

Study of CO₂ absorption on NaMg double salt

이현정, 조성준*, 김중현, 정하나

전남대학교

(sjcho@chonnam.ac.kr*)

CO₂ from the combustion of fossil fuel has been a primary source for global warming. Various CO₂ capture technologies have been developed to reduce CO₂ emission at the combustion process for power generation. In this work, we have investigated CO₂ capture technology using NaMg double salt as a dry absorbent. The absorbent was synthesized using simple coprecipitation of sodium carbonate, sodium nitrate and magnesium nitrate under vigorous stirring at low pH. The structural change of the NaMg salt during absorption process was monitored with *in-situ* variable temperature X-ray powder diffraction combined FT IR. The result suggested that the reversible transformation of MgO to MgCO₃ during the temperature cycle was responsible for the high absorption capacity, 30 wt% while NaNO₃ as a catalyst seemed to activate CO₂ for the facile absorption.