Novel synthetic approach to PtCo alloy nanoparticles by reduction of nanometer-sized metal coordination polymers

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Electronic Supplementary Information (ESI)

Fig. S1 TEM images of the compounds 1-4. The numbers in the figure refer to those of the compound. Scale bar = 20 nm.
Fig. S2  The relation between Pt/Co ratio and the IR intensity ratio of Pt^{II}-CN-Pt^{IV} to Pt^{II}-CN-Co.
**Fig. S3** TGA curve of the compound 1 in the H$_2$ atmosphere (N$_2$/H$_2$ = 10, total flow rate is 110 mL/min.).
Fig. S4  IR spectra of the compound 1 before and after the transformation reaction in the H₂ atmosphere. The reaction temperature and the reaction time are noted in the figure.
**Fig. 5** XPS curve in the Co2p energy range of compound 1 after the transformation reaction in H2 atmosphere at 350 °C for 3h (top) and at 400 °C for 3h (bottom). The peak at 781.9 eV attributed to the Co sites in PtII-CN-PtIV/Co negatively shifts to the peak at 778.2 eV due to metal Co.
Fig. S6  XRD patterns of the compound 1 before and after the transformation reaction in the H$_2$ atmosphere at 400 °C for 3h. The peaks marked by squares are assigned to PtCo.