

Supplementary information

Effect of Graphene and Au@SiO₂ core-shell nano-composite on photoelectrochemical performance of dye-sensitized solar cells based on N-doped titania nanotubes

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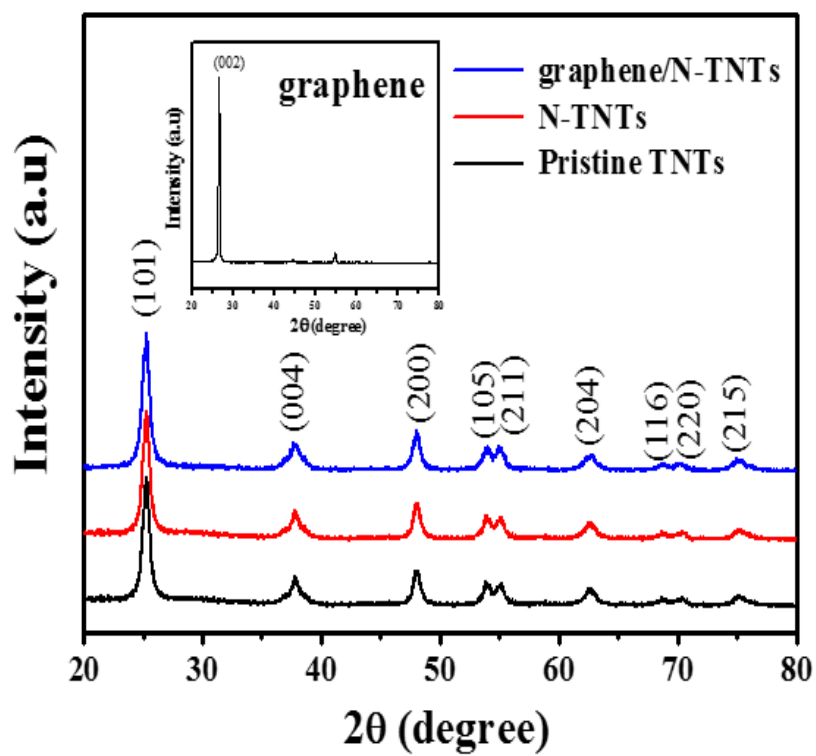


Fig. S1 XRD patterns of pristine TNTs, N-TNTs, and graphene/N-TNT composites. Inset of figure shows the diffraction pattern of graphene.

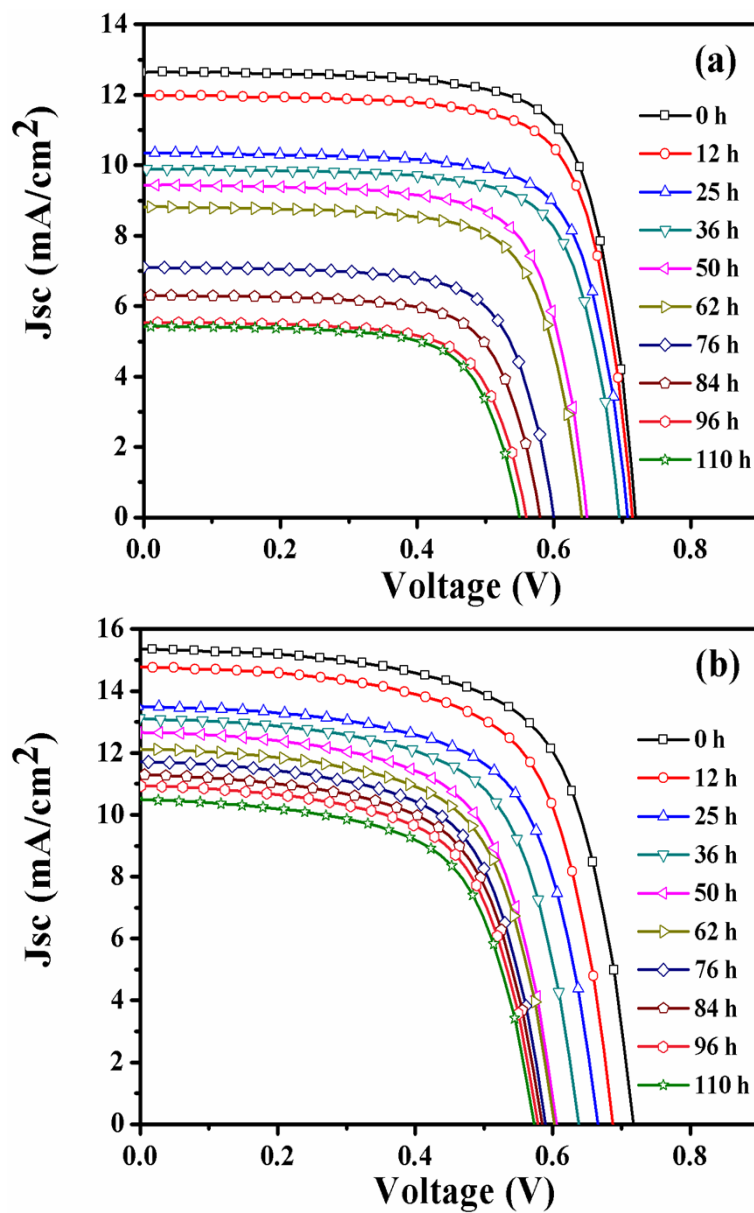


Fig. S2. Time dependent J-V characteristics of DSSCs prepared with graphene/N-TNTs from 0 h to 110 h with 12-13 h interval; (a) DSSC without Au@SiO₂ NPs and (b) DSSC with Au@SiO₂ NPs.