

Palladium Nanoparticles Supported on Magnetic Carbon-Coated Cobalt Nanobeads – Highly Active and Recyclable Catalysts for Alkene Hydrogenationⁱ

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Supporting Information

1. Additional TEM pictures	S2
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ⁱ This chapter includes parts from a manuscript which has been prepared in collaboration with R. Linhardt, R. Grass, G. Vilé, J. Pérez-Ramírez, W. J. Stark, and O. Reiser and submitted to *Adv. Funct. Mat.* for publication.

1. Additional TEM pictures

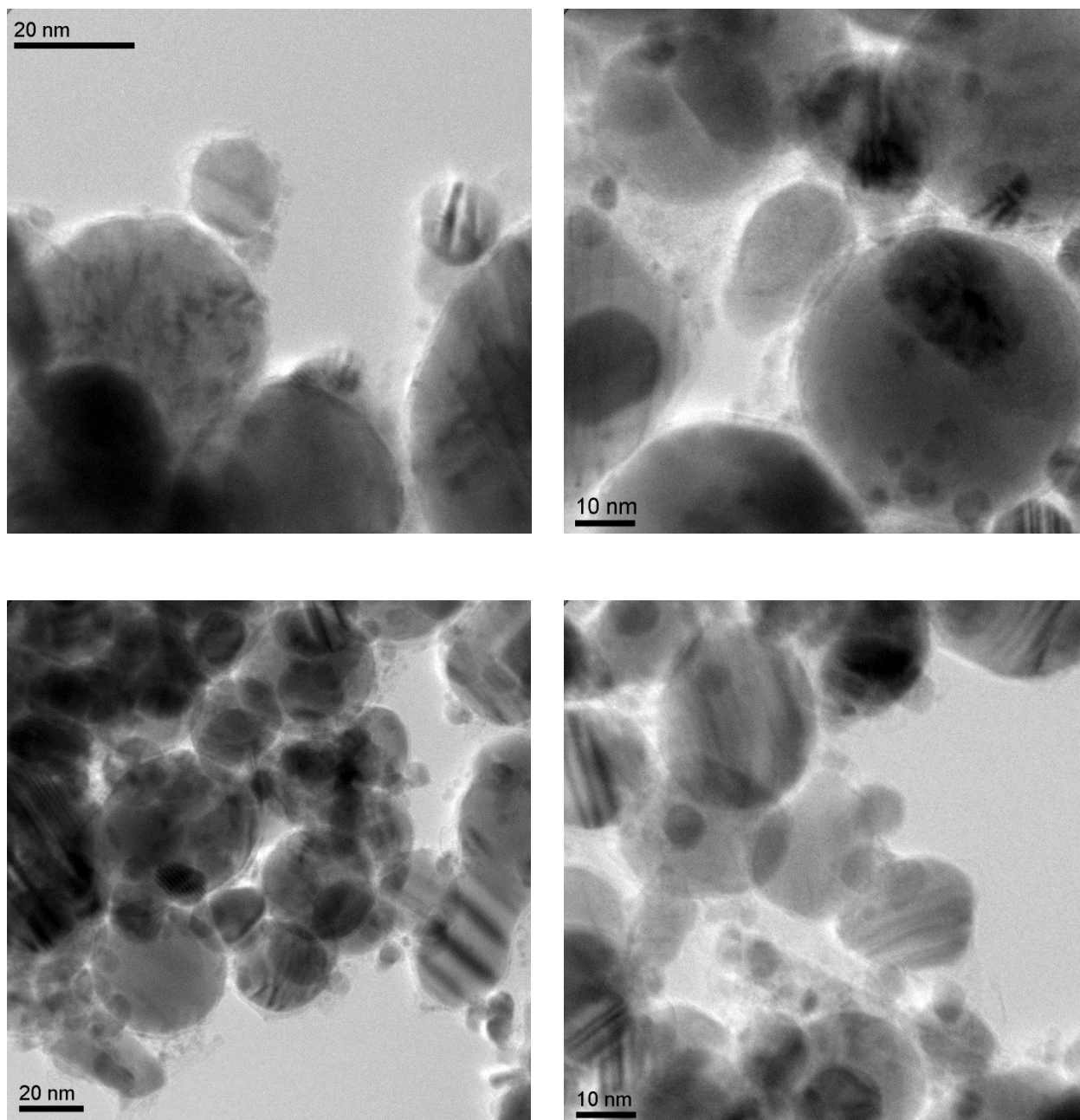


Figure S1. Additional TEM pictures of catalyst 2f with a low Pd loading of 0.2 wt% (top row) and the same nanocatalyst after runs of recycling the catalyst (bottom row). Pd nanoparticles (2.7 – 3.1 nm) cannot be unequivocally located between the Co/C supports, which have an average diameter of 25 nm and a rather broad size distribution.

2. EDX measurements

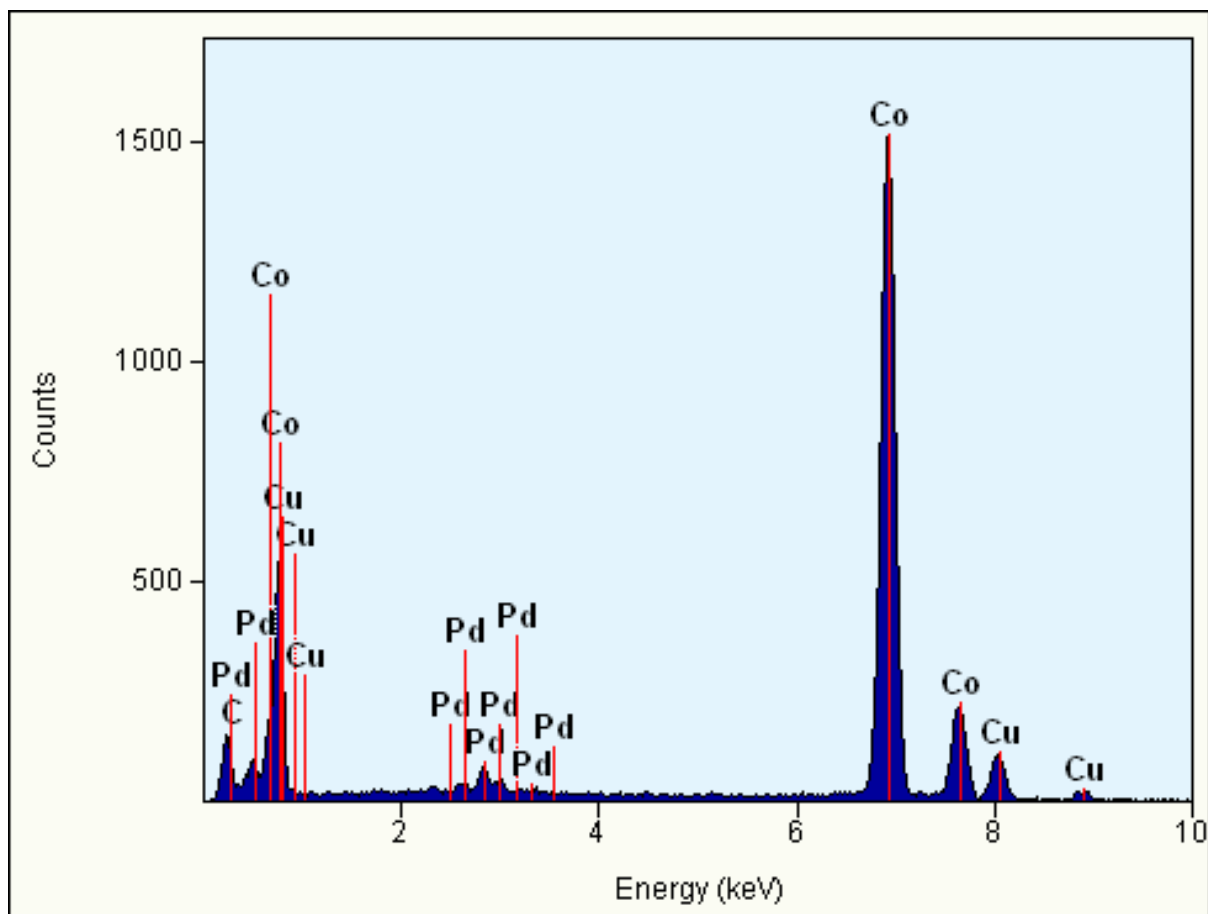


Figure S2. Energy-dispersive X-ray spectroscopy (EDX) spectrum of Pd@Co/C particles **2c** with a palladium content of 4.4 wt%. The characteristic peaks for the components of the hybrid material, i. e. Co, C, and Pd, are detected. The Cu peaks arise from the copper grid which is used as support.

3. XRD measurements

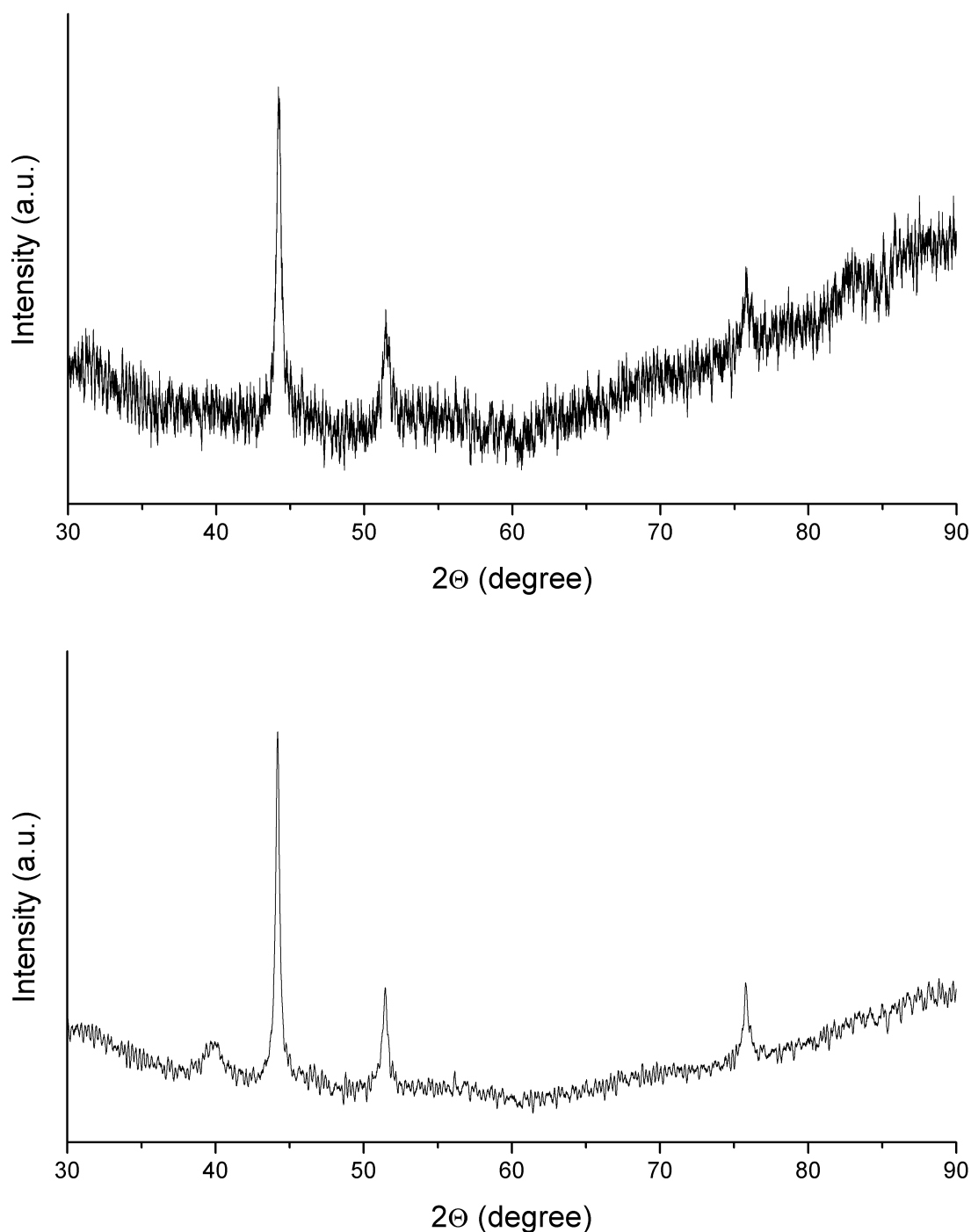


Figure S3. X-ray powder diffraction (XRD) of nanocomposites **2b** with 8.8 wt% Pd (top) and **2a** with 14.3 wt% Pd (bottom). Only at the high Pd loading one broad peak at 2θ of 39.9° was detected in addition to the cobalt peaks, which corresponds to the diffraction (111) of crystalline Pd(o). The spectrum at the bottom was recorded over 10 h.