Electronic Supplementary Material (ESI) for RSC Advances.

Pd nanocatalyst supported on multifaceted mesoporous silica with enhanced activity and stability for glycerol electrooxidation

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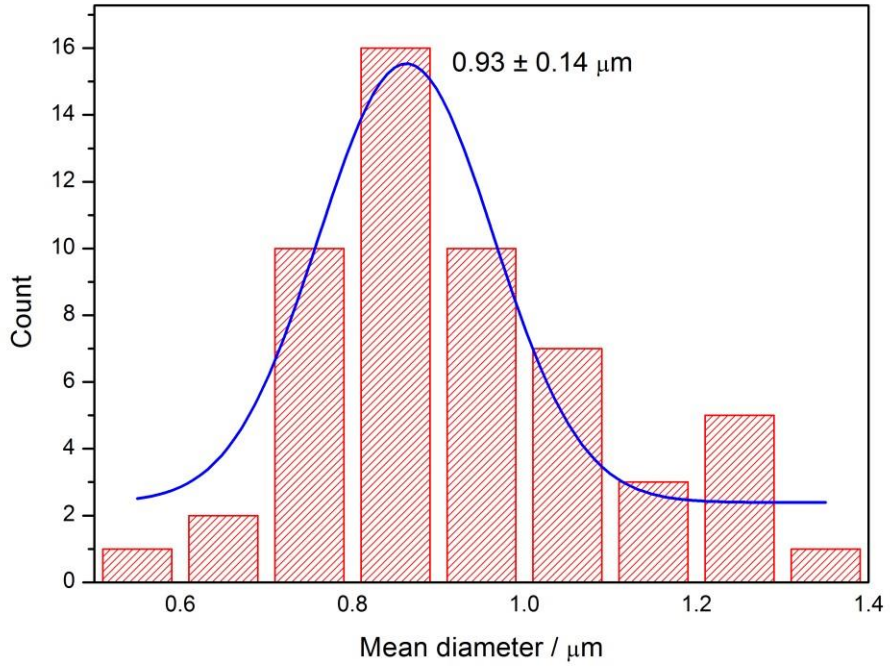

Figure S1. Mean size distribution of multifaceted mesoporous silica ( ).

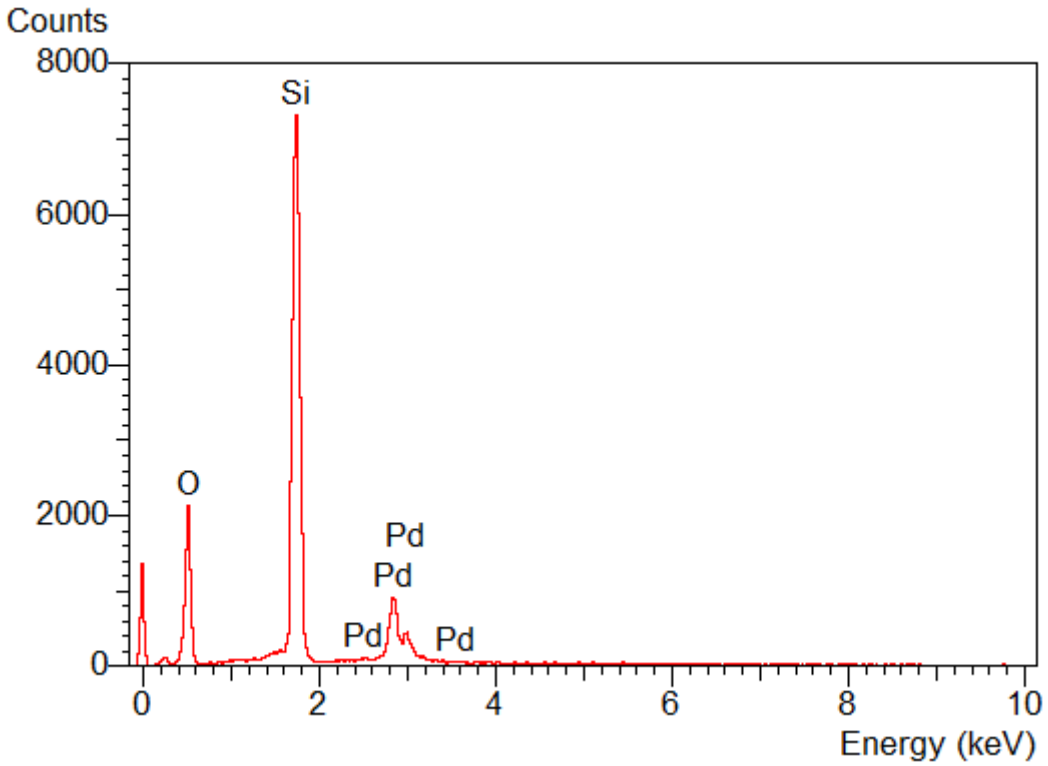

Figure S2. Representative EDS spectrum of Pd/SiO_2 nanoparticles.

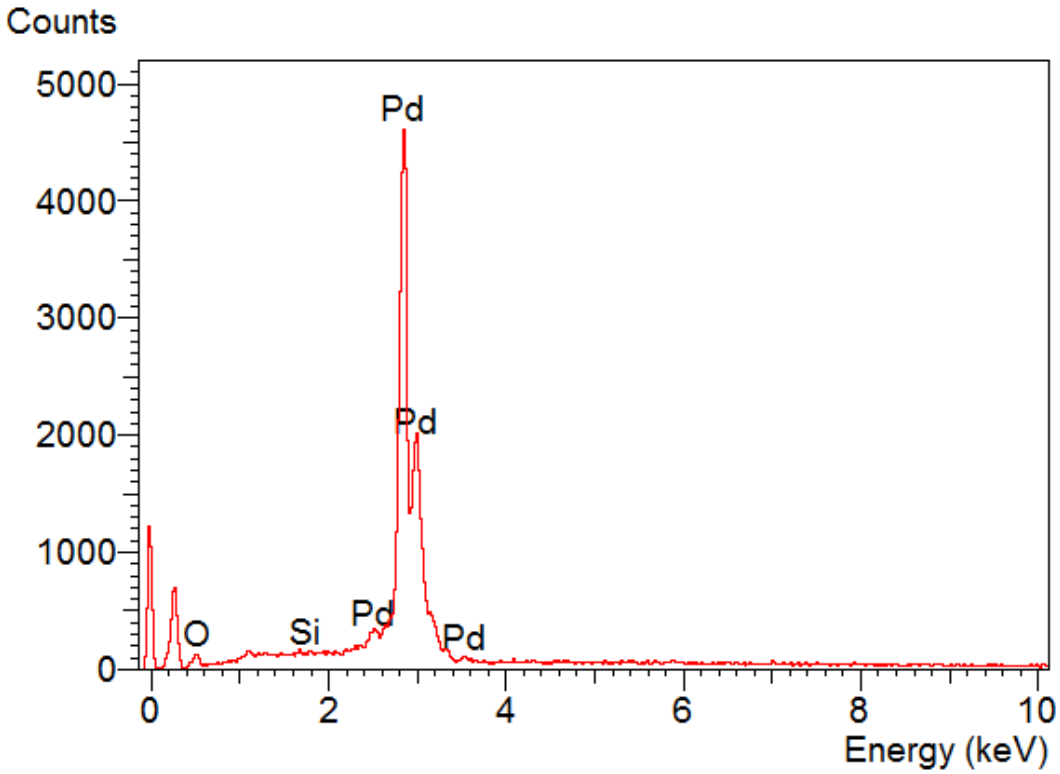

Figure S3. Representative EDS spectrum of Pd nanoparticles after removal of SiO_2.

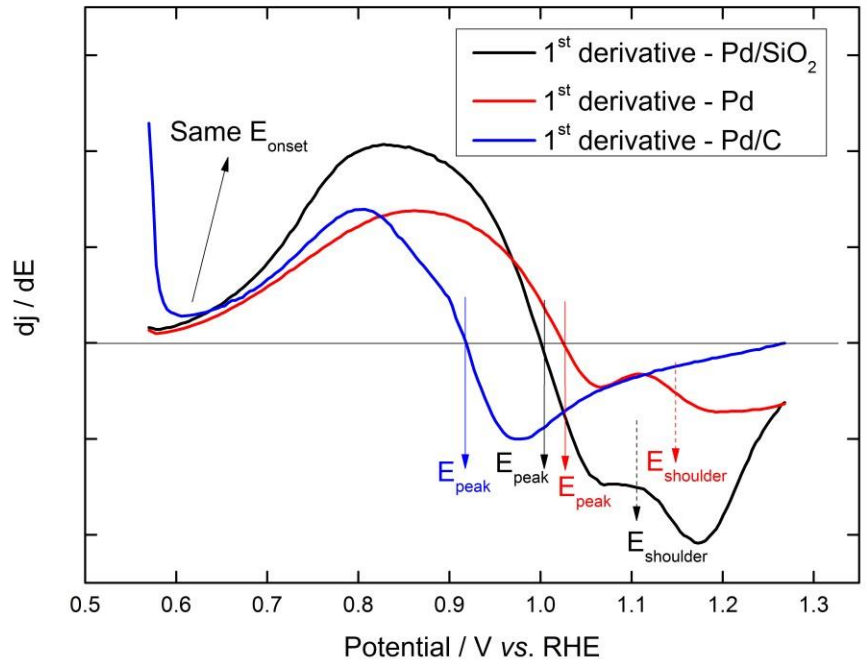

Figure S4. First derivative of the voltammograms of Pd/SiO_2, Pd and Pd/C in the presence of 0.1 mol L^{-1} KOH and 0.2 mol L^{-1} GlOH. The figure shows that the onset potential E_{onset} are virtually the same for all catalysts. The potential peaks E_{peak} are

indicated in the figure. A small shoulder appears for the reaction on Pd/SiO_2 and Pd, but Pd/C, as indicated by $E_{shoulder}$.

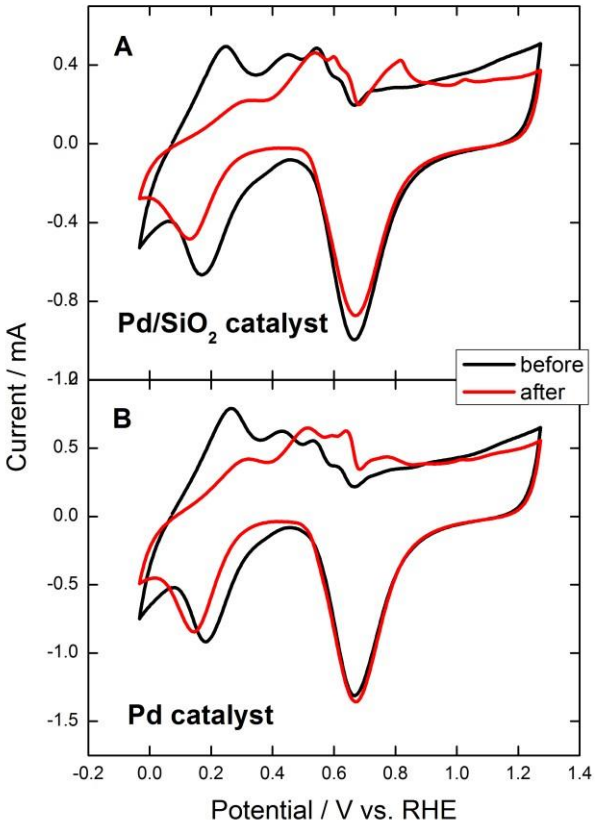

Figure S5. Cyclic voltammograms of (A) Pd/SiO_2 and (B) Pd in the presence of 0.1 mol L^{-1} KOH before (black line) and after (red line) the degradation test protocol, which consist in 100 potential cycles cycles between 0.57 and 1.27 V at 0.05 V s^{-1} in 0.1 mol L^{-1} KOH + 0.2 mol L^{-1} GlOH.