Support information

CTAB-assisted synthesis of ultrathin MoSe$_2$ nanosheets perpendicular to graphene for adsorption and photodegradation of organic dyes under visible light

Fig. S1 FT-IR spectra of MoSe$_2$/rGO composites and MoSe$_2$ \perp$ rGo heterostructures.
Fig. S2 A typical elemental mapping under SEM of MoSe$_2$-LrGO heterostructure.
Fig. S3 SEM images of the sample with CTAB but in the absence of stirring.
Fig. S4 STEM images of MoSe$_2$ rGO heterostructure with different magnifications.
Fig. S5 The N$_2$ adsorption-desorption isotherms of pure MoSe$_2$, MoSe$_2$/rGO composites and MoSe$_2$⊥rGO heterostructure.
Fig. S6 TG curves of MoSe$_2$/rGO composites and MoSe$_2$⊥rGO heterostructure.
Fig. S7 Adsorption spectra of three organic dyes in darkness with MoSe$_2$⊥rGO heterostructure.