

## MÖSSBAUER SPECTROSCOPY OF Fe-FERRIERITE

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In waste gases unwanted nitrogen oxides occur. Metallo-cations, or their oxidised nano-particles, inbuilt into a zeolite matrix, provide a destruction procedure for these oxides. Especially Fe-containing zeolites show remarkable redox behaviour. They catalyze selective reactions in various fields, such as selective catalytic reductions of NO<sub>x</sub> or N<sub>2</sub>O decomposition.

In situ absorption <sup>57</sup>Fe Mössbauer experiments at room temperature were performed to describe the structure of Fe species in catalysts of Fe-ferrierite, Fe-ZSM 5 and Fe-beta during catalysed redox reactions. Because of the low concentration of Fe (<1 %) in the analysed samples <sup>57</sup>Fe enriched iron was used. We described the dehydration procedure and the redox behaviour of the studied catalysts. O<sub>2</sub> and N<sub>2</sub>O were used for oxidation. The experimental arrangement used, proved to be suitable for the description of Fe-species of the Fe-zeolites structure.