

## Oxidative Coupling of Methane using Modified Perovskite Catalysts

Jeong-Myeong Ha<sup>†</sup>, Seoyeon Lim, Jae-Wook Choi,  
Dong Jin Suh, Hyung Chul Ham  
Korea Institute of Science and Technology  
(jmha@kist.re.kr<sup>†</sup>)

Oxidative coupling of methane (OCM) is one of the feasible methods to convert chemically stable methane to olefins and paraffins. While numerous catalysts including solid bases, metal oxides, supported oxides have been suggested to improve the selectivity and activity, perovskite catalysts have also been studied because of its well-defined structures correlated with the catalytic activity. Based on the crystal structures of SrTiO<sub>3</sub> and other perovskites, we studied the correlations between catalytic activity and solid structures and suggested the optimum perovskite structures for improving selectivity of OCM. We also attempted to improve OCM activity by modifying atomic compositions and introducing supported structures.