Supporting Information

Oriented Pt nanoparticles supported on few-layers graphene as highly active catalyst for aqueous phase reforming of ethylene glycol

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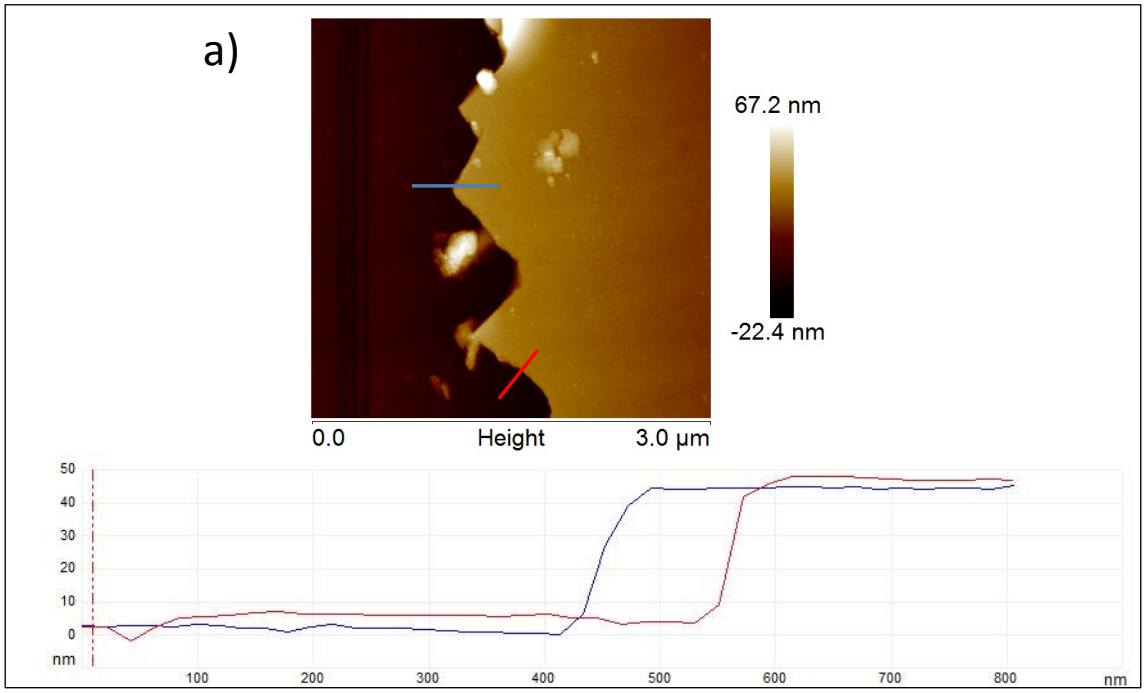
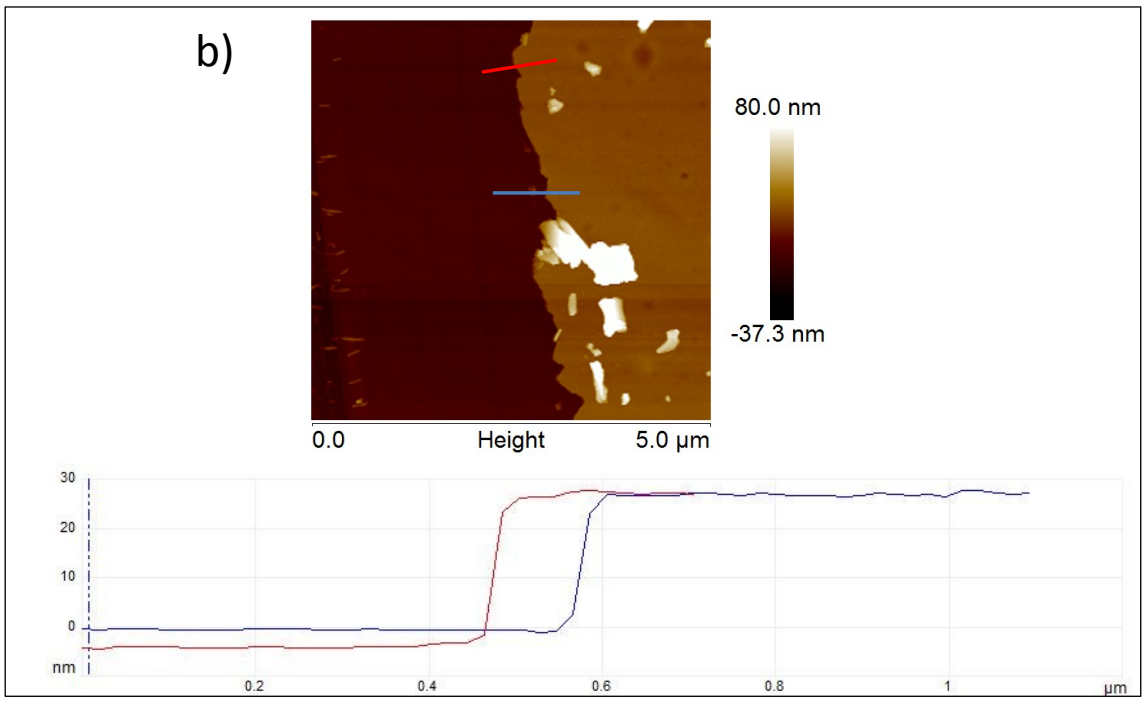
Figure S1. AFM of chitosan films made with a 20 mg·mL^{-1} chitosan aqueous solution images at 2000 rpm (a) and 6000 rpm (b). More diluted chitosan solution, 10 mg·mL^{-1}, at 6000 rpm (c). The thickness of the layer is showed below each image.





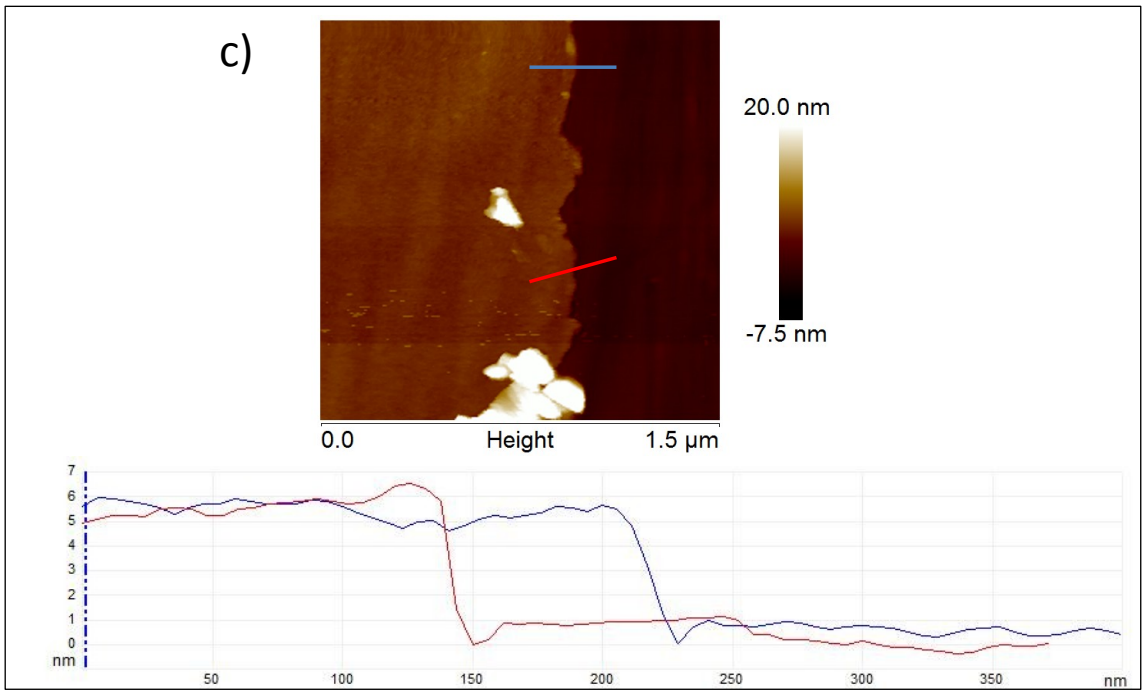


Figure S2. TEM images at low (a) and high (b) magnification of detached $\overline{\text{Pt}}$/*fl*-G films. The inset of the panel (a) corresponds to the histogram of Pt NPs size distribution.

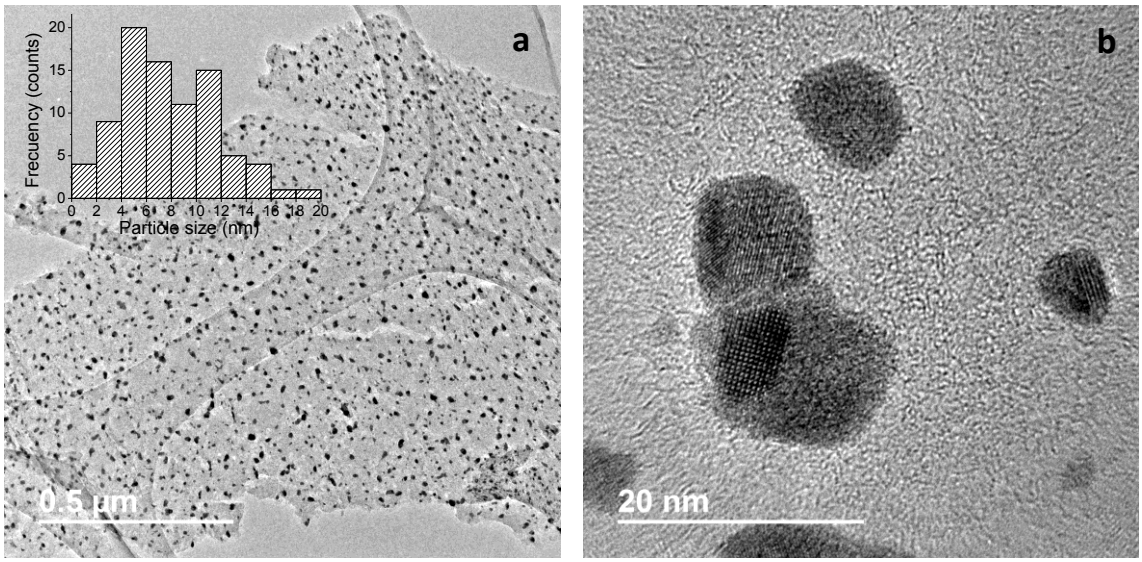


Figure S3. Temporal H_2 (left) and CO_2 (right) production at 250 ºC (a), 225 ºC (b) and 200 ºC (c) for unoriented Pt/*fl*-G catalyst.

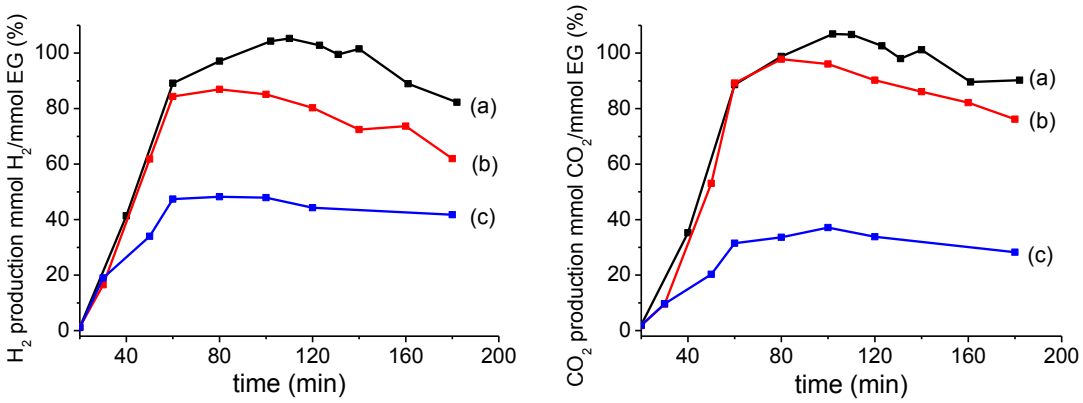


Figure S4. Temporal H_2 (left) and CO_2 (right) production at 10 % (a) and 20 % (b) of EG concentration in water for unoriented Pt/*fl*-G catalyst.

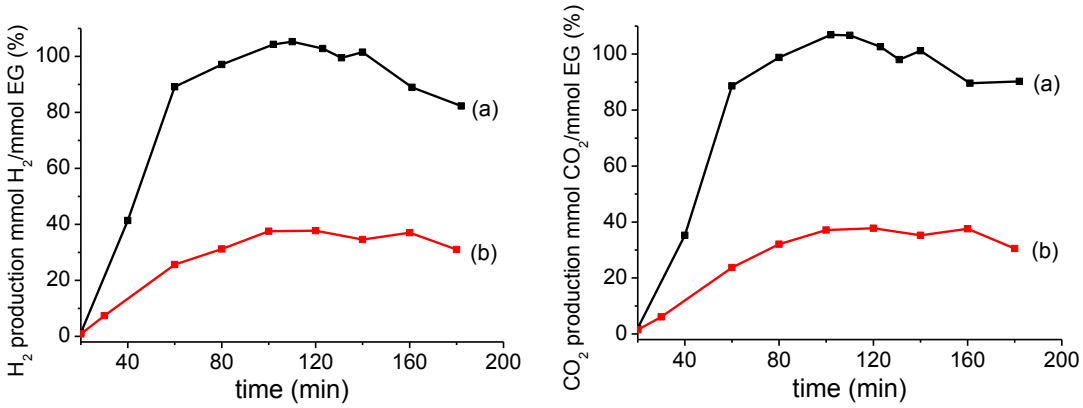


Figure S5. Temporal H_2 production ((mmol H_2/ mmol EG) x 100) for 45 ng·cm^{-2} (a), 0.43 µg·cm^{-2} (b) and 1 µg·cm^{-2} (c) $\overline{Pt}$/*fl*-G films.

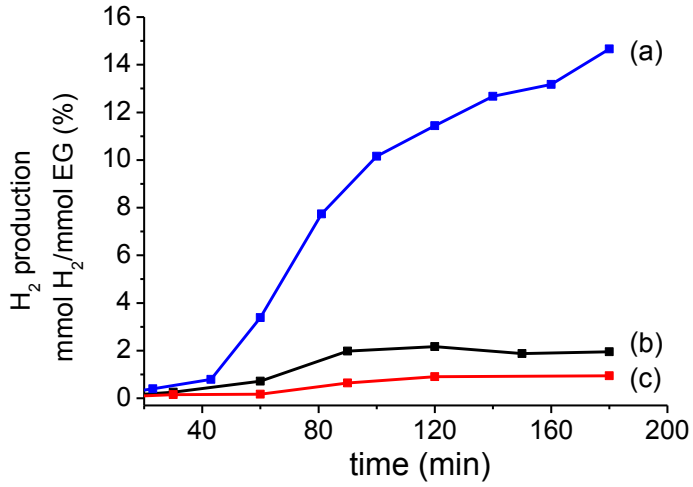


Figure S6. FESEM images at low (a) and high (b) magnification for the $\overline{Pt}$/*fl*-G films with high Pt loading, 1 µg·cm^{-2}. Particle size distribution (c) for the top images.