

Supplementary Information

Graphene oxide/titania hybrid films with dual-UV-responsive surfaces of tunable wettability

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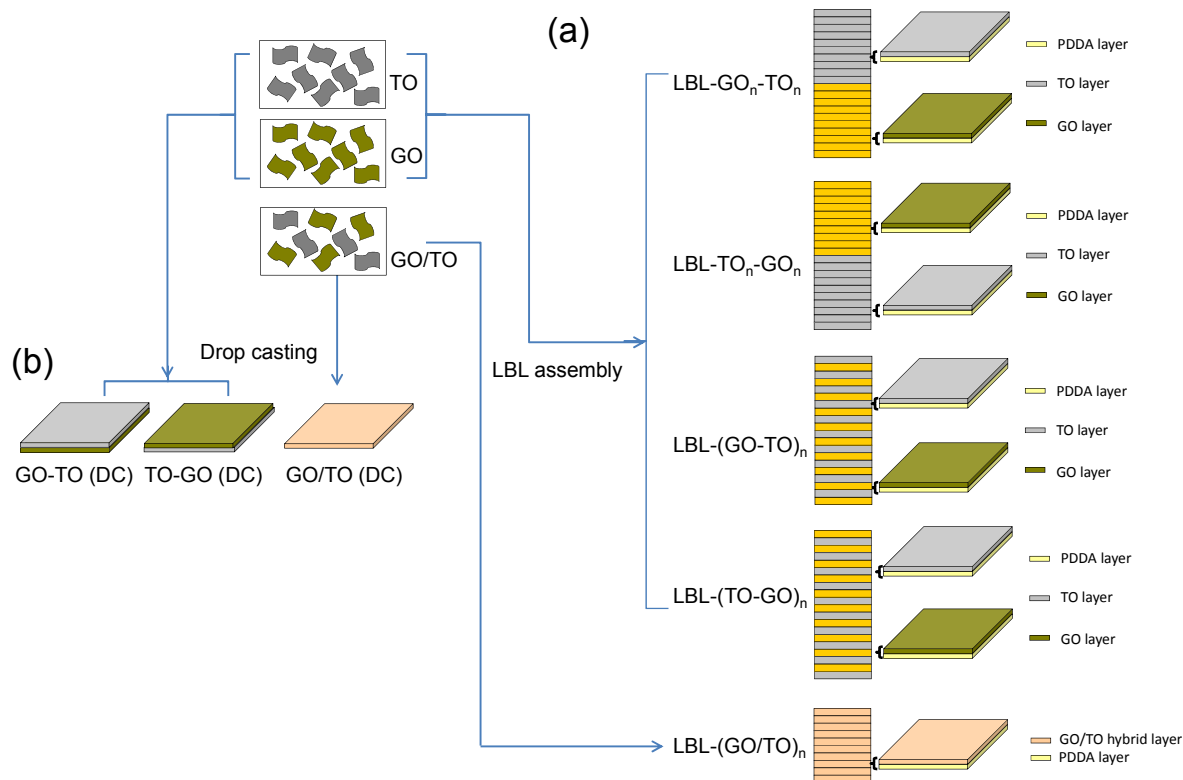


Figure S1 Schematics for the fabrication of hybrid films of GO and TO. (a) LBL and (b) DC.

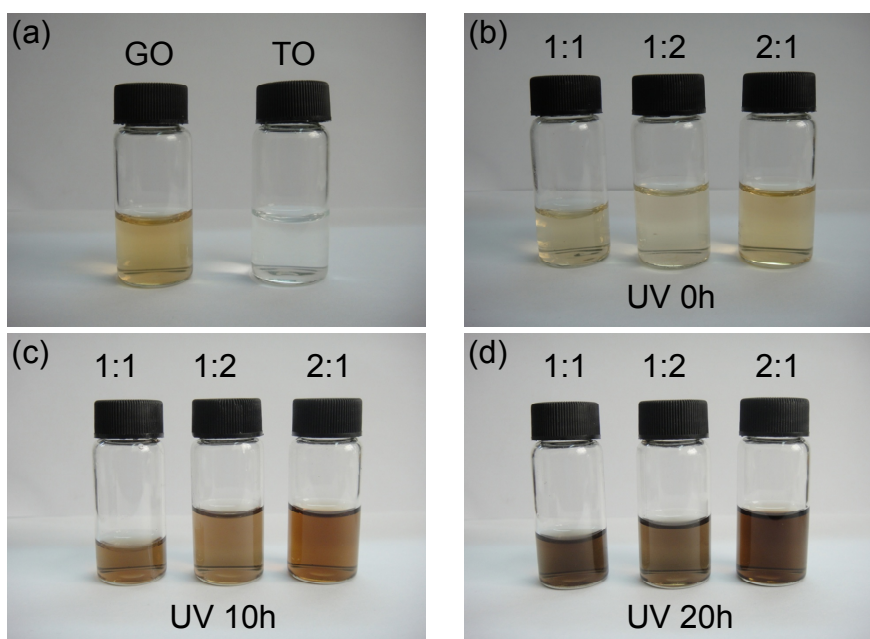


Figure S2 Photographs of (a) GO colloidal suspension (0.1mg/mL) and TO colloidal suspension (0.08mg/mL) and their hybrid colloidal suspensions with volume ratios of 1:1, 1:2, and 2:1 (from left to right) after UV irradiation for (b) 0h, (c) 10h and (d) 20h.

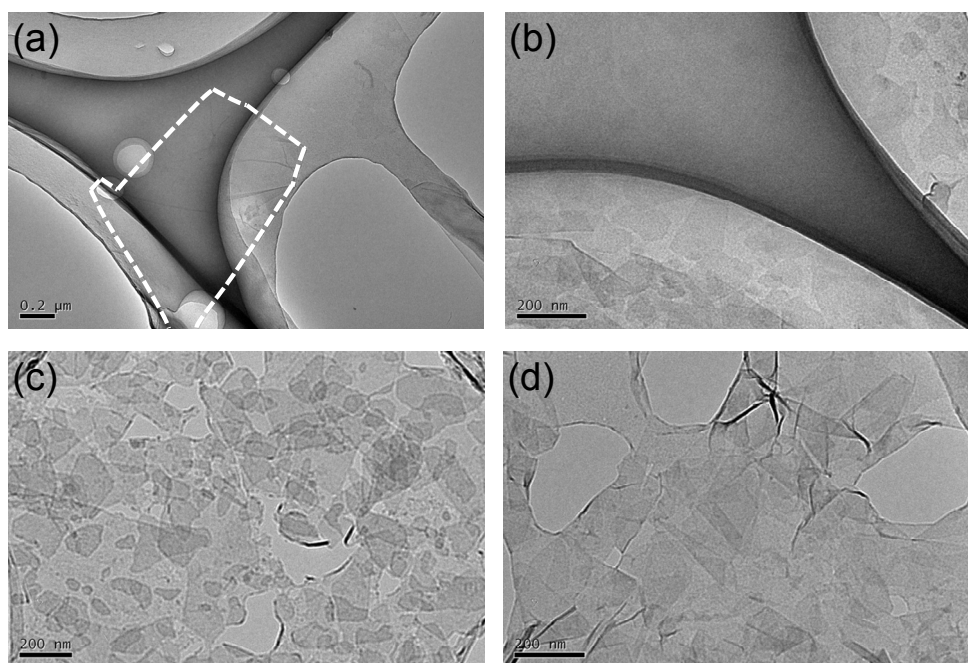


Figure S3 TEM images of (a) GO nanosheets, (b) TO nanosheets, (c) GO-TO film and (d) GO/TO hybrid film fabricated by LBL.

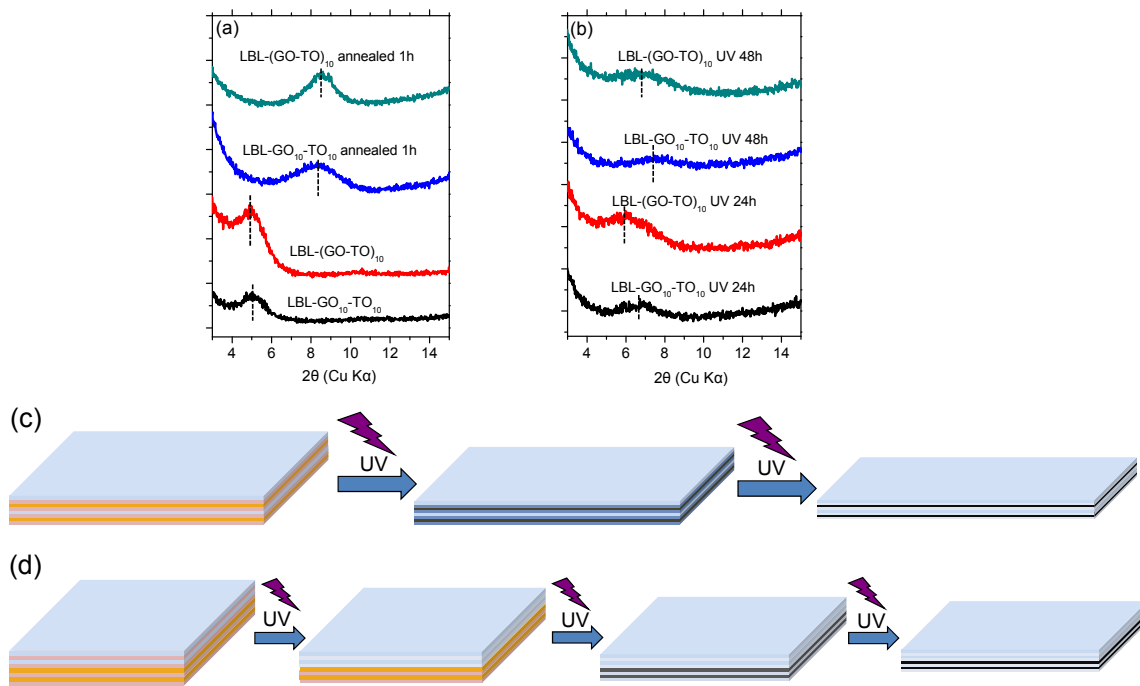


Figure S4 XRD patterns of (a) as-prepared samples of GO_n-TO_n and $(GO-TO)_n$ as well as the samples after annealing at 300°C in air for 1h, (b) GO_n-TO_n and $(GO-TO)_n$ after UV irradiation for 24h and 48h. Mechanism schematics of UV assisted PDDA decomposition and GO reduction of (c) $(GO-TO)_n$ and (d) GO_n-TO_n .

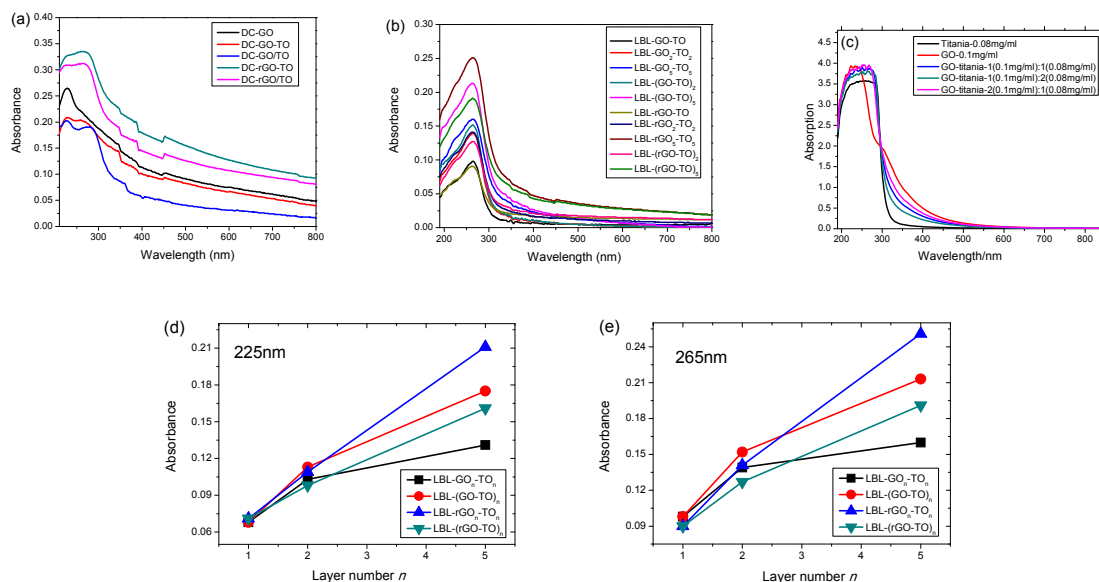


Figure S5 (a) UV-vis absorption spectra of as-prepared samples as well as the samples after UV for 48h fabricated by drop-casting. (b) UV-vis absorption spectra of as-prepared samples as well as the samples after UV irradiation for 48h fabricated by LBL. (c) UV-vis absorption spectra of GO, TO as well as hybrid colloidal suspensions with different ratios. (d) UV-vis absorption peaks located at 265nm and ϵ the shoulders located at 225nm for different structures of the LBL samples. (e) UV-vis absorption peaks located at 265nm and ϵ the shoulders located at 225nm for different structures of the LBL samples.

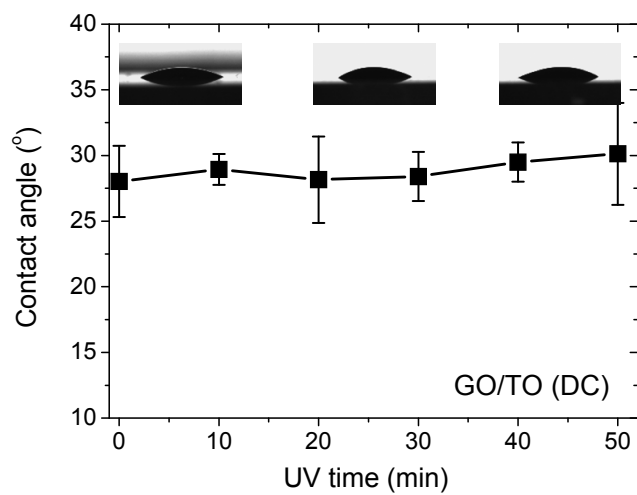


Figure S6 GO/TO hybrid film by drop-casting using GO/TO colloidal suspension [1(0.2mg/mL) :1(0.16mg/mL)] as the source.