

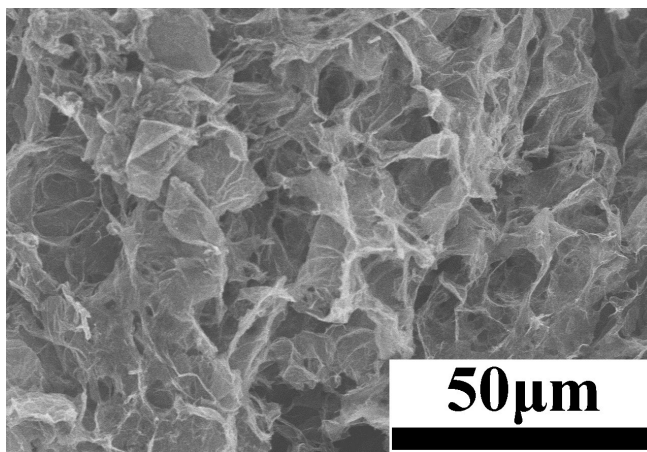
# Supporting Information

## 3D graphene/MnO<sub>2</sub> aerogels for high efficient and reversible removal of heavy metal ions

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### Preparation of Birnessite-Type MnO<sub>2</sub> Nanosheets

In a typical experiment, 2.4 g NaOH, 0.5 g PVP, and 2.97 g MnCl<sub>2</sub>·4H<sub>2</sub>O were added to ethylene glycol (90 mL) in a 250 mL round flask. H<sub>2</sub>O<sub>2</sub> (10 mL) was then added to the obtained red solution under magnetic stirring. After being refluxed for 1 h, the mixture was cooled to room temperature naturally. The resulting black precipitate was collected by centrifugation and washed with ethanol several times to remove the impurities and PVP.

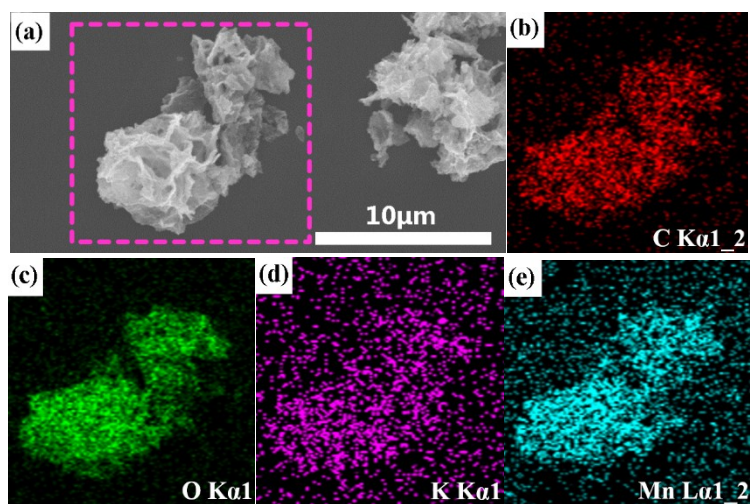


**Fig.S1** SEM image of graphene in the absence of Gly.

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† Electronic supplementary information (ESI) available: Preparation of birnessite-type MnO<sub>2</sub> nanosheets; SEM image of graphene in the absence of Gly; EDS mapping of graphene/MnO<sub>2</sub> sample.



**Fig.S2** TEM image of graphene/MnO<sub>2</sub> and the corresponding elemental mapping images: (b) C; (c) O; (d) K; (e) Mn.