Electronic Supplementary Material (ESI) for Catalysis Science & Technology.

Carbon supported Au–Pd Core–Shell nanoparticles for hydrogen production by alcohol electroreforming

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Supporting Information:

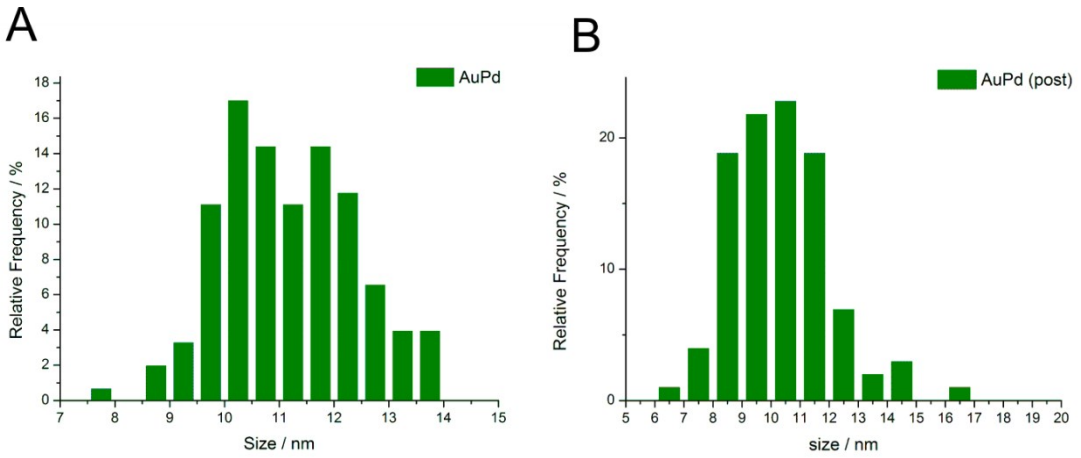

Figure S1: Histogram of nanoparticles sizes before (A) and after (B) prolonged use in the electroreformer. The size of particles prior is given with 11.1 ± 1.2 nm and 10.3 ± 1.7 nm after usage as catalyst.

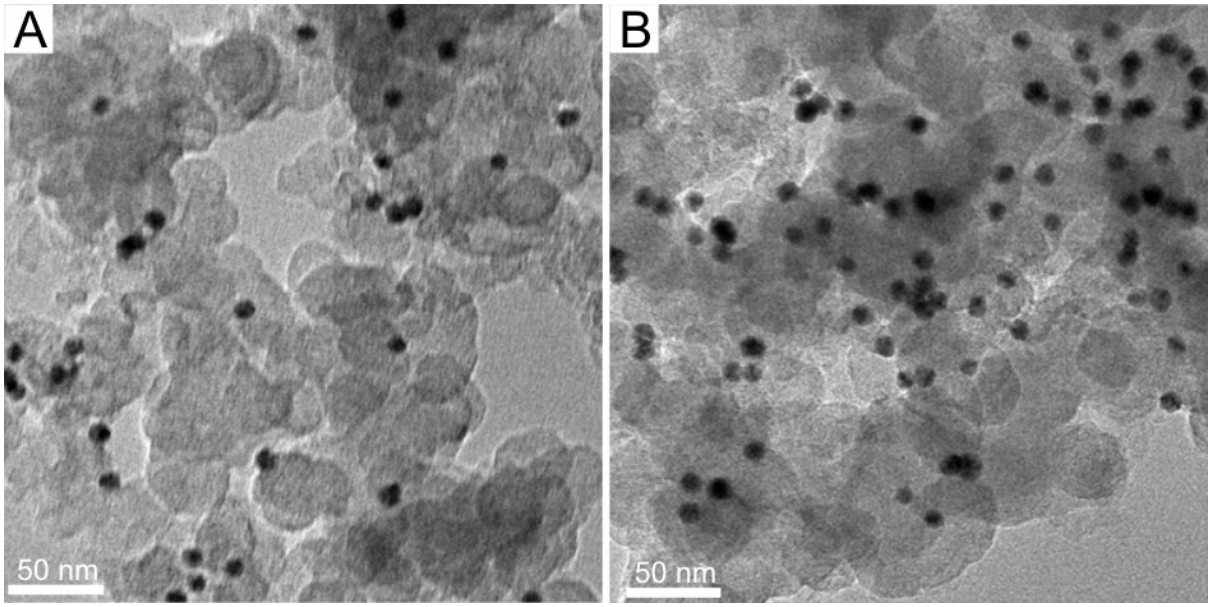

Figure S2: Low-resolution TEM images of Au-Pd nanoparticles loaded onto Vulcan XC-72 carbon.

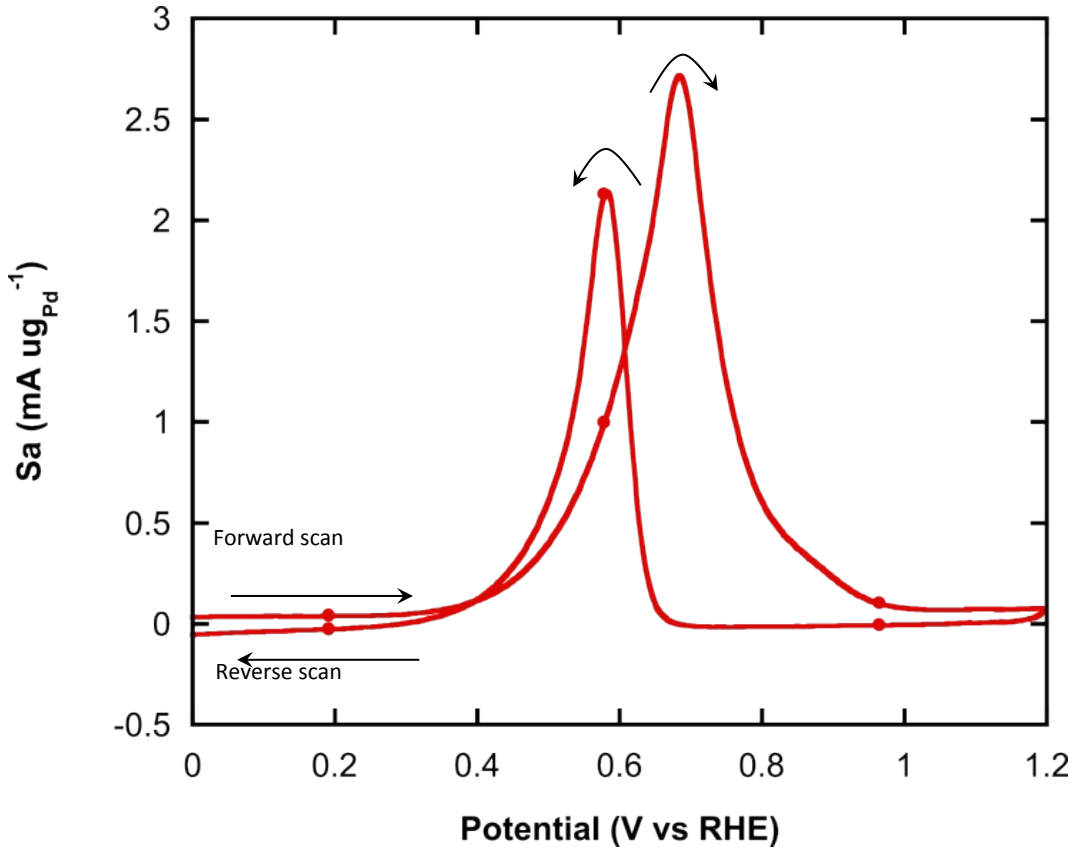

Figure S3: Cyclic voltammetry of Au-Pd/C in aqueous 2M EtOH and 2M KOH. Experiment was performed at room temperature with a 50 mV s^{-1} scan rate.

Table S1: Palladium and gold content before and after electrolysis determined by EDS. Only gold and palladium contents were investigated to yield results irrespective of particle loading on carbon.

	Pre-Catalysis	**Post-Catalysis**
Au Content in %	13.8 ± 2.2	15.9 ± 4.1
Pd Content in %	86.2 ± 2.2	84.1 ± 4.1

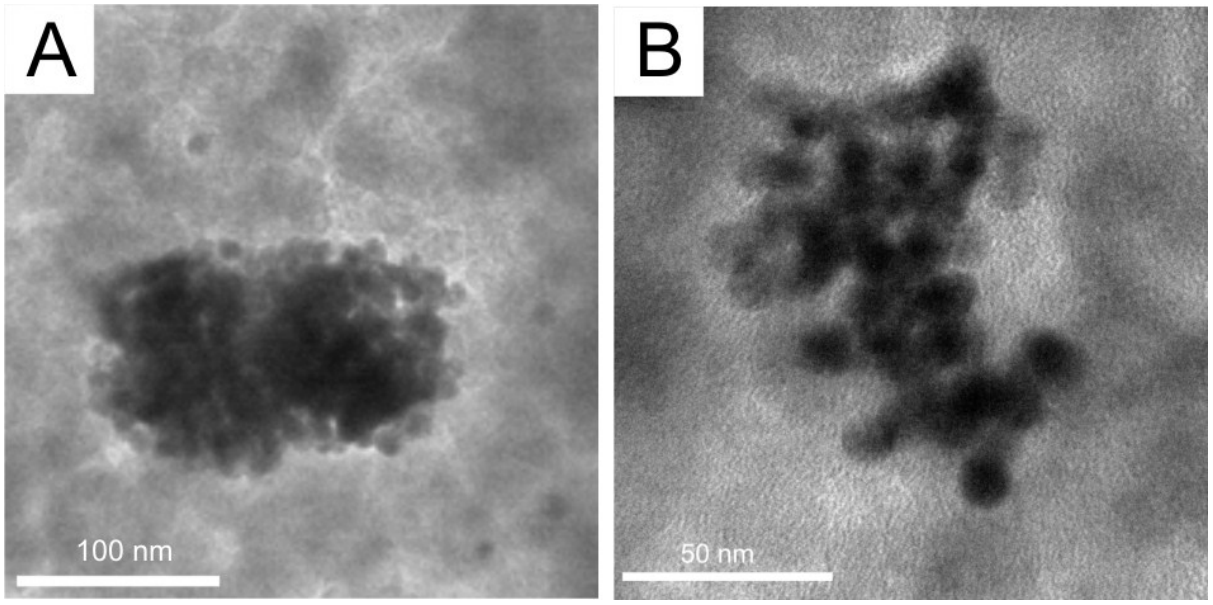

Figure S4: Clustering of Au-Pd nanoparticles on Vulcan XC-72 post-catalysis