

Highly active behaviors of  $\text{VO}_x/(\text{Al}_2\text{O}_3-\text{TiO}_2)$  composites in catalytic combustion of ethylene dichloride

이승준, 윤원근, 한정현, 김원배<sup>†</sup>  
포항공과대학교  
(kimwb@postech.ac.kr<sup>†</sup>)

Chlorinated volatile organic compounds (CVOCs) are regarded as critical air pollutants. Catalytic complete oxidation has been considered as the most promising method for CVOCs removal because of its low operating temperature and high selectivity toward non-toxic compounds. In this study,  $\text{Al}_2\text{O}_3-\text{TiO}_2$  mixed oxide was prepared as support materials by sol-gel method and  $\text{VO}_x$  was introduced as active material by wet-impregnation. The resultant composite catalysts showed excellent activity and selectivity on the catalytic combustion of ethylene dichloride (EDC). The high catalytic performances of  $\text{VO}_x/(\text{Al}_2\text{O}_3-\text{TiO}_2)$  catalyst can be attributed to synergistic effect associated with acidic property of support material and excellent reducibility of active material.