## Supporting information.

## Highly Selective Photocatalytic and Sensing Properties of 2D-Ordered Dome films of Nano Titania and Nano Ag<sup>2+</sup> doped Titania

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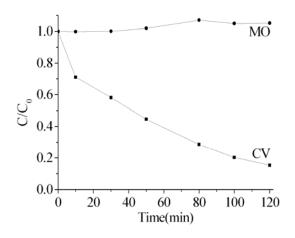


Figure S1. The time course of the decrease in the concentration for the degradation of the cationic CV and anionic MO under the UV-visible irradiation on the illuminated 2D-Ag-TiO<sub>2</sub> film that had been illuminated for three months under indoor fluorescent lamp at ambient temperature.

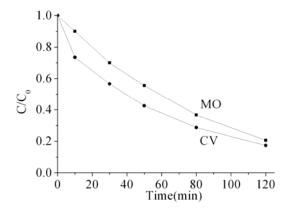


Figure S2. The time course of the decrease in the concentration for the photodegradation of the cationic CV and anionic MO on  $TiO_2(P25)$  under the UV-visible irradiation.

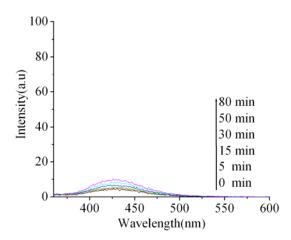
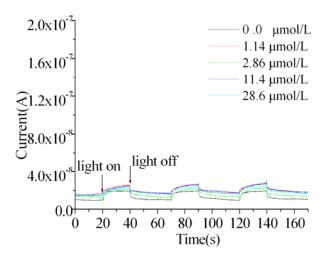


Figure S3. The time course of the fluorescence spectra of the aqueous basic solution of terephthalic acid with excitation at 315 nm in the presence of the 2D-Ag- $TiO_2$  film.



 $_{30}$  Figure S4. The transient response of the photocurrent with evolution of MO concentration for the 2D-TiO $_{\rm 2}$  film under visible irradiation.