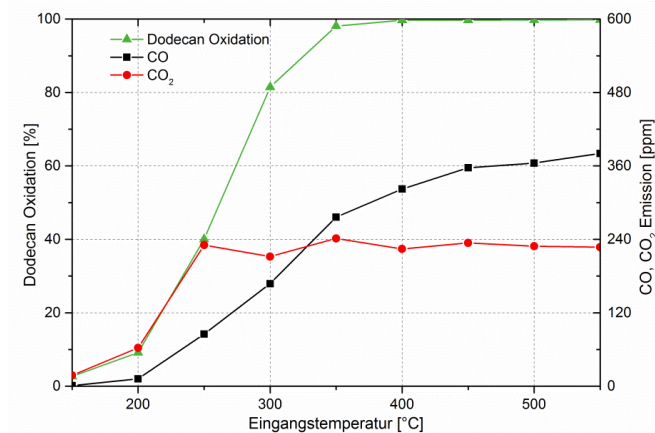
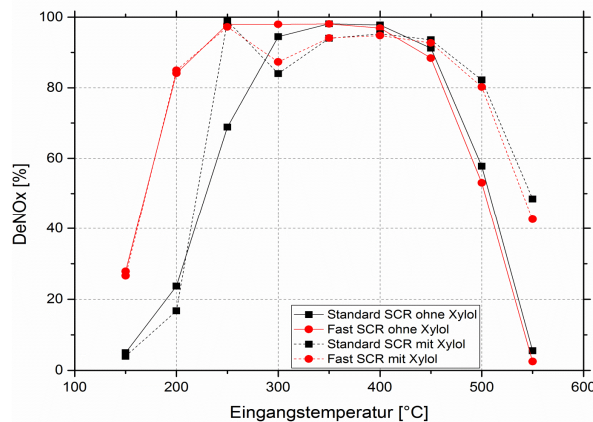


# Reduction of particle emissions over Vanadia based SCR catalysts (FVV 2013-15)

## Results:

- SCR-only system usable at BRICS states at Heavy-Duty and Non-Road applications
- beside DeNOx: TPM oxidation up to 85 % possible
- optimal engine application for engine development: low EGR, high boost pressure, early BOI
- optimal engine application leads to better oxidation due to higher SOF content, inline with catalytic experiments on different types of soot
- oxidation occurs both to CO and CO<sub>2</sub>, CO not further oxidized to CO<sub>2</sub> at catalyst
- organic components at high concentrations compete with NH<sub>3</sub> to active sites, no influence to TPM oxidation at engine test bed
- multi criteria optimization demonstrated: CO<sub>2</sub> vs. NOx vs. PM



E. Japke, M. Casapu, V. Trouillet, O. Deutschmann, J.-D. Grunwaldt. *Catal. Today* 258 (2015) 461.