Nghiên cứu điều chế MgO kích thước nano từ quặng secpentine và axit HCl**

**Study on preparation of nano - sized MgO from serpentine ore and HCl acid**

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**Abstract**

*Serpentine is a form of magnesium silicate whose composition is* Mg3Si2O5.(*OH)4 hay 3MgO.2SiO2.2H2O. In Vietnam, serpentine ore reserves are quite abundant in Nga Son Thanh Hoa. The paper shows results on the preparation of nano-sized MgO from Nga Son Thanh Hoa serpentine ore and HCl acid. The results show that the appropriate condition for leaching MgO from secpentine ore with HCl acid is: 5g of serpentine ore of 0.125mm particle size are dissolved in 15 ml of water and 10ml of HCl 36% at 80° C for 2 h, with a stirring speed of 500rpm. From the obtained solution, to completely separate aluminum and iron ions in the form of precipitated hydroxide, use 42.5ml Na2CO3 0,5M and 10ml H2O2 1:100 and to fully precipitate Mg2 + ions in the form of basic magnesium carbonate requires 97.5ml of Na2CO3 0.5M. The product formed by heating the basic magnesium carbonate at 700oC for 1h is single phase MgO with cubic structure consisting of sphere – like particles with the size ranging from 40 - 60nm. The efficiency of recovering MgO from ores is 96.1%.*

**Key words***: serpentine*, *leaching, hydrochloric acid, MgO*