

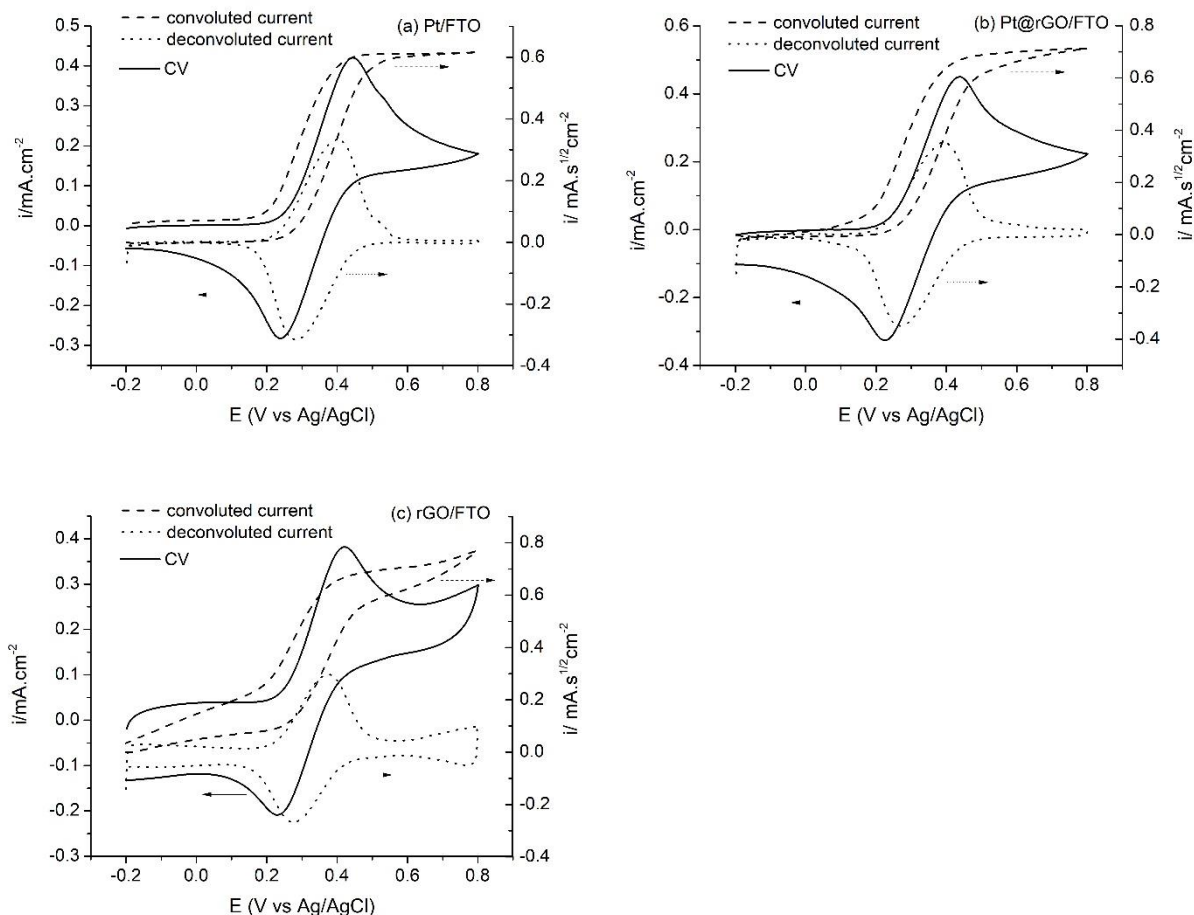
## Supplementary Material for:

# Fabrication and electrochemical behavior investigation of a Pt-loaded reduced graphene oxide composite (Pt@rGO) as a high-performance cathode for dye-sensitized solar cells

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## Convolution – deconvolution transforms

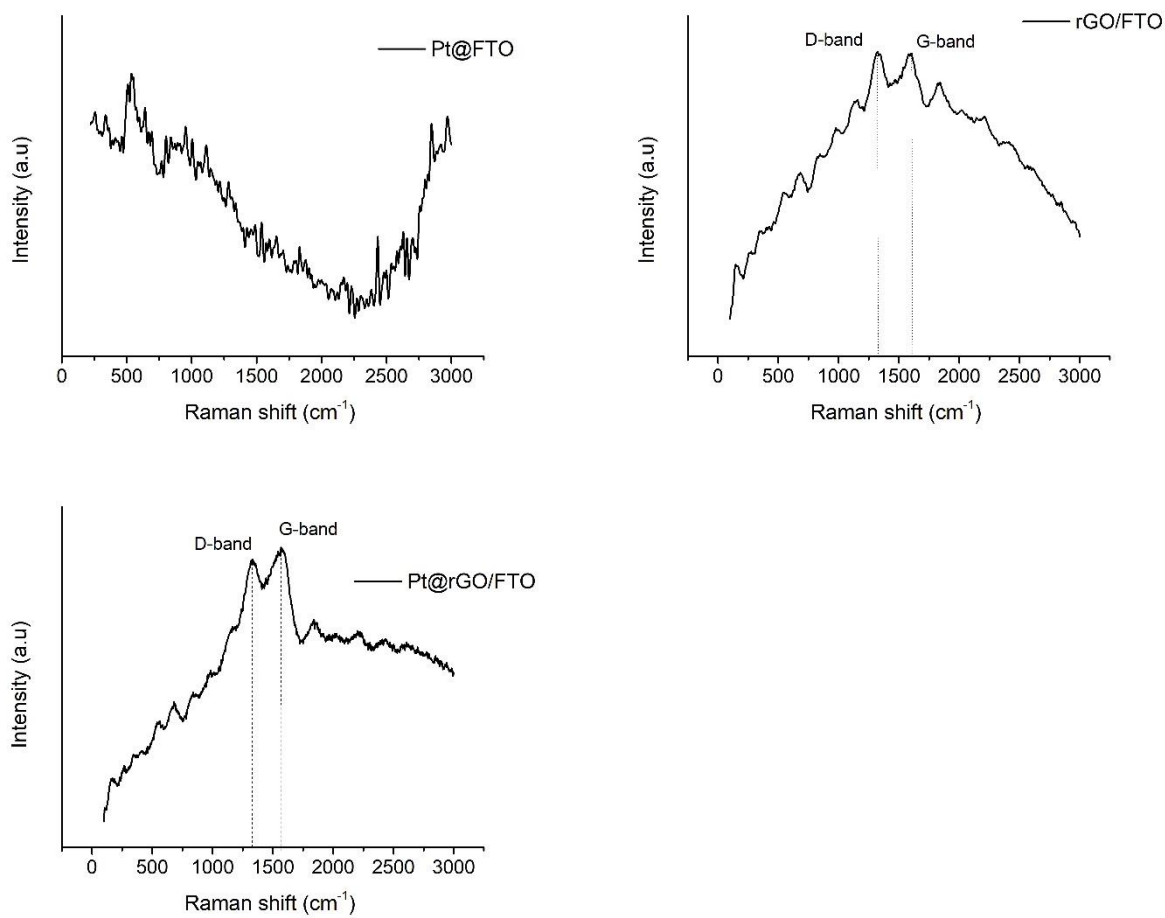
Figure S1 shows the CV curve and corresponding convolution – deconvolution transforms obtained for Pt/FTO, Pt@rGO/FTO and rGO/FTO electrodes.



**Figure S1:** CV (solid line), convolution voltammogram (dash line), and deconvolution voltammogram (dot line) obtained for Pt/FTO (a), Pt@rGO/FTO (b) and rGO/FTO (c) electrodes measured in 0.01 M LiClO<sub>4</sub> and 5 mM ferrocene with scan-rate 100 mV/s.

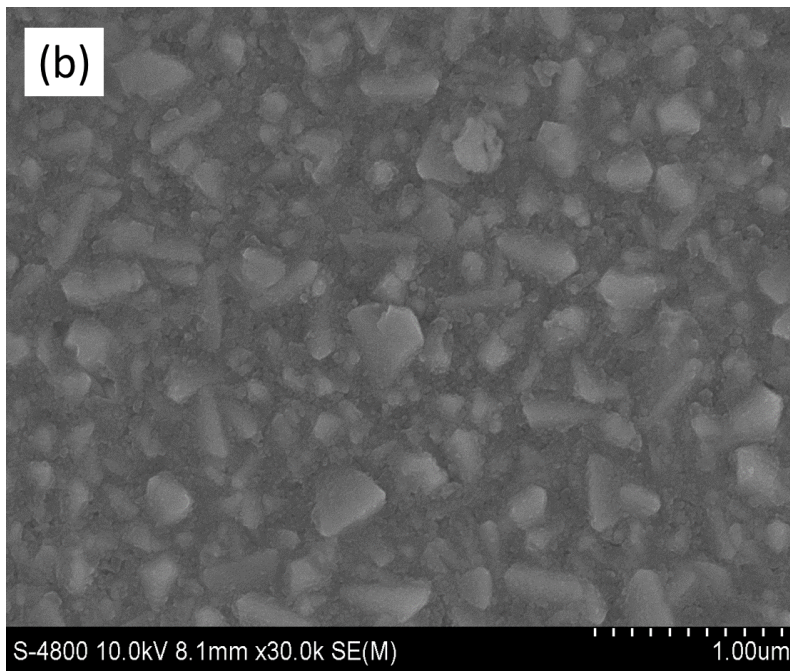
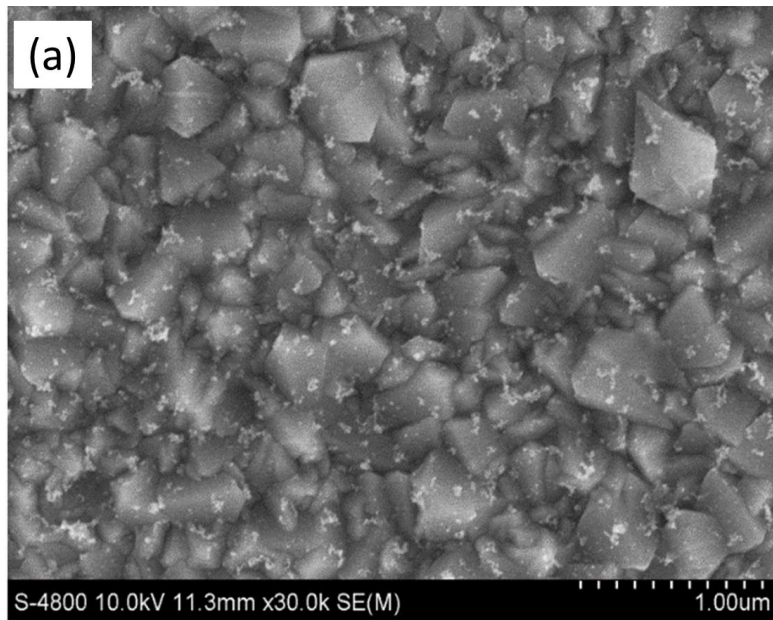
## Raman data and SEM analysis

Figure S2 shows Raman spectra of Pt/FTO, rGO/FTO and Pt@rGO/FTO.



**Figure 2:** Raman spectra of Pt/FTO, rGO/FTO and Pt@rGO/FTO composite.

Figure S3 shows SEM images of Pt/FTO and rGO/FTO.



**Figure S3:** SEM images of Pt/FTO (a) and rGO/FTO (b).