

## **ABSTRACT**

The present invention relates to a structured monolithic catalyst for reducing NO<sub>x</sub> emission in a flue gas, the preparation method and the use thereof. The catalyst comprises: a structured monolithic carrier and a coating of active components, wherein the coating of active components comprises active metal components and a substrate, wherein the active metal components comprise a first metal element, a second metal element, a third metal element and a fourth metal element, wherein the first metal element includes Fe and Co, wherein the weight ratio of Fe and Co is 1 : (0.05-20) on an oxide basis, wherein the second metal element is at least one selected from the group consisting of the metal elements of the Group IA and/or IIA, wherein the third metal element is at least one selected from the group consisting of the non-noble metal elements of the Groups IB to VIIB, and wherein the fourth metal element is at least one selected from the group consisting of the noble metal elements. The catalyst in accordance with the present invention has high catalytic conversion activity for reduced nitriles, is obtainable by a simple method, and when used in a FCC process, can effeciently reduce NO<sub>x</sub> emission in the incomplete regeneration flue gas.

Fig. 1