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Supplementary Materials

The Impact of Pressure and Hydrocarbons on NO_x Abatement over Cu- and Fe-Zeolites at Pre-Turbocharger Position

Deniz Zengel [1], Simon Barth[1,2], Maria Casapu[1], Jan-Dierk Grunwaldt[1,2,*]

[1] Institute for Chemical Technology and Polymer Chemistry (ITCP), Karlsruhe Institute of Technology (KIT), Engesserstr. 18/20, 76131 Karlsruhe, Germany
[2] Institute of Catalysis Research and Technology (IKFT), Karlsruhe Institute of Technology (KIT), Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, 76131 Karlsruhe, Germany
* Correspondence: grunwaldt@kit.edu; Tel.: +49-721-608-42120

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1. Tables

Table S1. Washcoat loading of Fe-ZSM-5 and Cu-SSZ-13 honeycombs.

	Fe-ZSM-5 [g]	Cu-SSZ-13 [g]
Sample #1 (C_3H_6)	2.06	2.20
Sample #2 ($C_{12}H_{26}$)	1.96	2.20
Sample #3 (C_8H_{10})	2.04	2.20

2. Figures

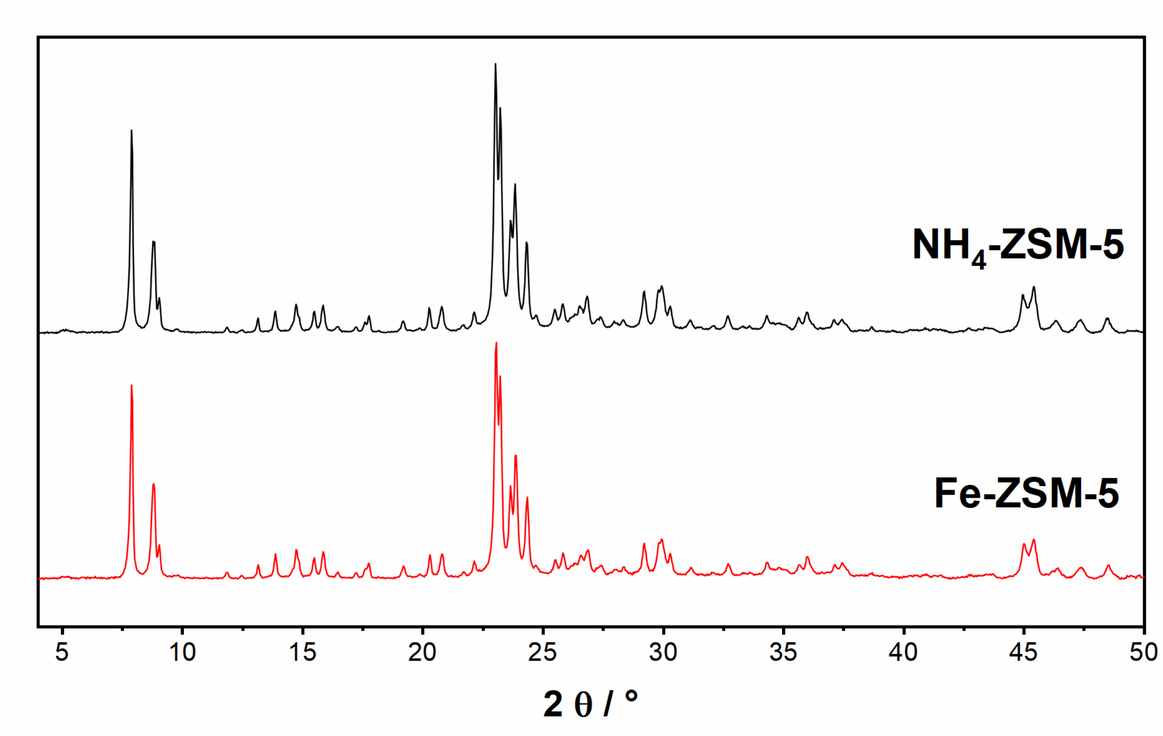

Figure S1. XRD patterns of NH_4-ZSM-5 (before ion exchange) and Fe-ZSM-5 (after ion exchange) show the characteristic pattern of the ZSM-5 framework.

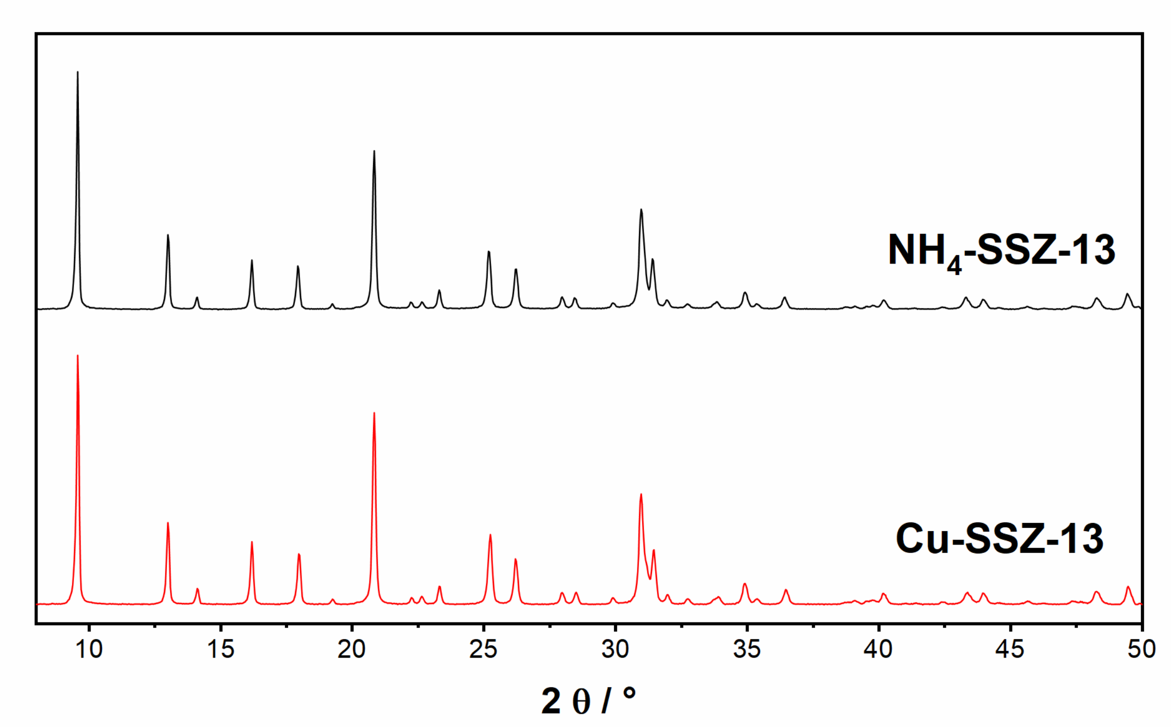

Figure S2. XRD patterns of NH_4-SSZ-13 (before ion exchange) and Cu-SSZ-13 (after ion exchange) show the characteristic pattern of the SSZ-13 framework.

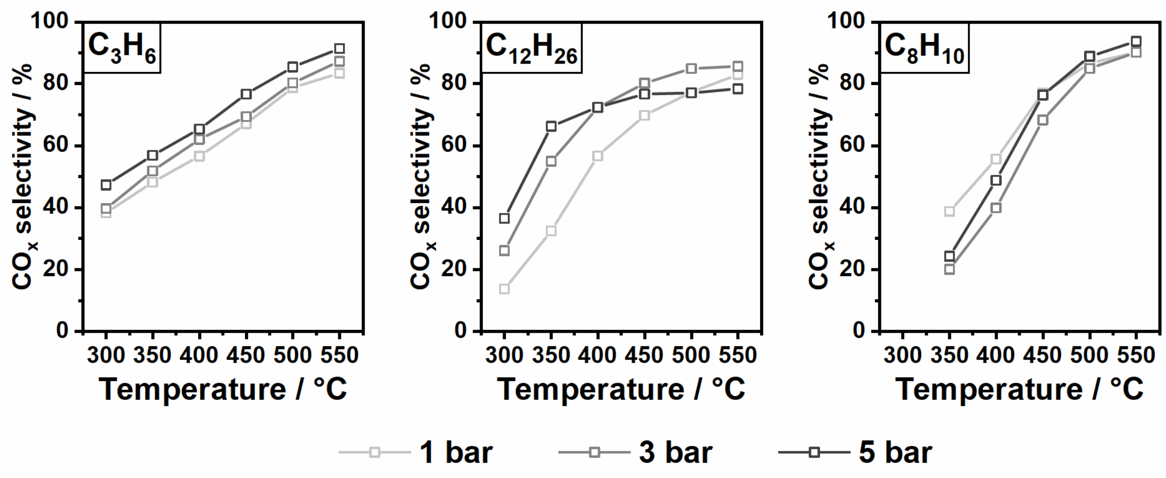

Figure S3. CO_x selectivity ($CO + CO_2$) during C_xH_y oxidation (14% O_2 and 4.5% H_2O in N_2) over Fe-ZSM-5 at 1, 3 and 5 bar pressure.

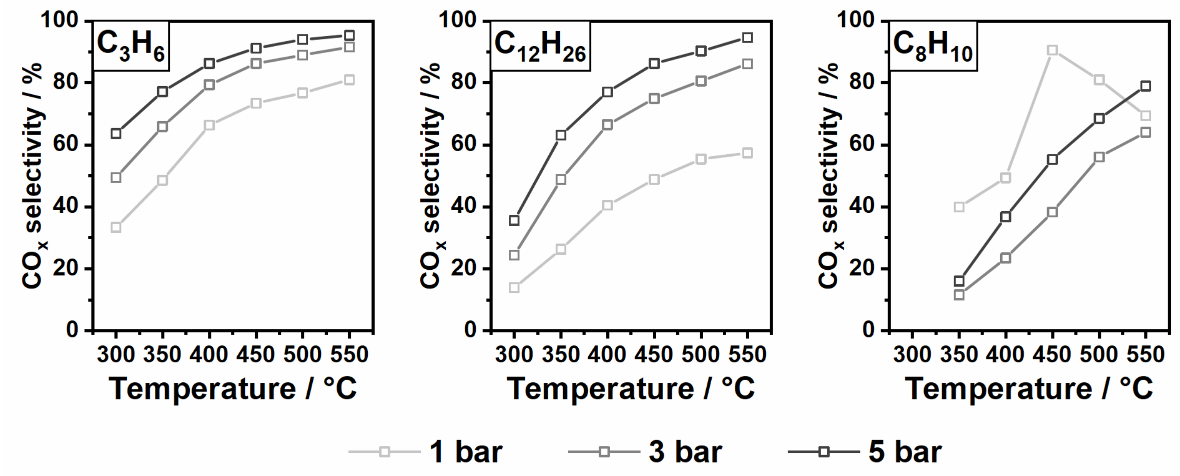

Figure S4. CO_x selectivity ($CO + CO_2$) during C_xH_y oxidation (14% O_2 and 4.5% H_2O in N_2) over Cu-SSZ-13 at 1, 3 and 5 bar pressure.

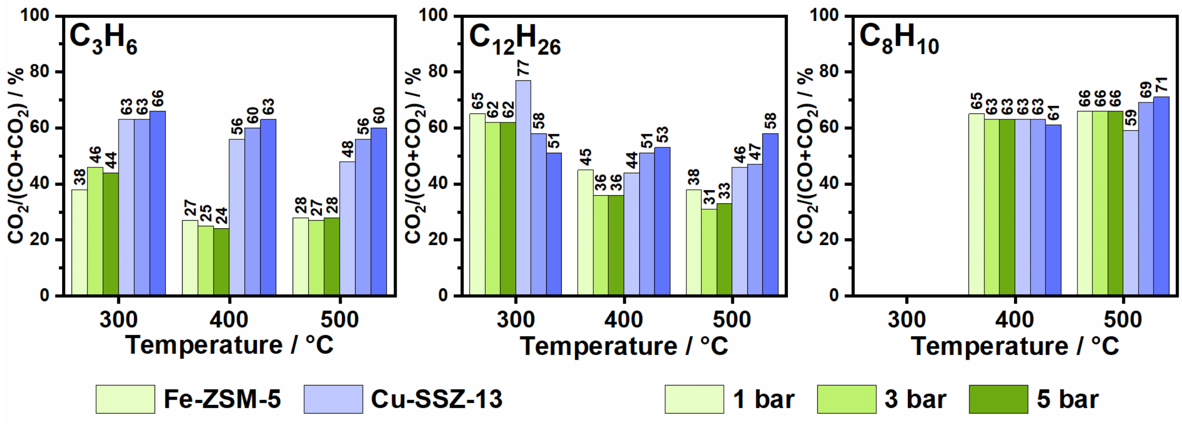

Figure S5. CO_2 share of formed CO_x ($CO + CO_2$) via hydrocarbon oxidation during standard SCR over Fe-ZSM-5 and Cu-SSZ-13.

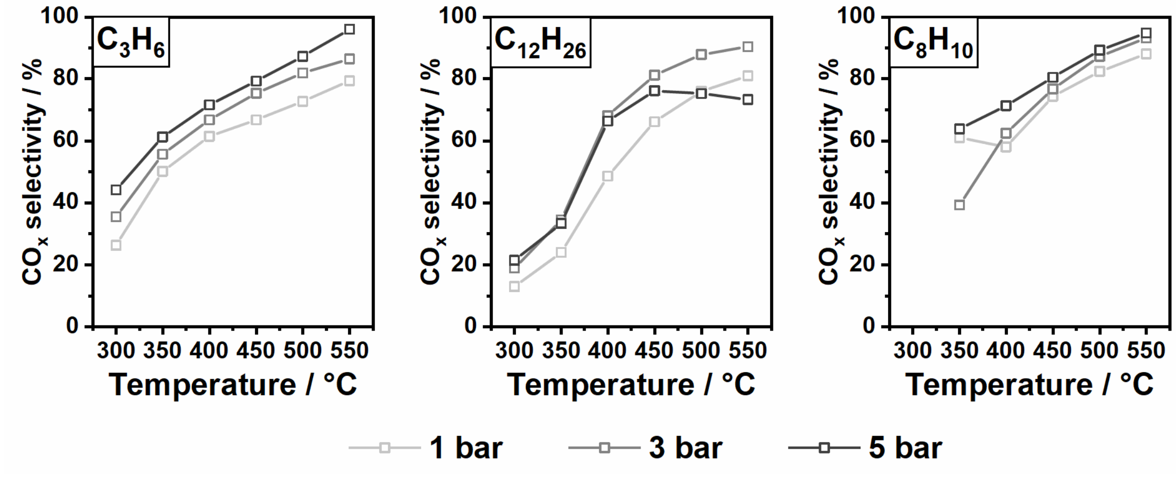

Figure S6. CO_x selectivity ($CO + CO_2$) during C_xH_y oxidation in standard SCR gas mixture (350 ppm NO, 350 ppm NH_3, 14% O_2 and 4.5% H_2O in N_2) over Fe-ZSM-5 at 1, 3 and 5 bar pressure.

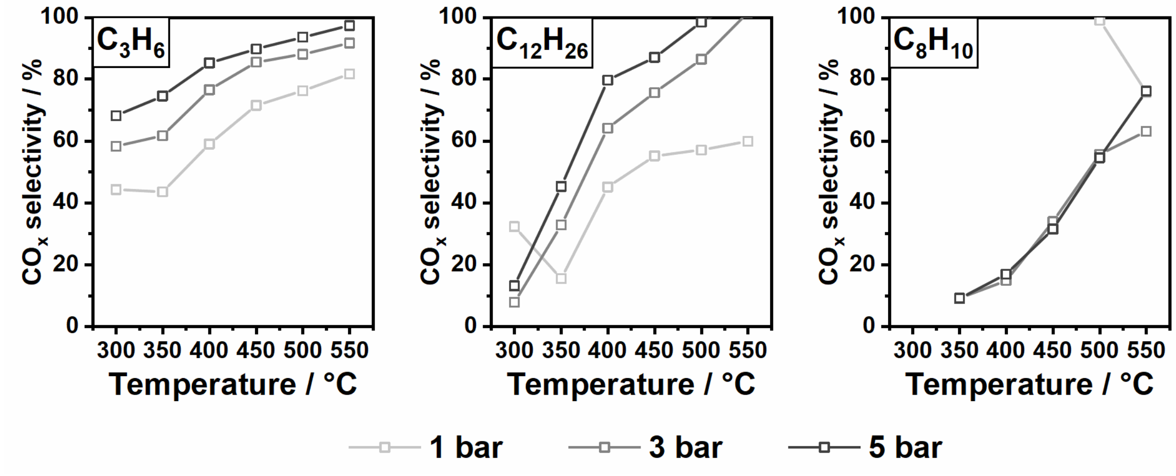

Figure S7. CO_x selectivity ($CO + CO_2$) during C_xH_y oxidation in standard SCR gas mixture (350 ppm NO, 350 ppm NH_3, 14% O_2 and 4.5% H_2O in N_2) over Cu-SSZ-13 at 1, 3 and 5 bar pressure.

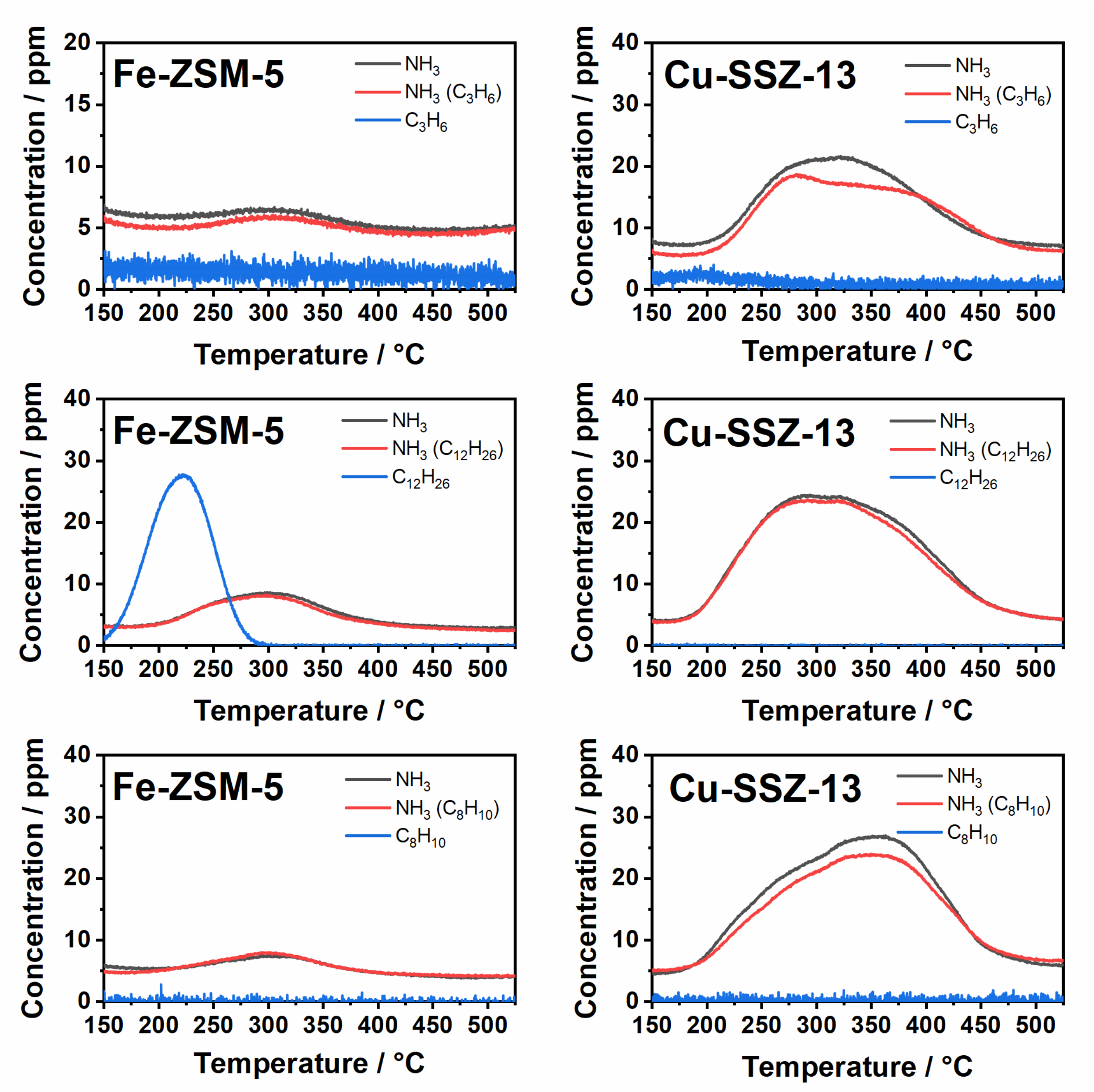

Figure S8. Comparison of the temperature programmed desorption of ammonia (NH_3-TPD) in presence and absence of C_xH_y of Fe-ZSM-5 and Cu-SSZ-13. All samples were saturated for half an hour with NH_3 or NH_3 + C_xH_y in a gas mixture consisting of 350 ppm NH_3, 200 ppm C_3H_6/50 ppm $C_{12}H_{26}$/75 ppm C_8H_{10}, 4.5% H_2O and N_2 at 150 °C and subsequently heated in N_2 at a heating rate of 5 K min^{-1}. Differences in the amount of stored NH_3 of the same catalyst type between the different hydrocarbons are due to a different amount of washcoat loading of the respective honeycomb used and the prior catalytic testing with the corresponding hydrocarbon.

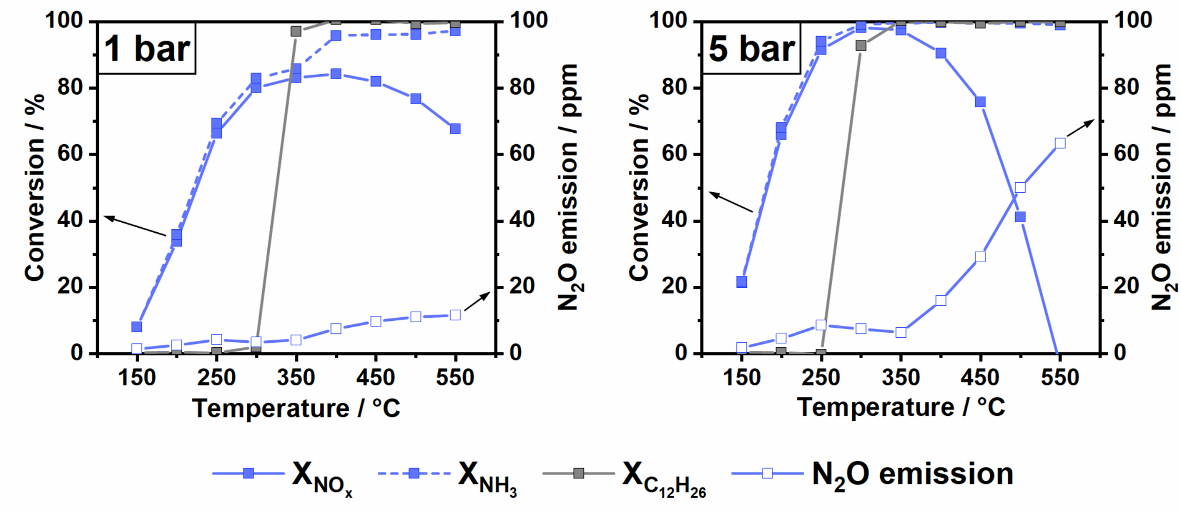

Figure S9. $NO_x/NH_3/C_{12}H_{26}$ conversion and N_2O emission over Cu-SSZ-13 for 1 bar (left) and 5 bar (right) in Standard SCR gas mixture (50 ppm $C_{12}H_{26}$, 350 ppm NO, 350 ppm NH_3, 14% O_2, 4.5% H_2O in N_2).