Electronic Supplementary Information

RGO/TiO_2 nanosheets immobilized on magnetically actuated artificial cilia film: A new mode for efficient photocatalytic reaction

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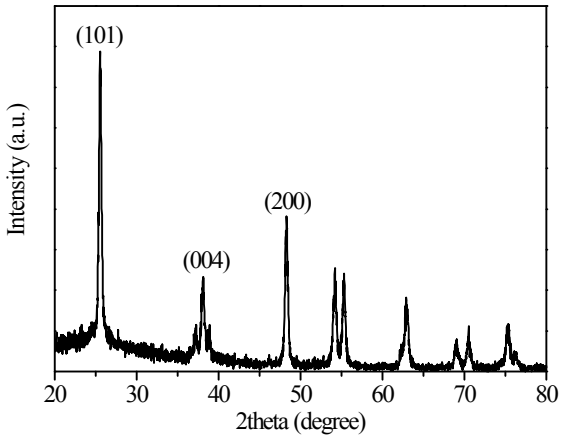

Fig. S1 XRD pattern of as-prepared TiO_2 nanosheets.

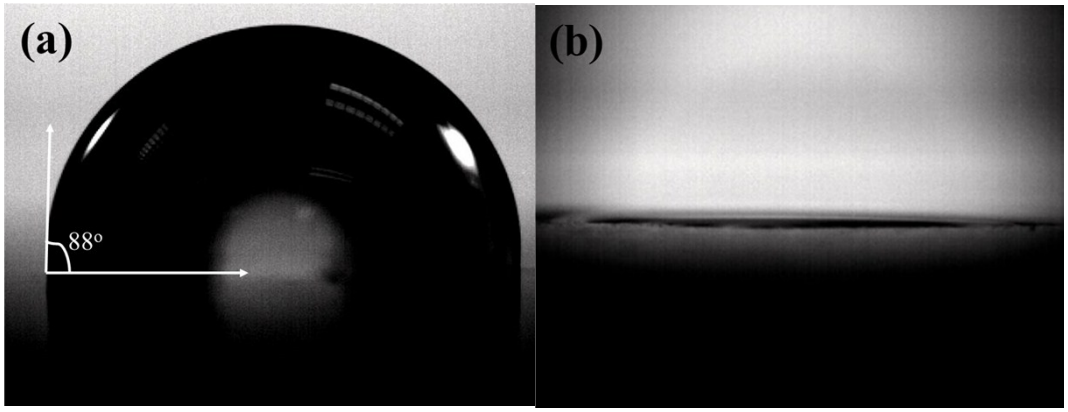

Fig. S2 Photograph of water droplets deposited on the PDMS film (a) before and (b) after AAPGD treatment.

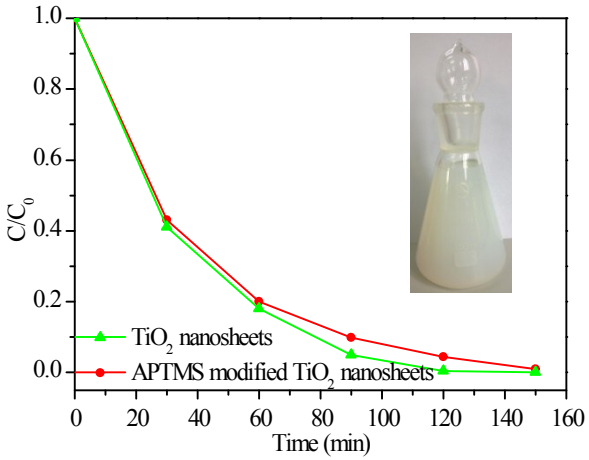

Fig. S3 Photocatalytic activity of pristine and APTMS modified TiO_2 nanosheets in decomposing RhB. Photograph of APTMS modified TiO_2 nanosheets dispersed in ethanol is inserted.

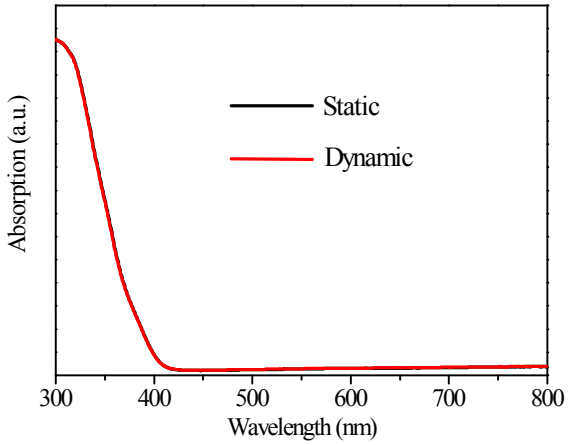

Fig. S4 Light absorption spectra of the cilia film immobilized RGO/TiO_2 at the static state and dynamic state (800 r/min).

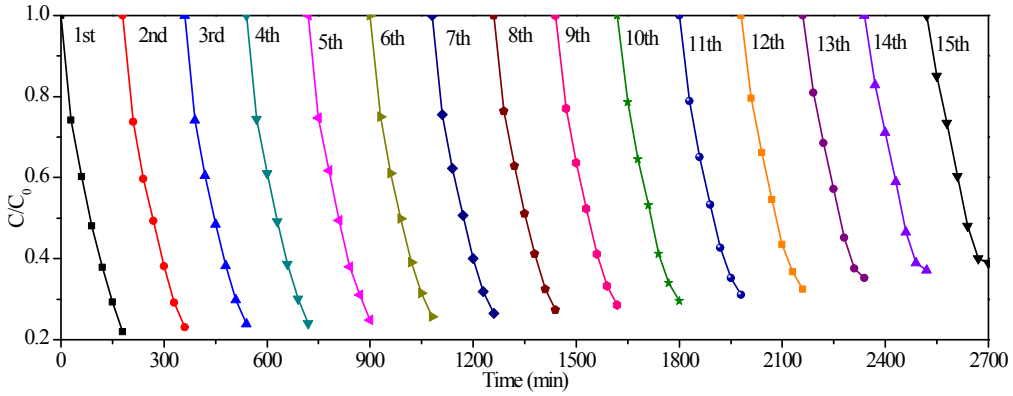

Fig. S5 Circular reactions of as-prepared artificial cilia film in decomposing RhB at a magnetic actuation speed of 800r/min.

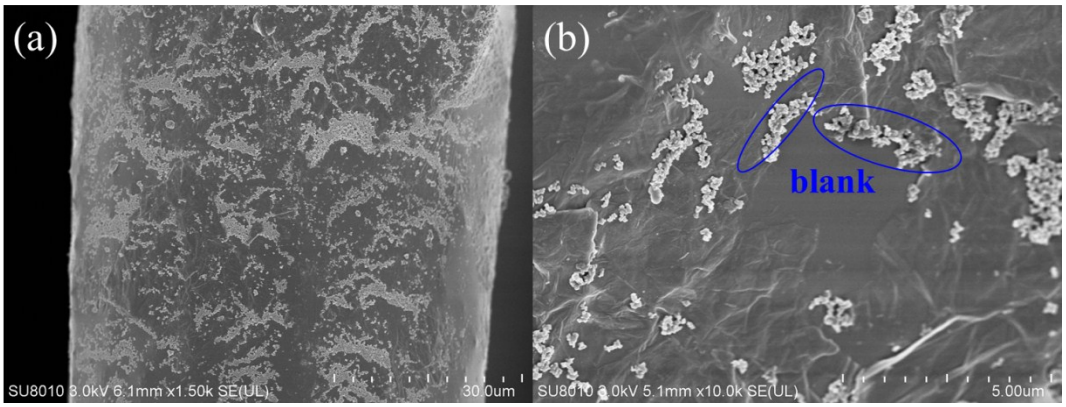

Fig. S6 SEM images of (a) typical cilia surface and (b) the reduced TiO_2 density and positive effect of RGO after 15 circular reactions.

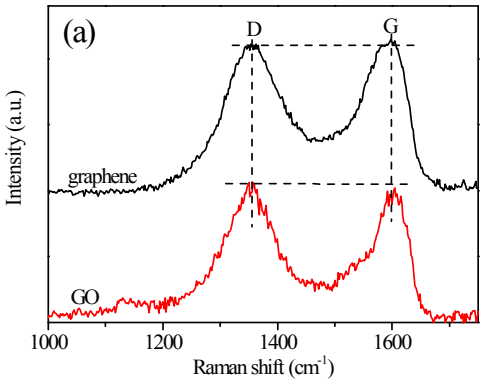

Fig. S7 Raman spectra of GO and RGO.