

## The performance of nickel catalyst with high thermal conductivity for CO<sub>2</sub> methanation

이현주, 이두환<sup>†</sup>, 김지은<sup>1</sup>  
서울시립대학교; <sup>1</sup>아주대학교  
(dolee@uos.ac.kr<sup>†</sup>)

Recently there has been growing interest in power-2-gas process in which excess electrical energy is converted into chemical energy of gases. To be specific, excess electrical energy generated due to intermittencies of renewable energy sources such as solar and wind could be used to produce hydrogen. And renewable hydrogen with captured carbon dioxide can produce methane which is used as fuel. This is why there have been a lot of studies for CO<sub>2</sub> methanation these days. So I tested the performance of nickel catalyst with high thermal conductivity which is attributed to the catalyst core of metal, namely aluminum because CO<sub>2</sub> methanation is strong exothermic reaction.