Electronic Supplementary Information

Facile Approach to Surface Functionalized MoS₂ Nanosheets

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Fig. S1 Digital photographs of MoS₂-MPA, MoS₂-CY and MoS₂-TG in different solvents.
Fig. S2 Representative TEM images of MoS$_2$-MPA (a-c), MoS$_2$-CY (d-f) and MoS$_2$-TG (g-i).
Fig. S3 Representative SEM images of bulk MoS$_2$ (a), MoS$_2$-MPA (b), MoS$_2$-CY (c) and MoS$_2$-TG (d). The (a) is secondary electrons image. The (b), (c) and (d) are backscattered electrons images on copper substrate.
Fig. S4 (a) N1s spectra of MoS$_2$-none and MoS$_2$-CY. (b) C1s spectrum of MoS$_2$-TG.
Fig. S5 (a) Representative AFM image of WS$_2$-MPA. The height profile in panel (b) is along the line in (a). (c) Representative TEM image of WS$_2$-MPA. (d) TGA curve of WS$_2$-MPA. XPS survey (e) and C1s (f) spectra of WS$_2$-MPA.
**Fig. S6** ζ-potential of MoS$_2$-none and MoS$_2$-MPA.

**Fig. S7** Representative TEM images of MoS$_2$-Ag using MoS$_2$-MPA (a,b) and MoS$_2$-none (c,d) as substrate, respectively.
Fig. S8 Digital photographs of MoS$_2$-g-PMMA and MoS$_2$-g-PCL in different solvents.