Catalyst Deactivation Study in Selective Oxidation at Low Temperature

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Selective Oxidation especially at low temperature is an important for many reactions such as H2S removal from biogas, Methyl Oleate epoxidation etc. The catalysts that use in these reactions are metal oxides. The reaction mechanism is Mars – Van – Krevelen. The main cause of catalyst deactivation is oxygen vacancy formation. It was found that the interaction between active metal and support, the method to synthesize catalyst and doping metal can retard oxygen vacancy formation.

Prof. Piyasan is the President of the Asia-Pacific Association of Catalysis Societies (APACS) and the Founding Director of the Center of Excellence on Catalysis and Catalytic Reaction Engineering (CECC), Chulalongkorn University, Thailand. He has published more than 500 papers. His work focuses on Heterogeneous Catalysis Engineering, Catalyst Deactivation, and Polymerization Catalysts based on metallocene and Ziegler-Natta Catalysts.

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Research field:

- Heterogeneous Catalysis Engineering
- Catalyst Deactivation
- Polymerization Catalysts