

Effect of Mg contents during desulfation in Lean NOx Trap Catalysis

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Lean NOx traps (LNTs), known as NOx storage reduction (NSR) or NOx adsorber, have been considered as one of the potential methods to meet stringent exhaust emission regulations and demonstrate outstanding performance for NOx removal. Although they have excellent deNOx ability, the system can be easily deactivated by sulfur species in the exhaust gas stream. Especially, formation of barium sulfates, resulting from the reaction between NOx storage component (BaO) and sulfur oxides causes severe deactivation of the system. Understanding sulfation and desulfation mechanisms for development durable LNT catalysts is very important. For this purposes, we studied on sulfation and desulfation process in Mg-Al mixed oxide-supported catalysts on the physicochemical properties and NOx storage performance by using several analytical techniques, such as ICP, XRD, In-situ IR and NOx uptake with MS.