

Special Issue

DeNO_x Systems and VOCs (Volatile Organic Compounds) for Pollution Abatement in Catalysis

Message from the Guest Editors

Both volatile organic compounds (VOCs) and NO_x emissions contribute to the poor quality of air in our cities. The importance of heterogeneous catalysis to abate VOC and NO_x emissions is widely recognized; however, the improvement of catalysts is still demanding. The goal is to obtain more efficient catalysts to apply in VOC catalytic oxidation and in DeNO_x technologies, increasing at the same time conversion and selectivity with low-energy consumption. In addition, due to the limited resources of noble metals and the cost of the current technologies adopted for DeNO_x, like ammonia SCR, it is necessary to find efficient and cheap solutions. Attention will be paid to the catalytic activity and selectivity of supported noble metals, reducible oxides, and perovskite materials, and to the relationship between physico-chemical properties and catalytic performances. The effects of CO₂, H₂O, and SO_x in the exhausts composition will be also addressed. The idea of this Special Issue is to focus the attention of the scientific community in designing new catalysts and technologies for VOC (indoor and outdoor) and NO_x abatement.

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