## Composite Aerogel Membranes with Well Dispersed Nano M-TiO2@GO

## for Efficient Photocatalysis

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Fig. S1. The SEM image of Ti<sub>3</sub>AlC<sub>2</sub>.



Fig. S2. FTIR spectrum of oxidized MXene powders.



Fig. S3. High resolution XPS spectra of O 1s region of MXene before and after oxidation



Fig. S4. Characterization of morphology and element distribution of  $C_{15}M_{15}G_5$ . (a) The SEM image, the EDS distribution maps of (b) C, (c) O, and (d) Ti elements



Fig. S5. Adsorption curves of M-TiO\_2@GO/CHs composite aerogel membrane for different dyes.

(a) Rhodamine B, (b) Acid Blue 1.



Fig. S6. UV-vis absorption spectra of degradation of different dyes by C<sub>15</sub>M<sub>15</sub>G<sub>5</sub>

(a) Rhodamine B, (b) Acid Blue 1.