

Effect of Alkaline Earth Metal Carbonate Salts on the CO<sub>2</sub> Absorption on NaNO<sub>3</sub>-MgO  
Absorbent

김강영, 박진수<sup>1</sup>, 오경렬<sup>1</sup>, 안영인<sup>1</sup>, 권영욱<sup>1,†</sup>

성균관대학교; <sup>1</sup>성균관대학교 화학과

(ywkwon@skku.edu<sup>†</sup>)

Many researchers have studied CO<sub>2</sub> absorption behavior by MgO absorbent in the presence of metal carbonates. Most of them focused on the ability of metal carbonates as an agent to increase CO<sub>2</sub> absorption capacity of MgO absorbent. We report here the rate of CO<sub>2</sub> absorption of MgO absorbent is enhanced by the addition of carbonates. We prepared MgO samples mixed with varied amounts of alkali or alkaline earth carbonates and measured their CO<sub>2</sub> absorption kinetics. The absorption kinetics showed variations depending on the nature and the amount of carbonate. A small amount of SrCO<sub>3</sub> appears to enhance the kinetics most efficiently. Plausible mechanisms based on the observation will be discussed.