

Effect of the active metal on the NO_x formation during catalytic combustion of ammonia SOFC off-gas

Tobias Weissenberger^{1*}, Ralf Zapf¹, Helmut Pennemann¹ and Gunther Kolb¹

Fraunhofer Institute for Microengineering and Microsystems IMM, Carl-Zeiss-Straße
18-20, 55129 Mainz, Germany

* tobias.weissenberger@imm.fraunhofer.de

Supporting Information

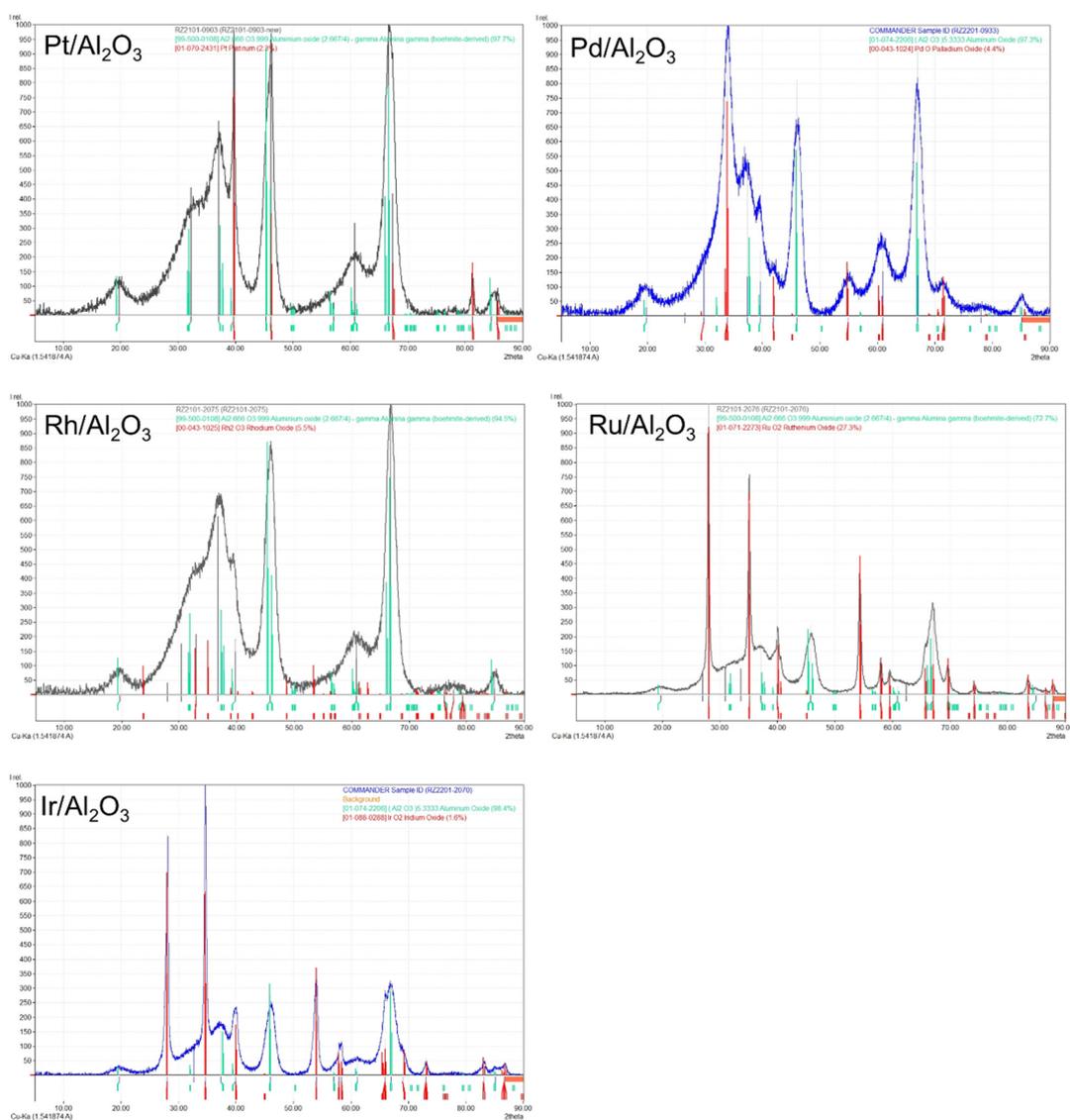


Figure S1: Powder XRD pattern of noble metal based catalysts

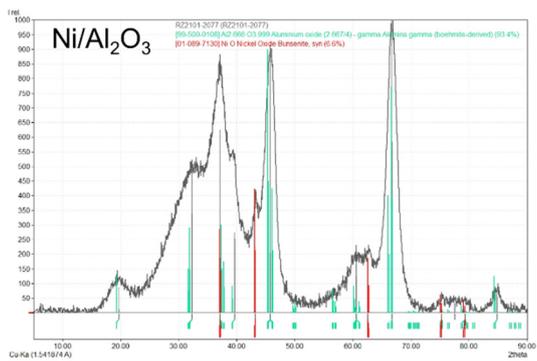
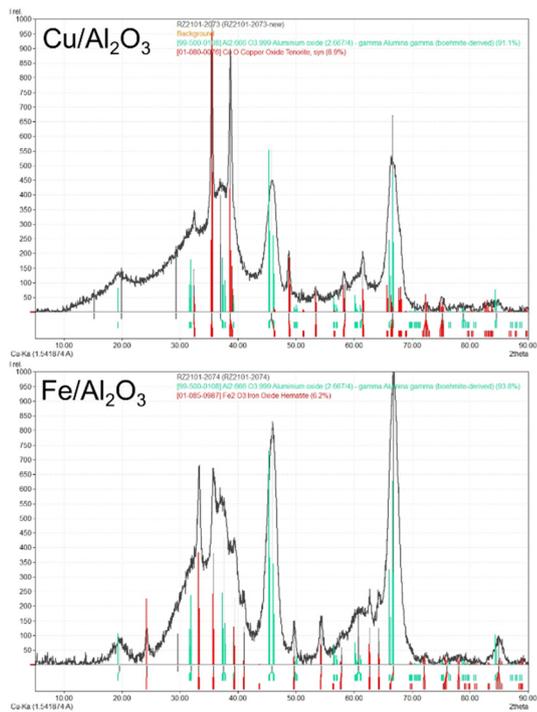


Figure S2: Powder XRD pattern of transition metal based catalysts

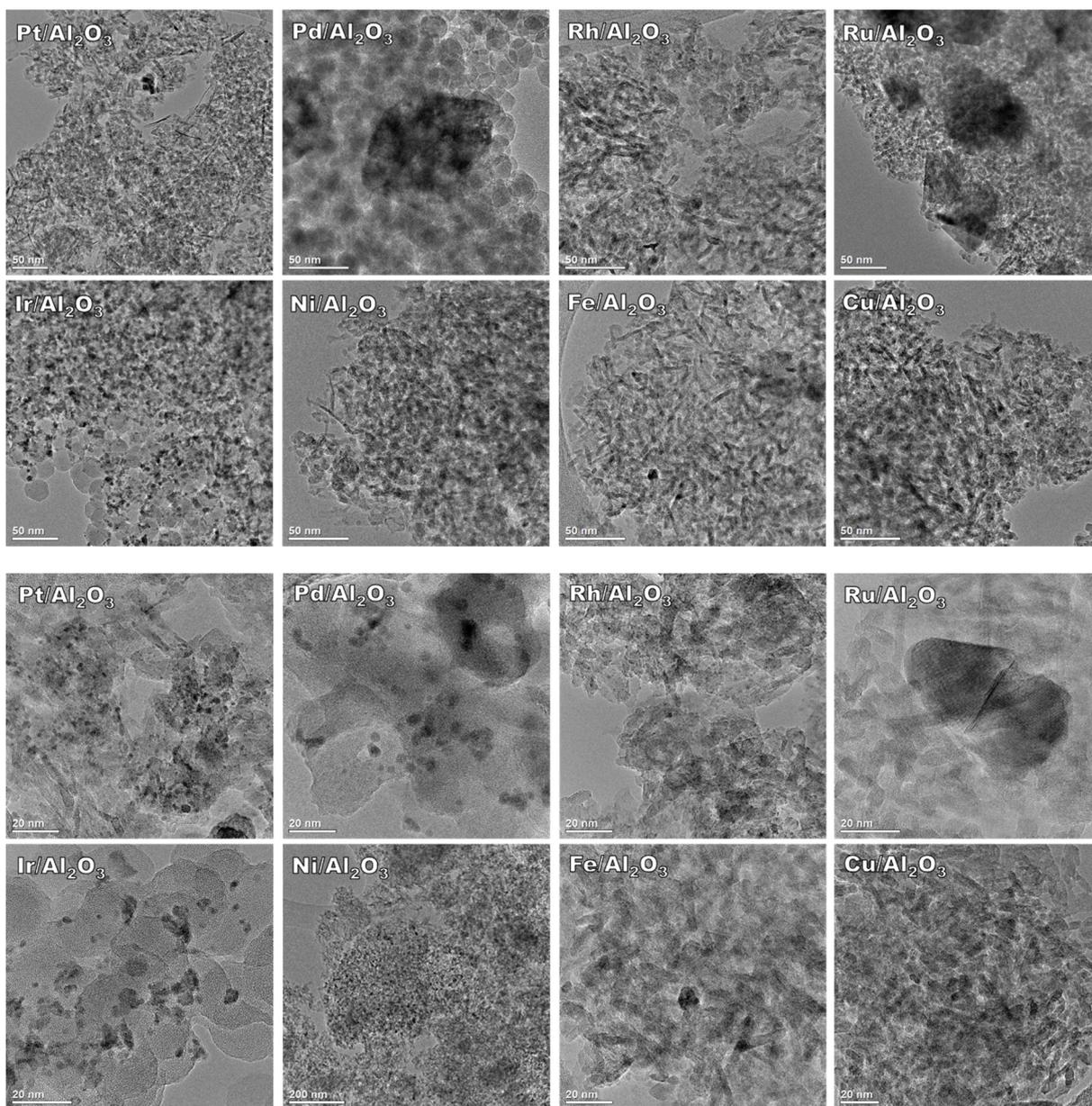


Figure S3: TEM micrographs of the used catalysts with two different magnifications

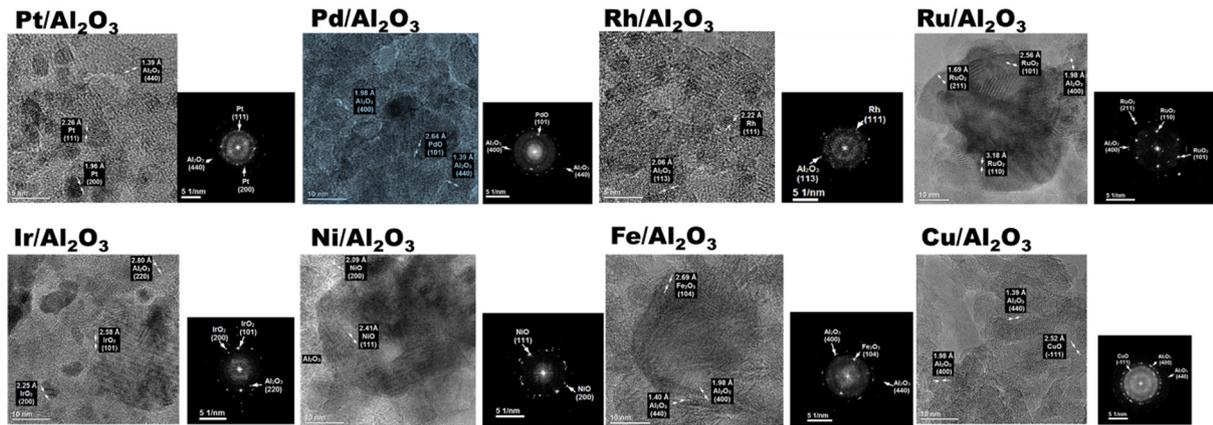


Figure S4: TEM micrographs with interplanar distances and selected area electron beam diffraction images used for identification.

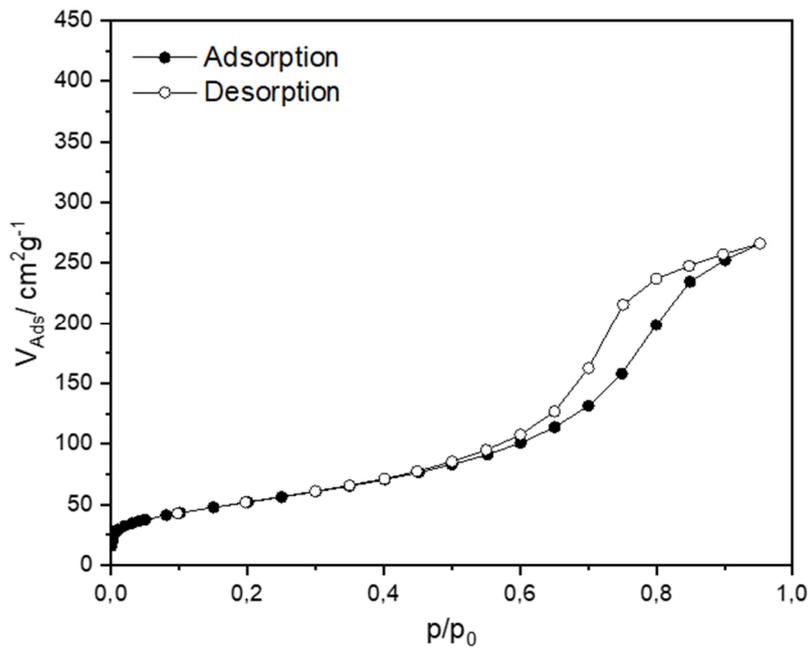


Figure S5: Nitrogen sorption isotherm of Al₂O₃ support

Table S1: Specific surface area (BET method) of the used catalysts

Catalyst	Surface Area (BET) m^2g^{-1}
Pt/Al ₂ O ₃	150.2
Pd/Al ₂ O ₃	149.8
Rh/Al ₂ O ₃	154.1
Ru/Al ₂ O ₃	150.7
Ir/Al ₂ O ₃	151.6
Ni/Al ₂ O ₃	147.5
Fe/Al ₂ O ₃	153.6
Cu/Al ₂ O ₃	140.8
pure Al ₂ O ₃	155.9

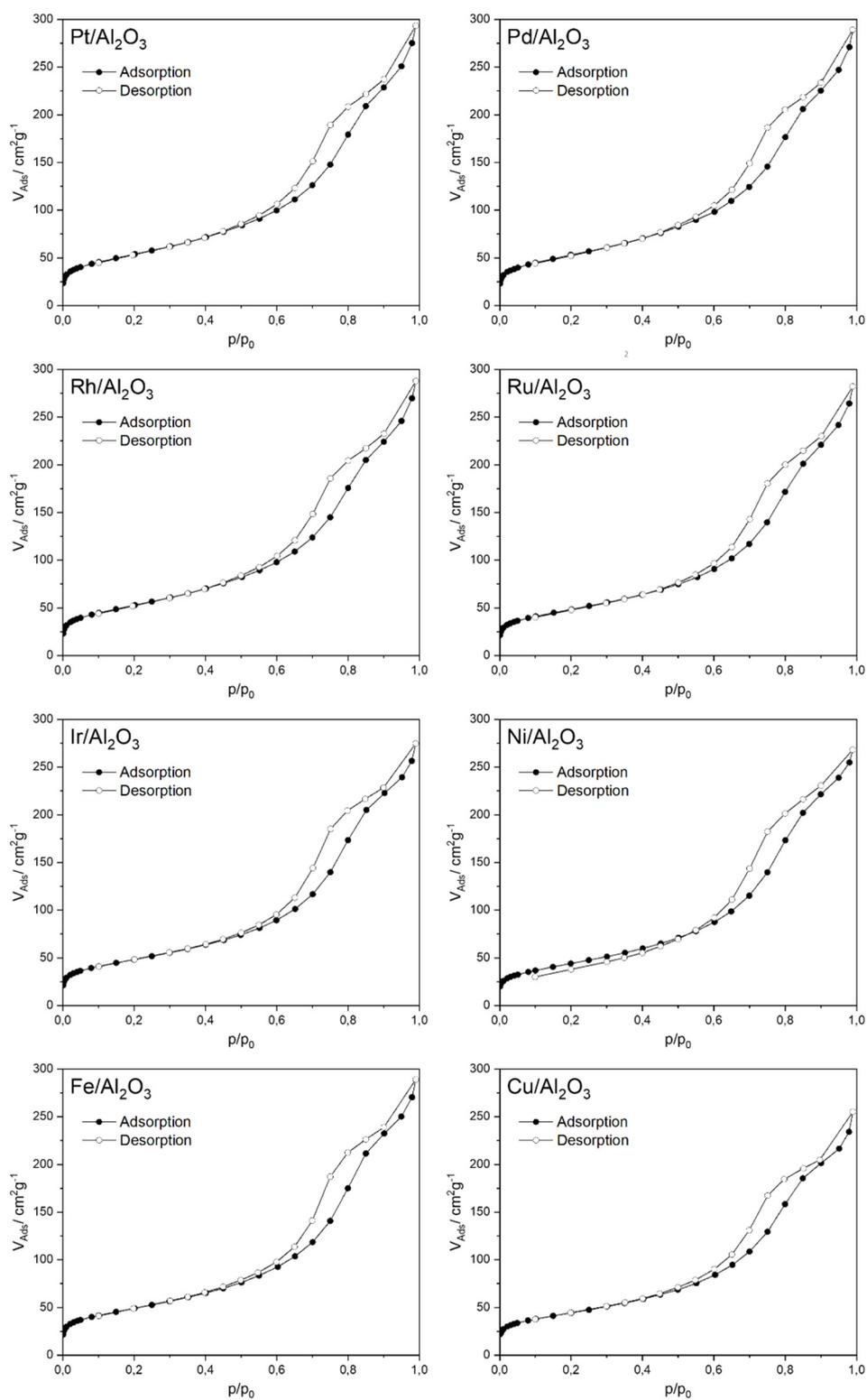


Figure S6: Nitrogen sorption isotherms of the used catalysts

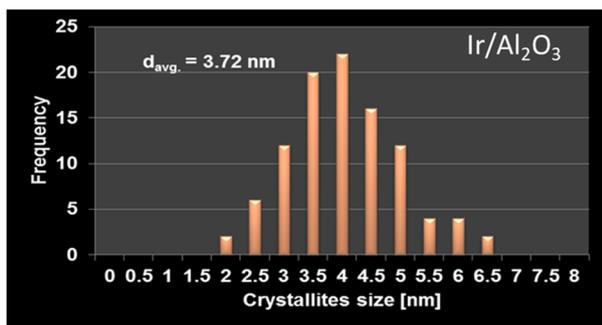
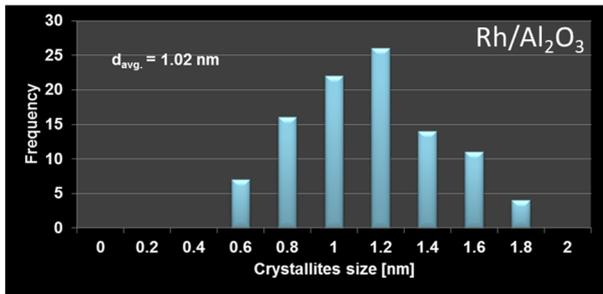
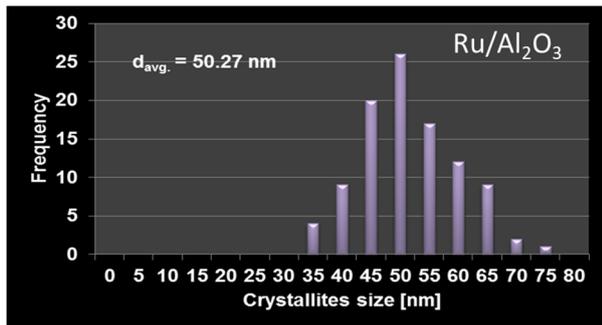
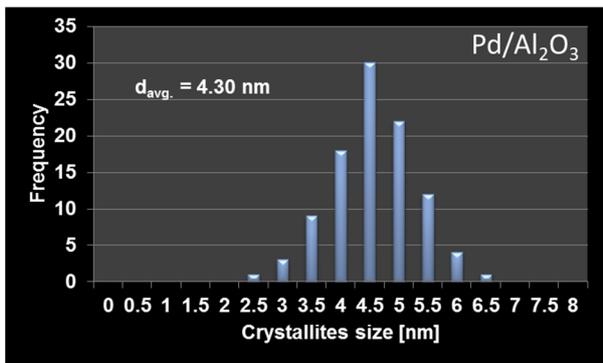
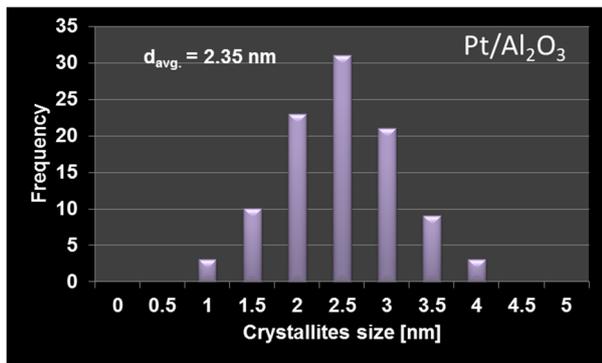


Figure S7: Particle size distribution of different catalysts determined by TEM.