

Supplementary Information

Element	Cu-SSZ-13		Cu-ZSM-5		Cu-BEA	
	Weight%	Atomic%	Weight%	Atomic%	Weight%	Atomic%
O K	62	74	56	69	54	68
Al K	2.7	1.9	3	2.2	3.2	2.4
Si K	34	23	38	28	41	29
Cu K	1.3	0.39	2.5	0.80	1.7	0.53

Table S1. Elemental analysis of the Cu-SSZ-13, Cu-ZSM-5, and Cu-BEA samples by EDX.

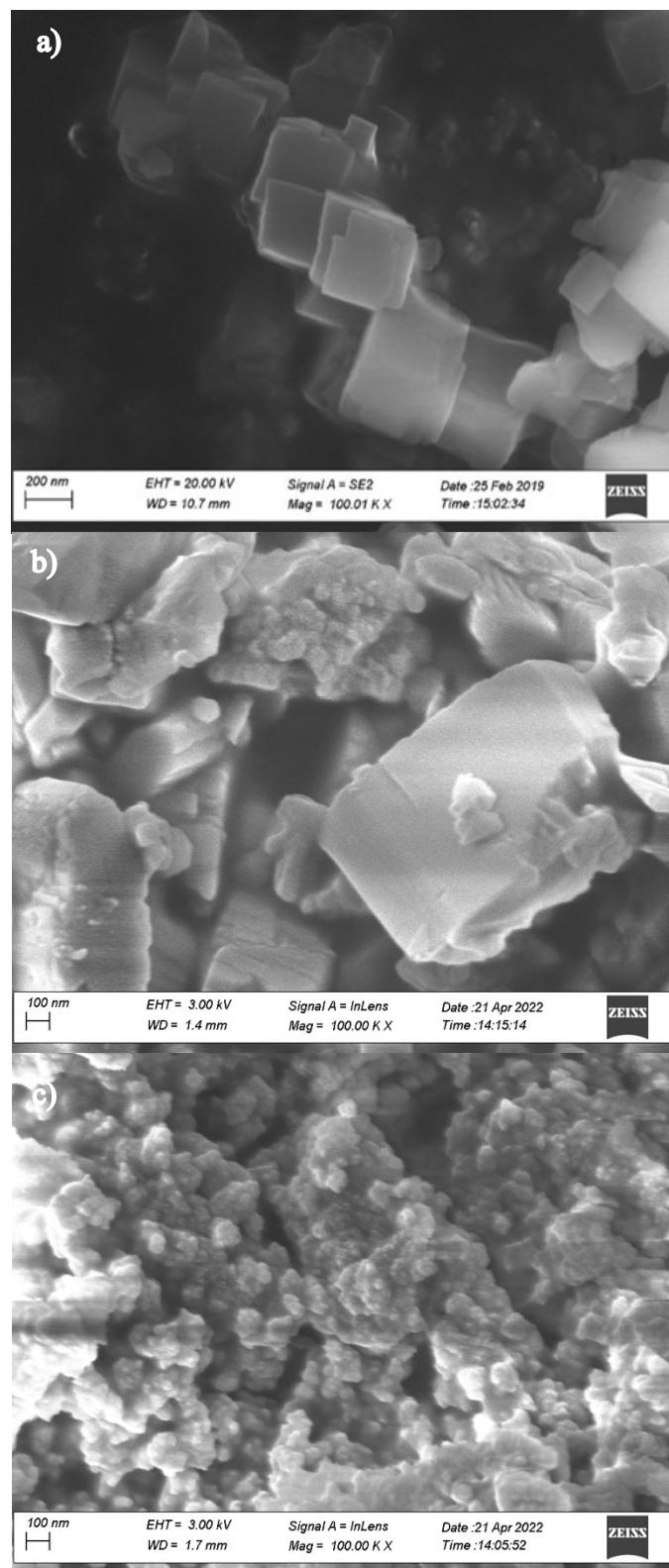


Fig. S1. SEM images of a) Cu-SSZ-13, b) ZSM5, and c) BEA zeolite samples.

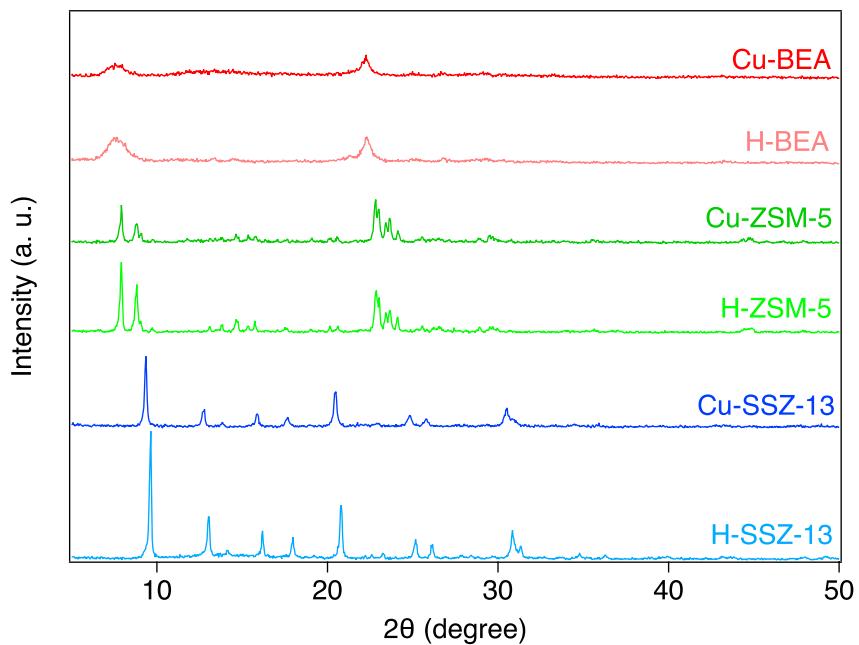


Fig. S2. XRD images for H-and Cu-type samples.

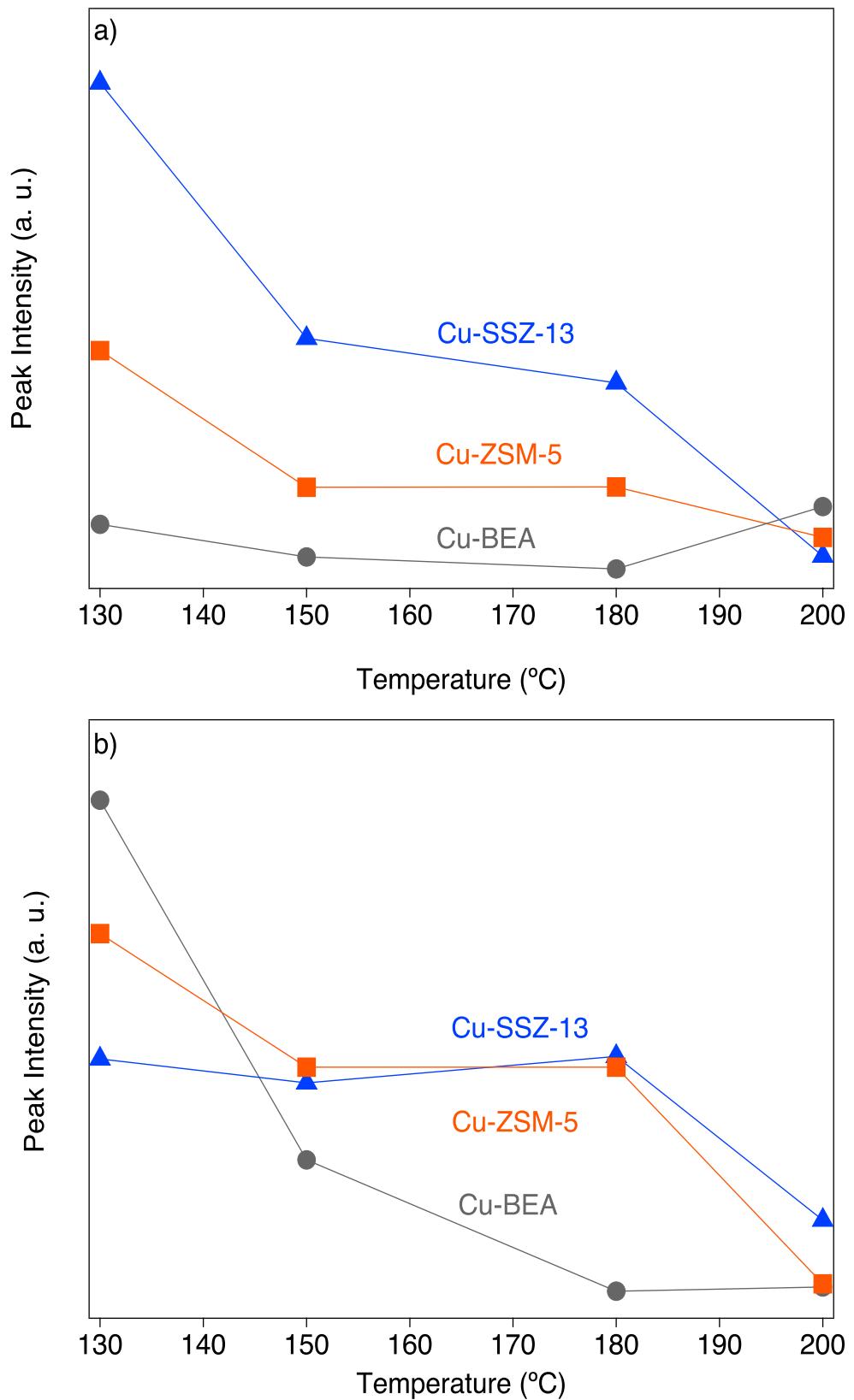


Fig. S3. Peak intensity values for a) NO^+ and b) nitrate species for Cu-SSZ-13, Cu-ZSM-5,

and Cu-BEA samples during NO oxidation experiment, at 130, 150, 180, and 200 °C.

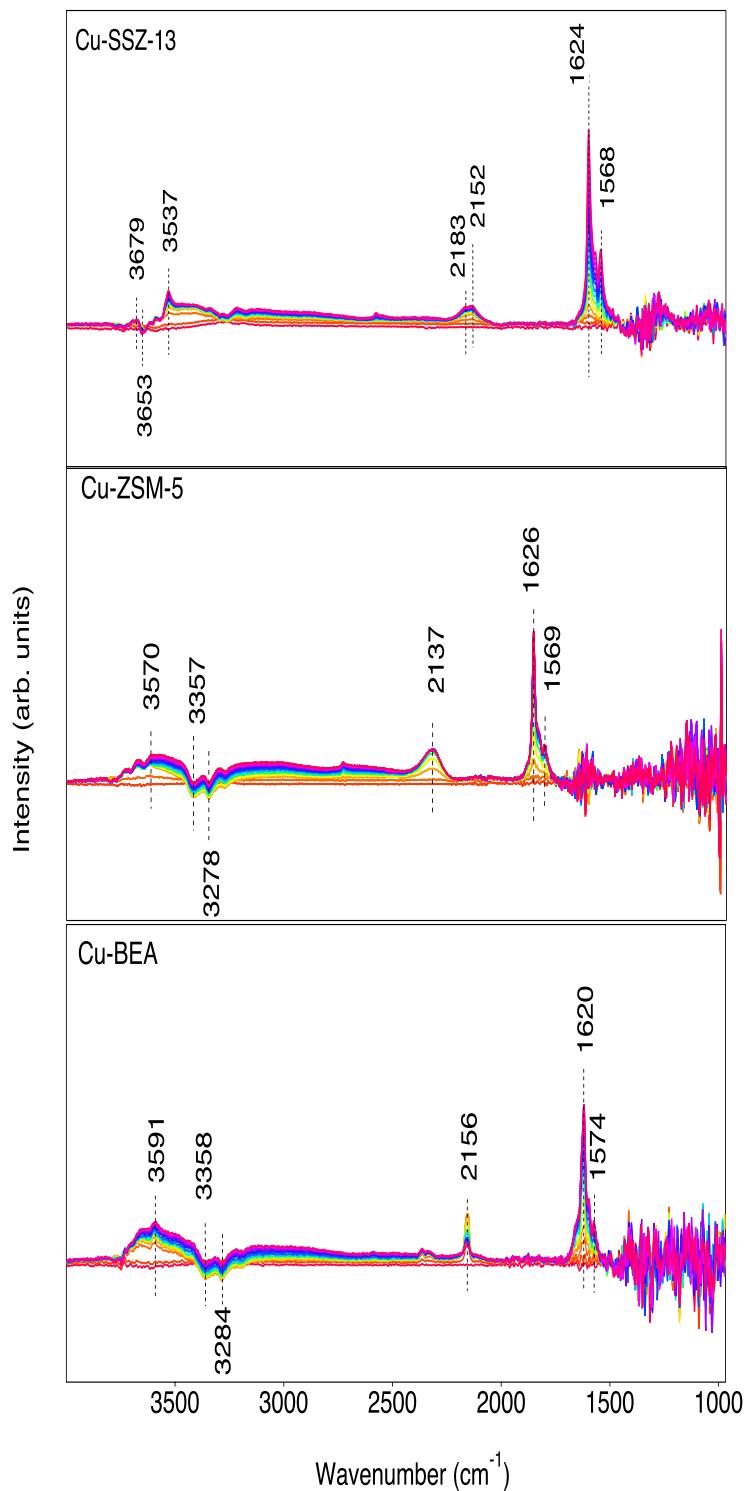


Fig. S4. In situ DRIFT spectra at 200 °C were obtained for samples upon exposure to (400 ppm NO and 10% O₂) at a flow rate of 10 mL/min for Cu-SSZ-13, Cu-ZSM-5 and Cu-BEA samples.

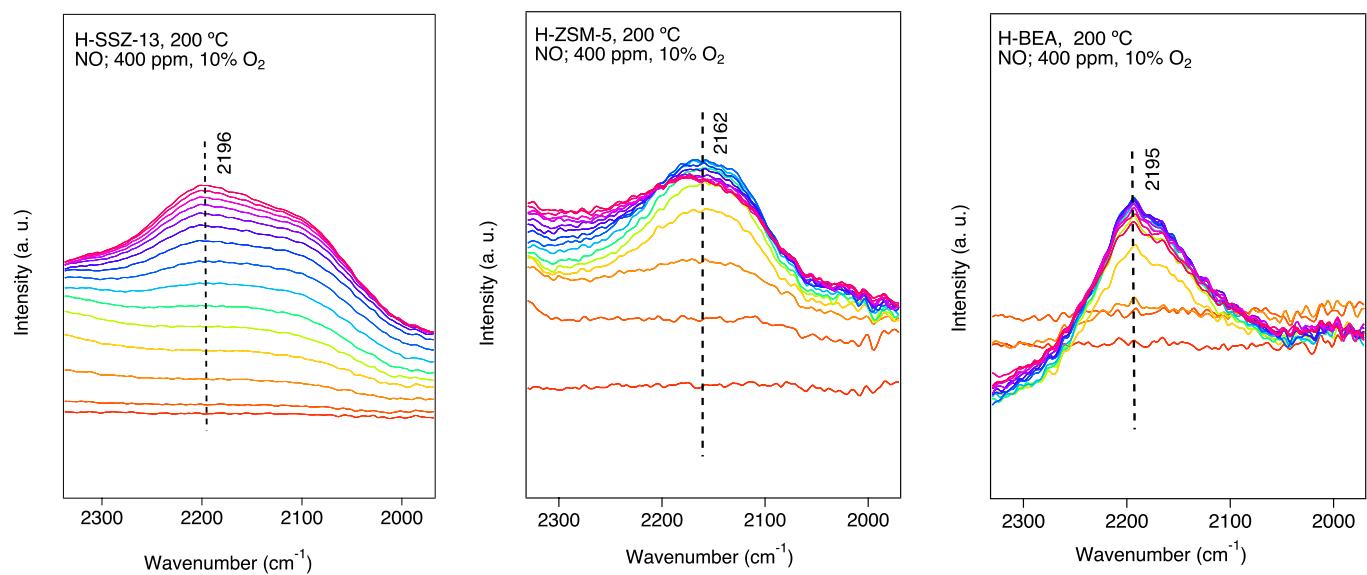
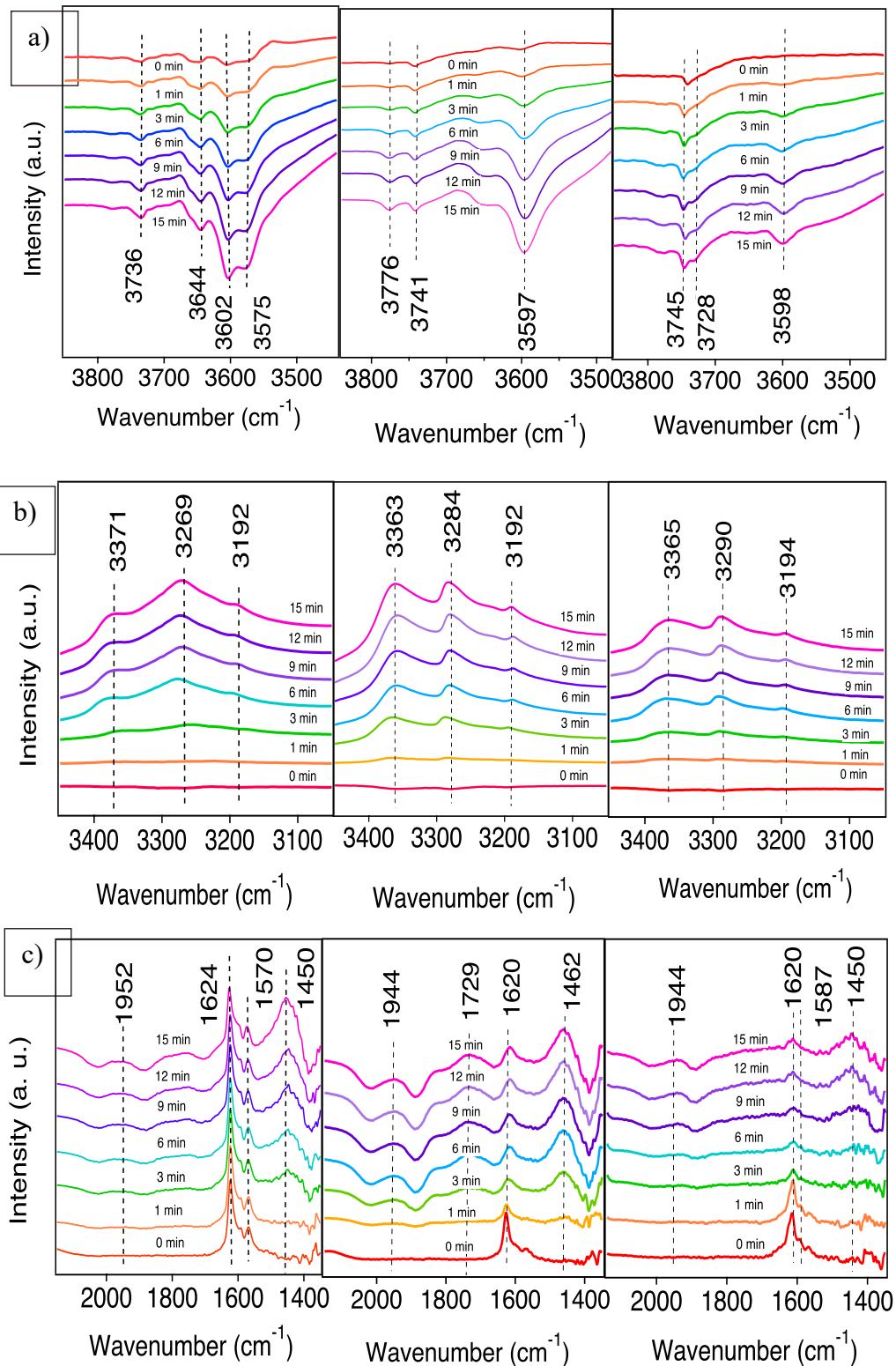


Figure S5. In situ DRIFT spectra at 200 °C obtained for samples upon exposure to (400 ppm NO and 10% O₂) at a flow rate of 10 mL/min for H-SSZ-13, H-ZSM-5 and H-BEA samples.



Cu-SSZ-13

Cu-ZSM-5

Cu-BEA

Figure S6. In situ DRIFT spectra of a) O-H, b) N-H Stretching c) N-H bending vibrational region at 200 °C were obtained for three samples upon exposure to (400 ppm NO, 400 ppm NH₃ and 10% O₂) at a flow rate of 10 mL/min.

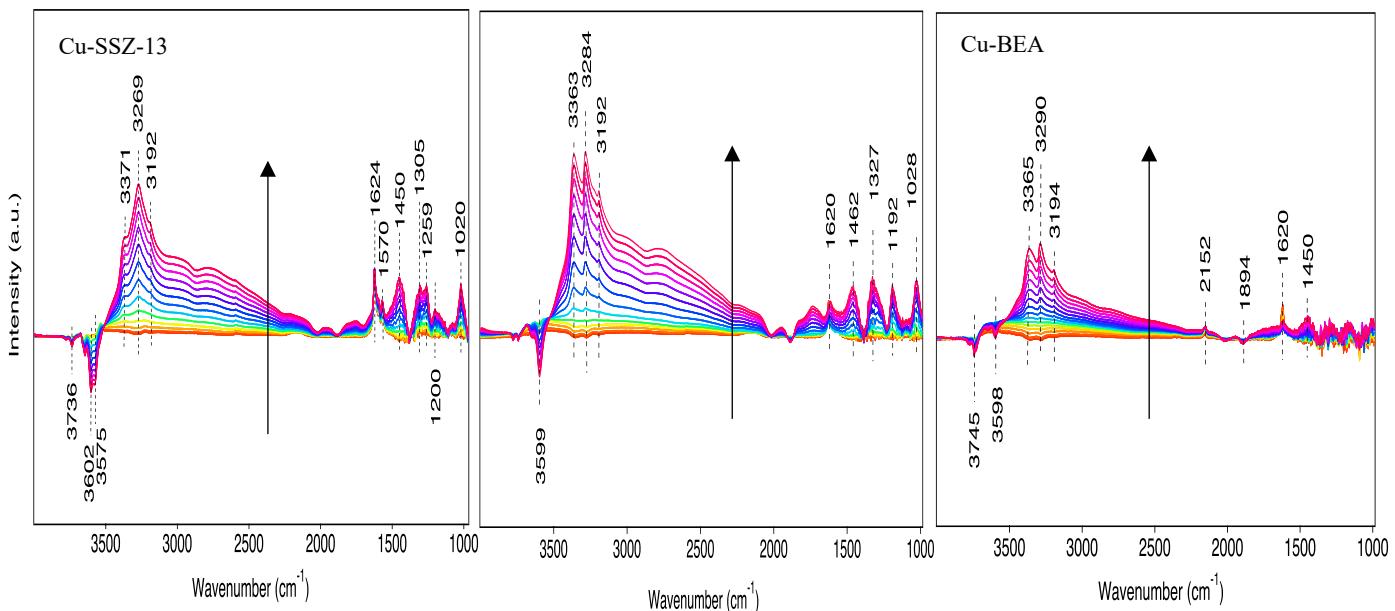


Figure S7. In situ DRIFT spectra at 200 °C Cu-ZSM-5 and for samples upon exposure to (400 ppm NO, 400 ppm NH₃ and 10% O₂) at a flow rate of 10 mL/min for Cu-SSZ-13, Cu-ZSM-5, and Cu-BEA samples.

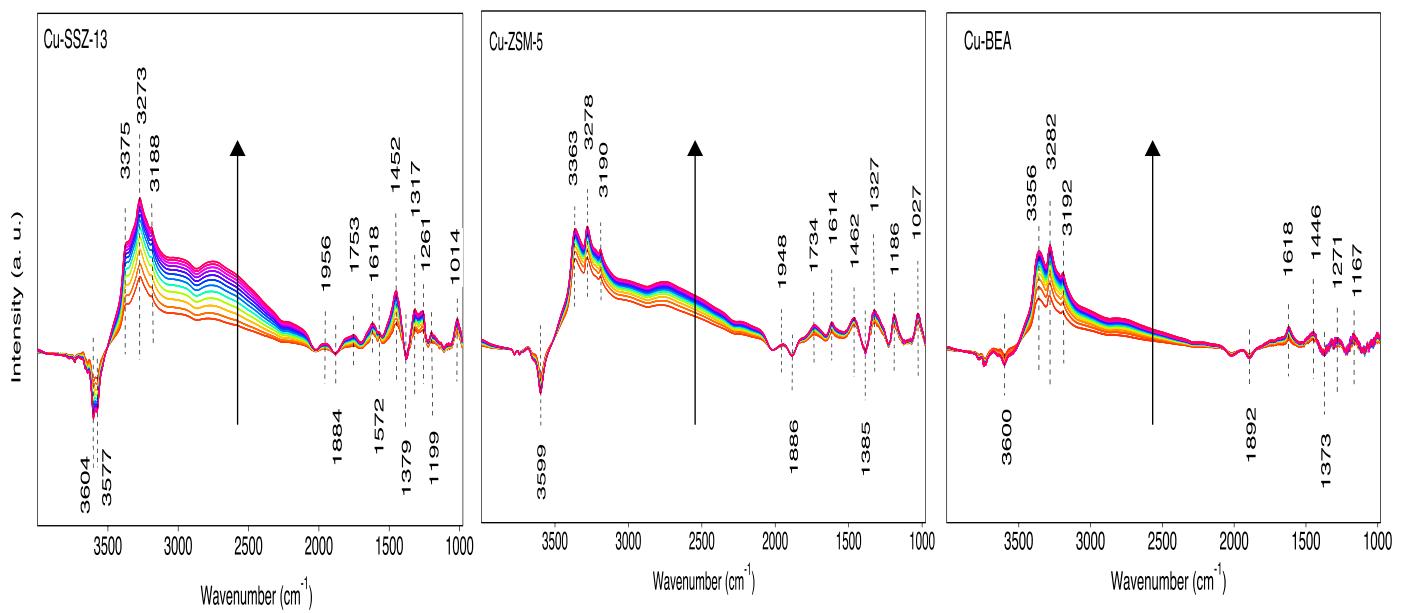


Figure S8. In situ DRIFT spectra at 200 °C were obtained for samples upon exposure to (400 ppm NH₃ and 10% O₂) at a flow rate of 10 mL/min for Cu-SSZ-13, Cu-ZSM-5, and Cu-BEA samples.

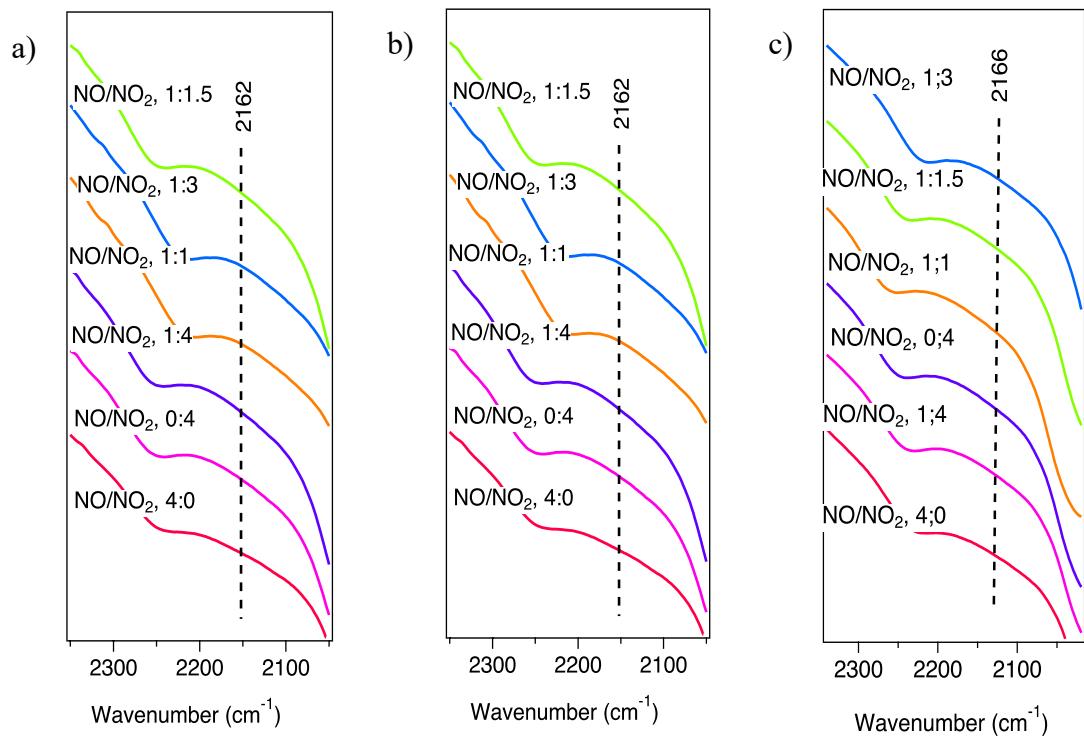


Figure S9a. DRIFT spectra for different NO/NO₂ ratios over Cu-SSZ-13 zeolite at a) 220, b) 200 and c) 180 °C

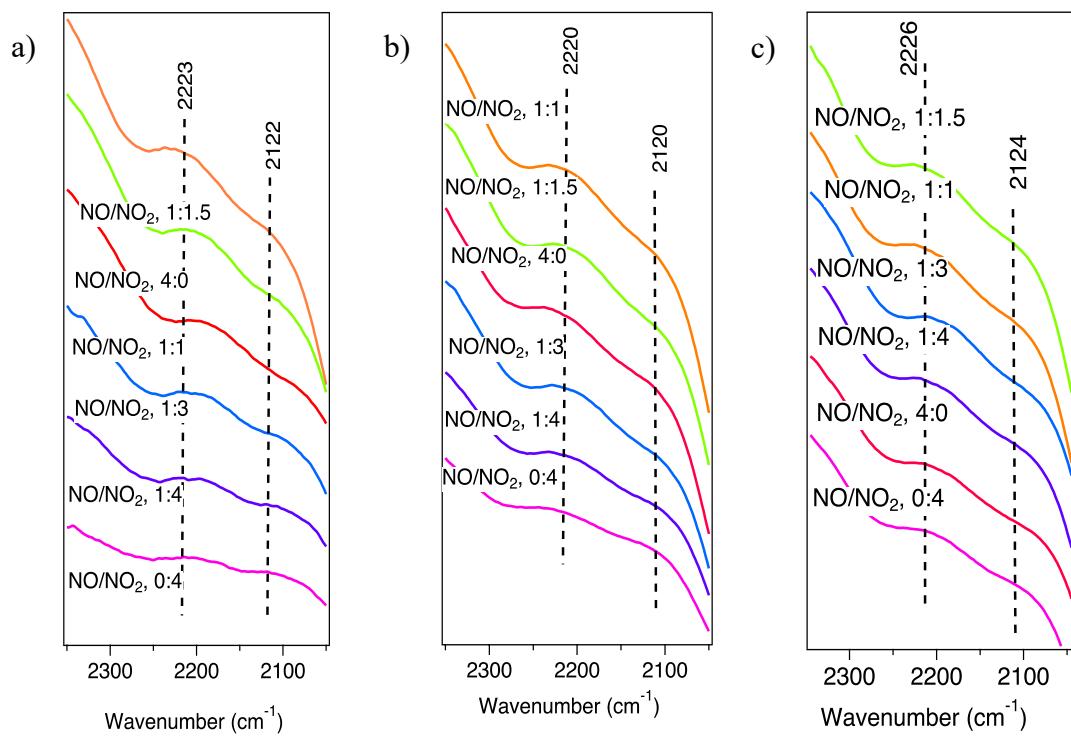


Figure S9b. DRIFT spectra for different NO/NO₂ ratios over Cu-ZSM-5 zeolite at a) 220, b) 200 and c) 180 °C

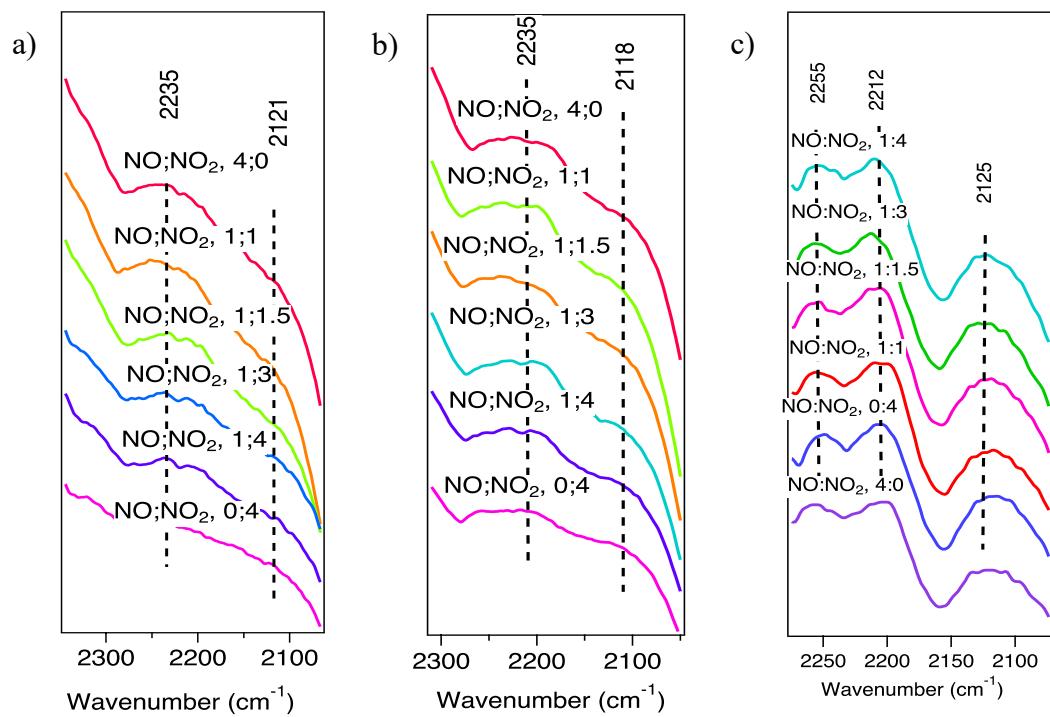
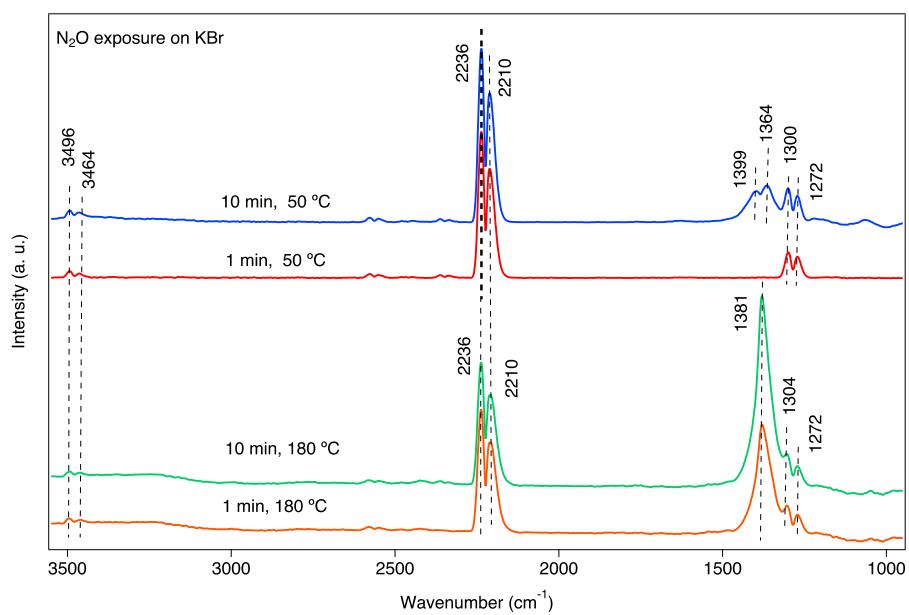


Figure S9c. DRIFT spectra for different NO/NO₂ ratios over Cu-BEA zeolite at a) 220, b) 200 and c) 180 °C



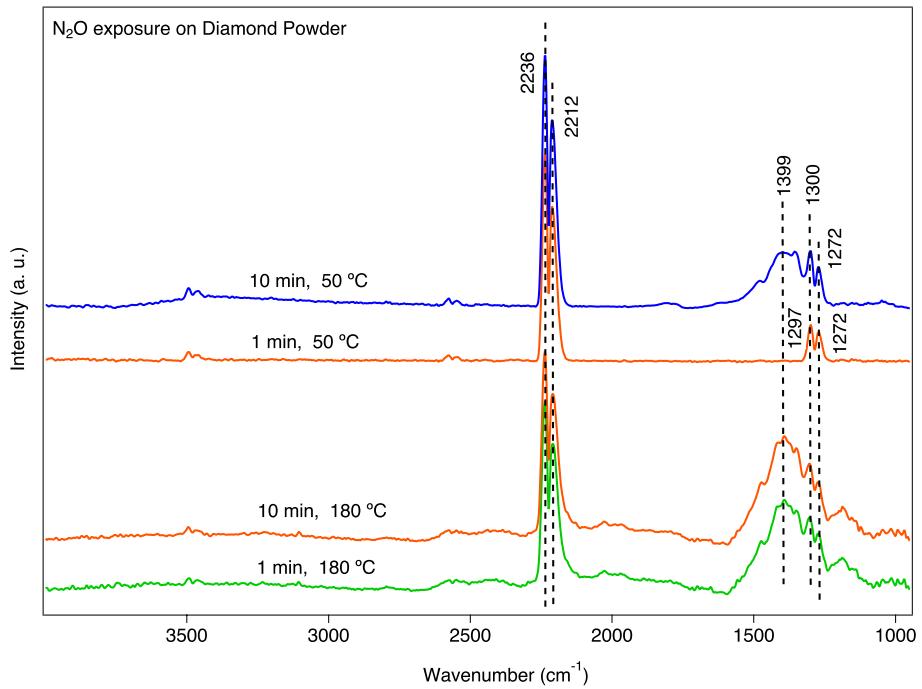


Figure S10. DRIFTS measurements for investigating peak position for N₂O exposure on KBr (top) and diamond powder (bottom).