

## Supplementary material

# Pt Electrocatalyst Prepared by Hydrothermal Reduction onto the Gas Diffusion Layer for High-Temperature Formic Acid and Ethanol Fuel PEMFC

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More SEM images are next presented under different hydrothermal reductive conditions

- Image of the FA160300 (Figure S1) electrode that presented the biggest crystallite size. As can be observed, the structure of the Pt particles is similar to the FA120200.

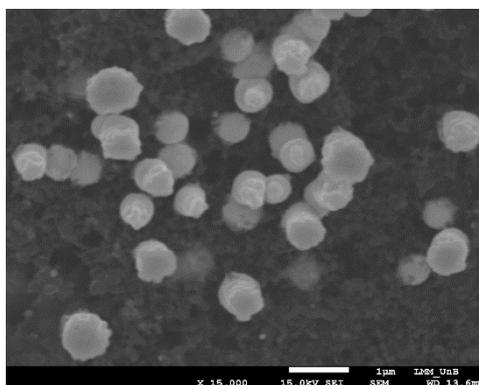


Figure S1. SEM image of the FA160300

- Image of the FA160100 (Figure S2). As in Fig. S1, the structure resembles to Fig. S1 and FA120200.

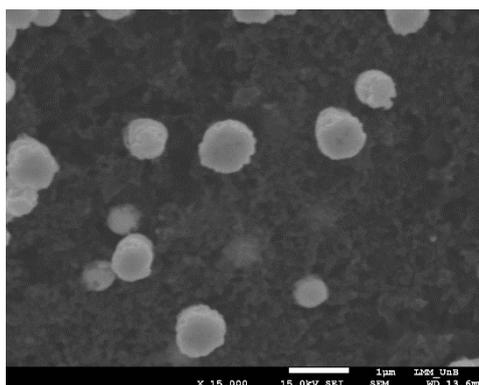
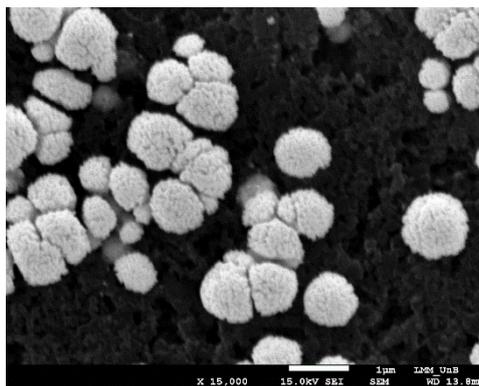


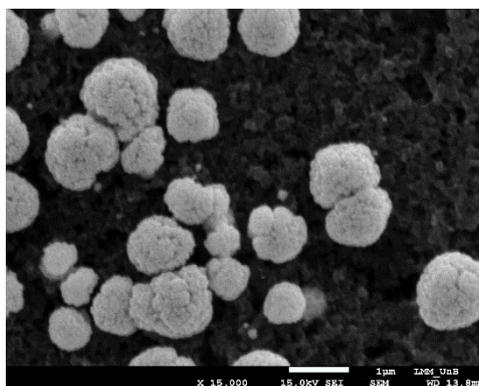
Figure S2. SEM image of the FA160300

- Image of the EG200300 (Figure S3) electrode that presented the biggest crystallite size for the EG materials. The structure resembles to EG160200, with a slightly larger agglomeration.



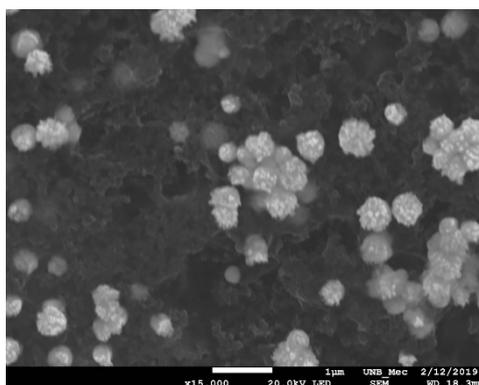
**Figure S3.** SEM image of the EG200300

- Image of the EG200200 (Figure S4) electrode that also presented a large crystallite size. The structure resembles to EG160200 and Fig. S3, with a slightly larger agglomeration.



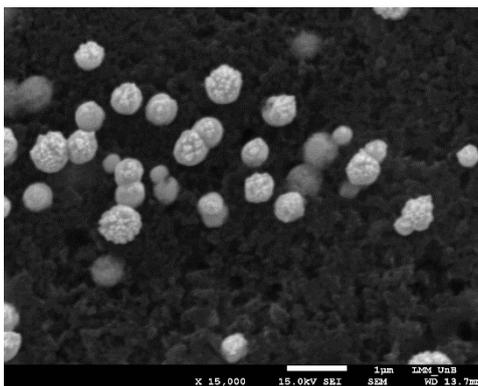
**Fig. S4.** SEM image of the EG200200

- Image of the ET160100 (Figure S5) electrode that presented the biggest crystallite size. As can be observed, the structure of the Pt particles is similar to the ET120300.



**Figure S5.** SEM image of the ET160100

- Image of the ET160300 (Figure S6) electrode that also presented a large crystallite size. The structure resembles to ET120300 and Fig. S5, with a slightly larger agglomeration.



**Figure S6.** SEM image of the ET160300