Supplementary Information

Fabrication of poly(3,4-ethylenedioxythiophene) film via a facile method and its application in dye-sensitized solar cells

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Detail experimental procedure of PEDOT/rGO film

PEDOT film was prepared under the best experimental conditions obtained in the above experiment. GO was prepared from natural graphite by improved Hummers method. The solution contains 2 mg/mL GO was formulated with 20.0 mg GO and 10 mL distilled water, and the solution was transferred to a hydrothermal synthesis reactor to react for 8 h under 150 ℃, GO was reduced to rGO in this step. Afterwards, rGO solution with its concentration of 0.5 mg/mL was compounded with 10 mg rGO and 20 mL absolute ethyl alcohol, and spun-coated on the PEDOT film by a spin coater with the rotate speeding is 5000 r/min, then the films were followed by drying treatment at 50 ℃ for 2 h.

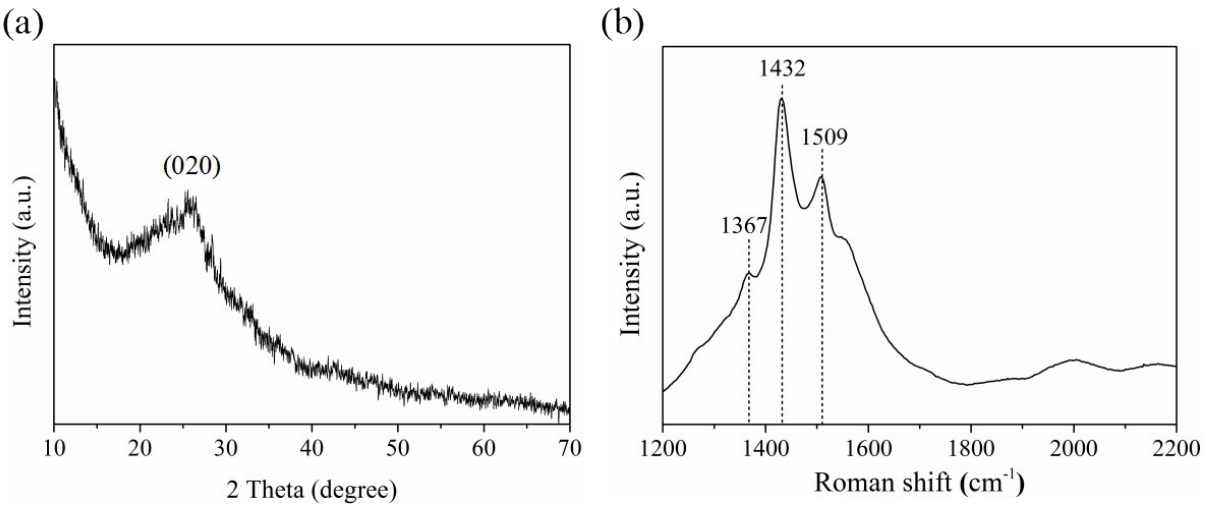

Figure S1 (a) XRD pattern and (b) Roman spectrum of PEDOT film

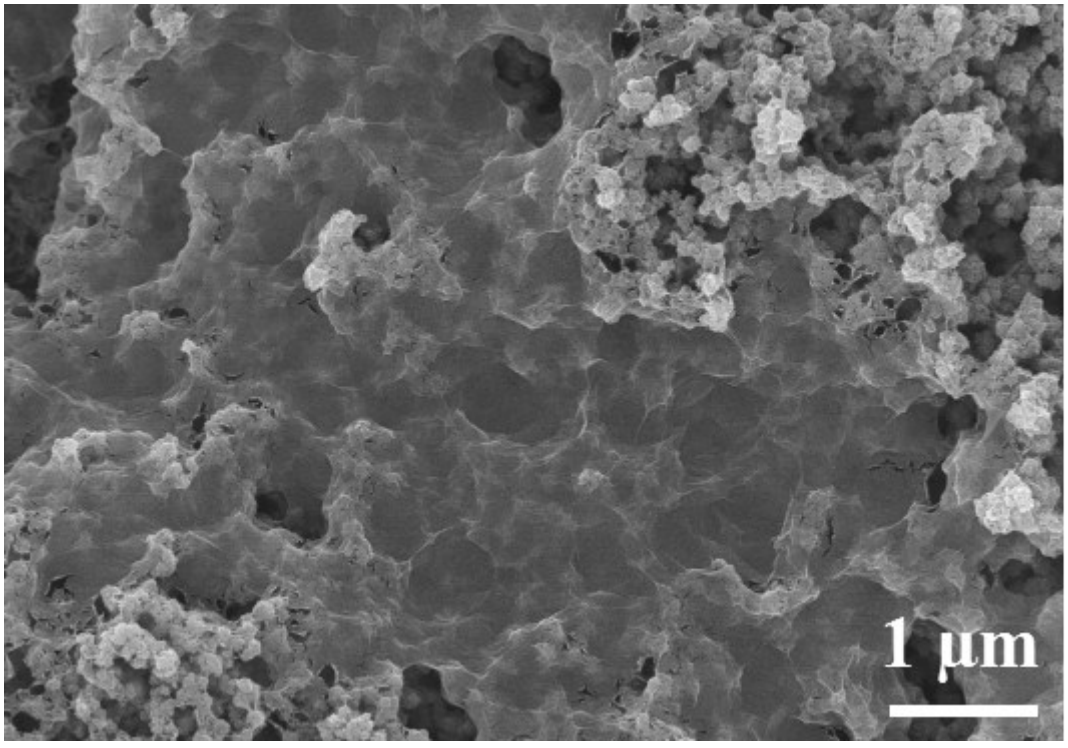

Figure S2 FESEM images of PEDOT/rGO films

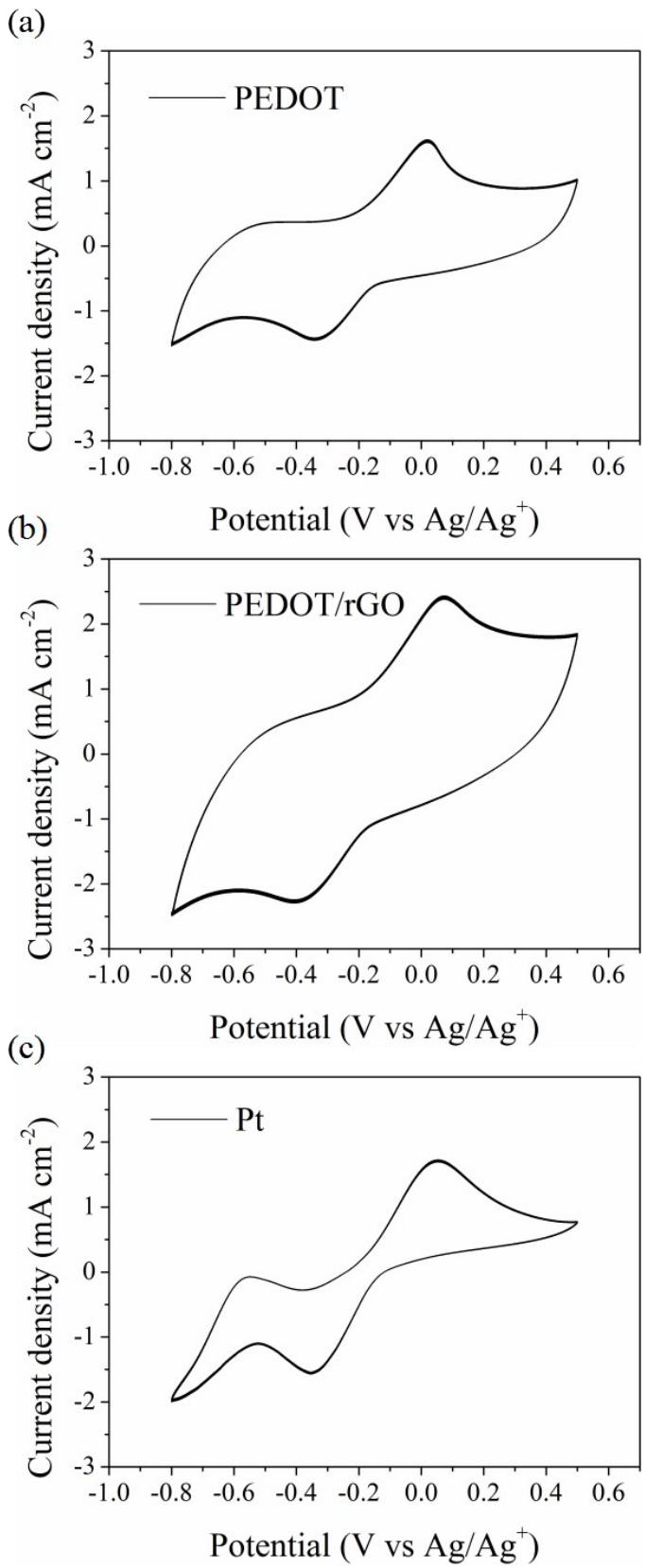

Figure S3 Cyclic voltammograms curves of various films with 100 cycles