

Electronic Supplementary Information

Reduced graphene oxide modified highly ordered TiO₂ nanotube array photoelectrode with enhanced photoelectrocatalytic performance under visible- light irradiation

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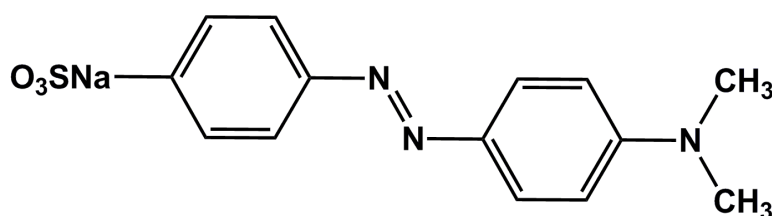


Figure S1. Chemical structure of MO molecule.

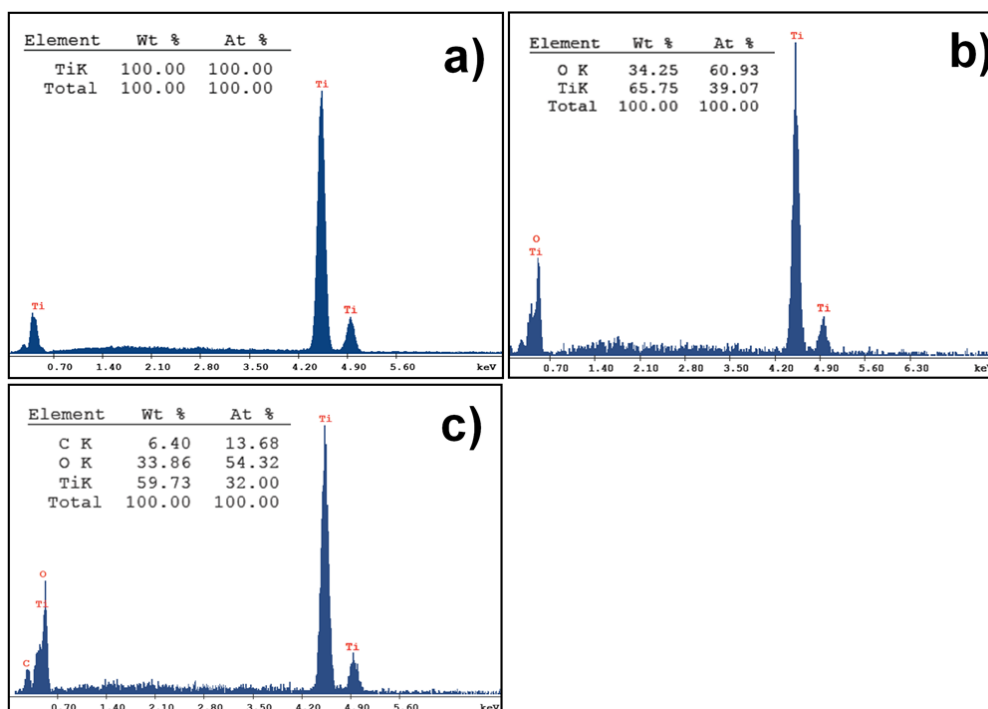


Fig. S2 EDX spectra of the metallic Ti substrate (a), bare TNTs (b) and RGO-TNTs (c) nanostructures.

The quantitative elemental analysis results for the above samples are also listed.

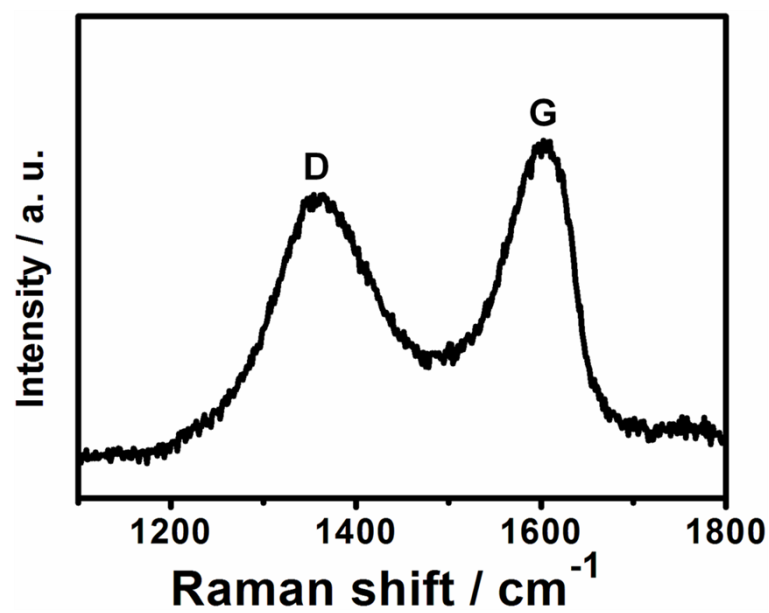


Fig. S3 Raman spectrum of GO nanosheets.

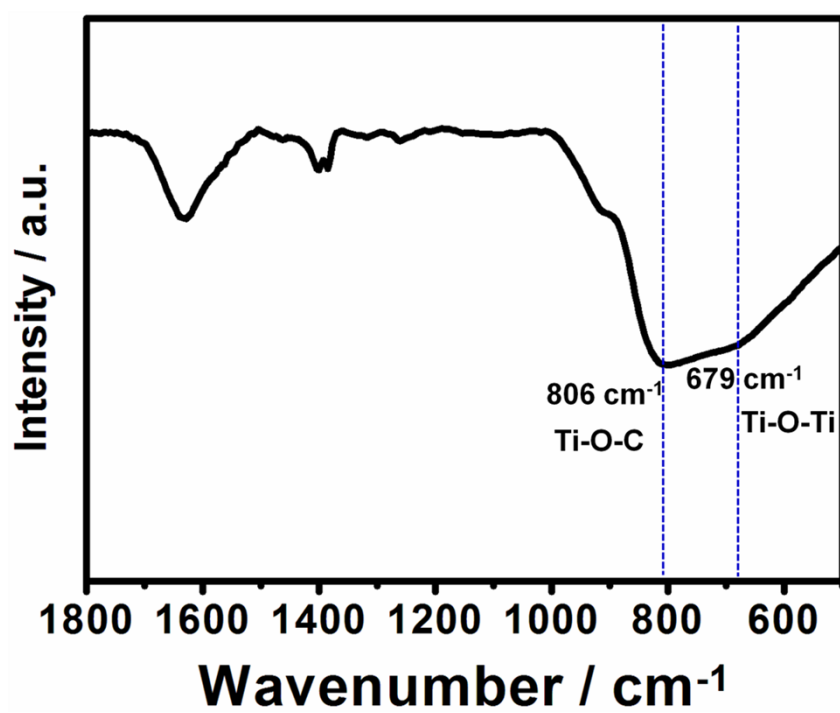


Fig. S4 FT-IR spectrum of RGO-TNTs nanostructures.

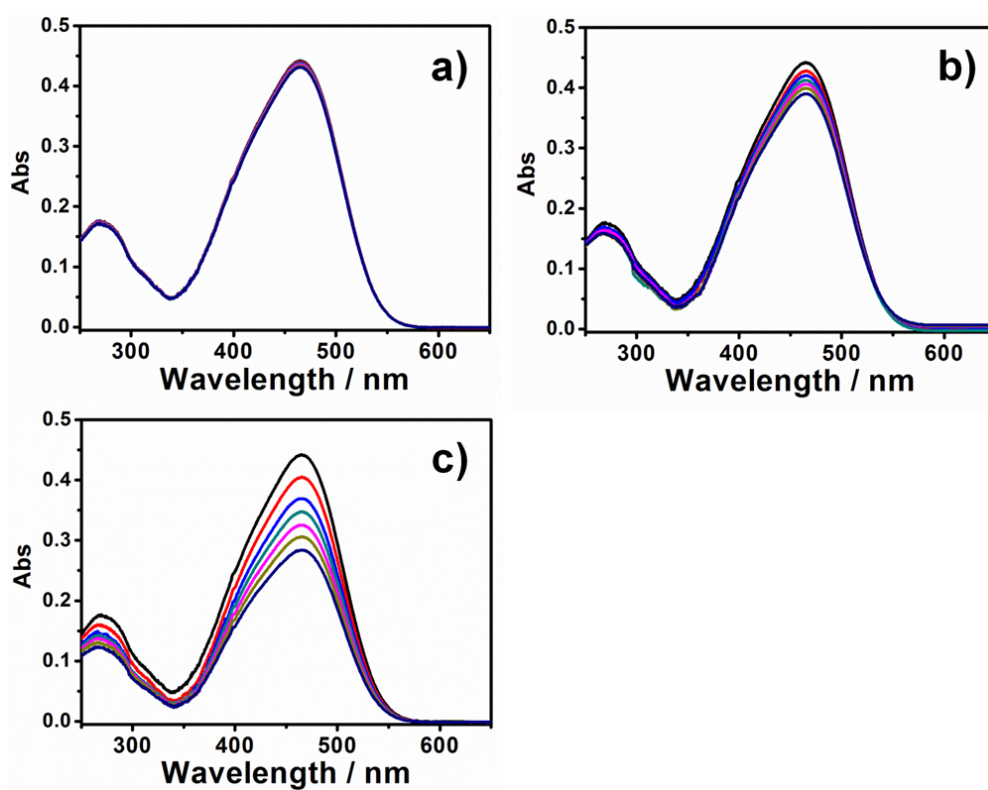


Fig. S5 The real-time absorption spectra of MO molecules during the PEC degradation process over no catalysts (a), bare TNTs (b) and RGO-TNTs (c) electrode under visible-light illumination from 0 min to 120 min.

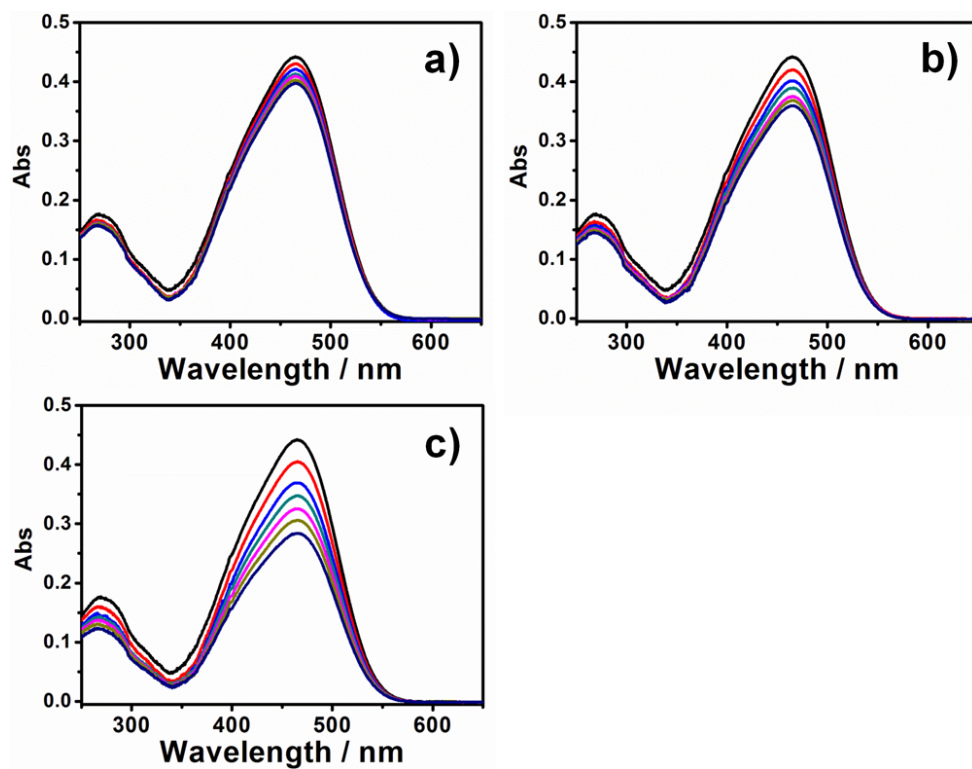


Fig. S6 The real-time absorption spectra of MO molecules during the degradation process over RGO-TNTs electrode under different processes, (a) EC process, (b) PC process and (c) PEC process from 0 min to 120 min.

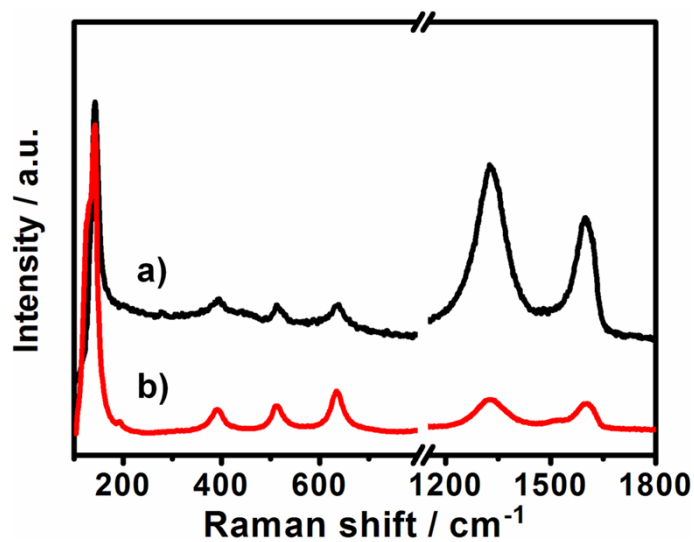


Fig. S7 Raman spectra of RGO-TNTs electrode before (a) and after (b) the PEC degradation of MO dye under visible-light irradiation.

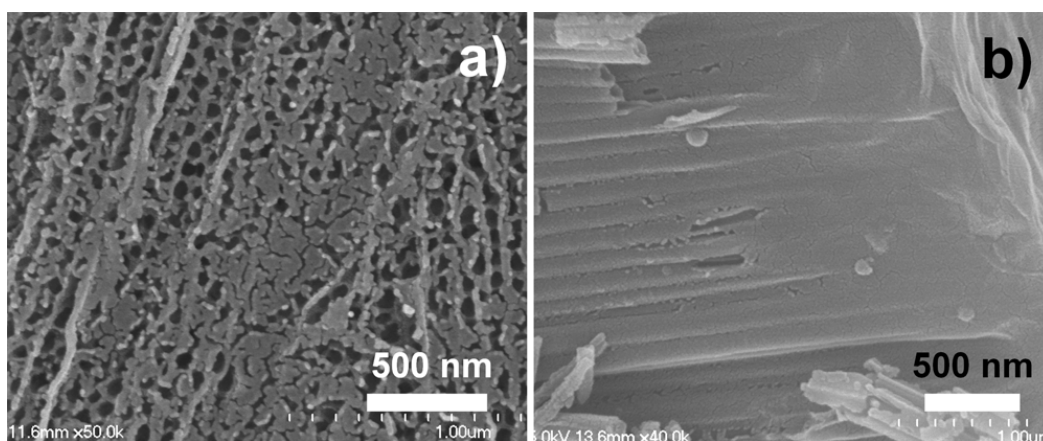


Fig. S8 SEM images of RGO-TNTs electrode after the PEC degradation of MO dye under visible-light irradiation.