

Volatile Organic Compounds (VOCs) Destruction by Catalytic Oxidation for Environmental Applications

Authors : Mohammed Nasir Kajama, Ngozi Claribelle Nwogu, Edward Gobina

Abstract : Pt/ γ -Al₂O₃ membrane catalysts were prepared via an evaporative-crystallization deposition method. The obtained Pt/ γ -Al₂O₃ catalyst activity was tested after characterization (SEM-EDAX observation, BET measurement, permeability assessment) in the catalytic oxidation of selected volatile organic compound (VOC) i.e. propane, fed in mixture of oxygen. The VOC conversion (nearly 90%) obtained by varying the operating temperature showed that flow-through membrane reactor might do better in the abatement of VOCs.

Keywords : VOC combustion, flow-through membrane reactor, platinum supported alumina catalysts

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