

### High-throughput screening of NO SCR quaternary catalysts containing Pt, Cu, Fe and Co supported on mesoporous AlSBA-15

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The selective catalytic reduction (SCR) of NO<sub>x</sub> with hydrocarbons in excess oxygen has been studied extensively in recent years. As a candidate, Pt/ZSM-5 and Cu/ZSM-5 catalysts have been suggested due to the high deNO<sub>x</sub> activity and selectivity. However, they are suffered from N<sub>2</sub>O formation or deactivation in the presence of water or sulphur and a further improvement is required. Nowadays, a combinatorial screening approach has been tried to optimize the composition in multi-component deNO<sub>x</sub> catalyst systems. That is, binary or quaternary combinations of catalyst libraries were synthesized and their catalytic performances were tested in multi-channel reactor. In this study, we tried to optimize catalytic composition in a quaternary system of Pt, Cu, Fe, and Co supported on aluminium-containing SBA-15 using a 64-channel micro reactor.