

Supporting Information

Photo-Assisted Preparation and Patterning of Large-Area Reduced Graphene Oxide-TiO₂ Conductive Thin Film

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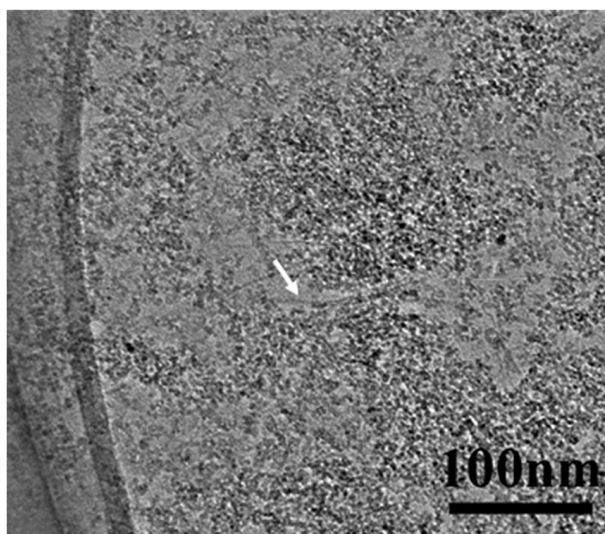


Figure 1S TEM image of GO-TiO₂ thin film

Figure 1S shows a TEM image of GO-TiO₂ thin film transferred directly from filtrating paper to a Cu grid. There are many wrinkles on the film, see for example the area marked with an arrow in the figure, due to the flexible nature of GO sheets. TiO₂ nanoparticles are observed to pack randomly and densely inside the film.

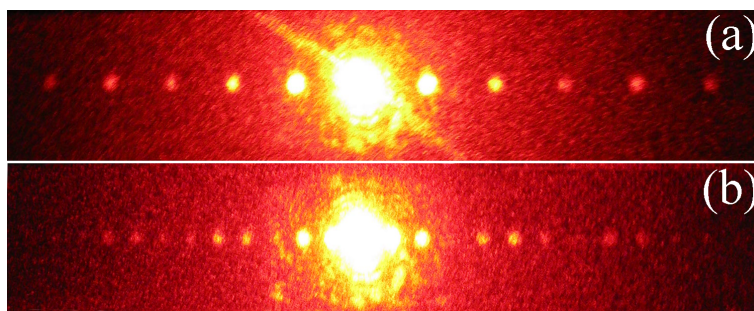


Figure 2S Fraunhofer diffraction patterns of PRGO-TiO₂ micropatterns replicated from photomasks with line/space width of (a) 10 μm/ 20μm and (b) 20 μm/ 50μm, respectively.

Figure 2S shows two Fraunhofer diffraction patterns obtained by irradiating the UV-patterned GO-TiO₂ film with a He-Ne laser (633 nm). The patterned film was prepared by use of a photomask half with a period of 10 μm/ 20 μm for line/ space width (period 1), and half with a period of 20 μm/ 50μm (period 2), respectively. The optical micrograph of the patterned film was shown in Fig. 3c. The Fraunhofer diffraction patterns shown in Fig. 2S (a) and (b) were taken at the position of period 1 and period 2, respectively. The observation of highly ordered diffraction patterns proved the formation of high-quality periodic structures of PRGO-TiO₂ lines alternated with GO-TiO₂ lines.