

Supporting Information

Cellulose Fibers Constructed Convenient Recyclable 3D

Graphene-Formicary-like δ -Bi₂O₃ Aerogels for the Selective Capture of Iodide

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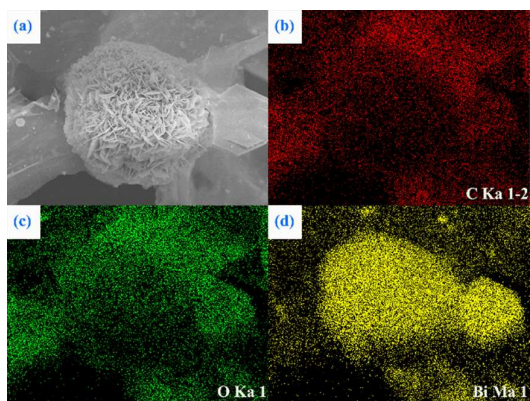


Figure S1. SEM Mapping of the as-prepared FL- δ -Bi₂O₃ aerogels. (a) SEM image. (b) Carbon mapping. (c) Oxygen mapping. (d) Bismuth mapping.

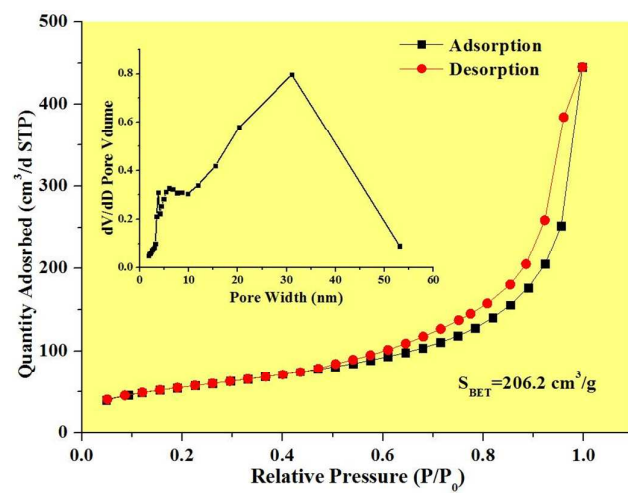


Figure S2. N₂ adsorption/desorption isotherm curve for FL- δ -Bi₂O₃ aerogels.

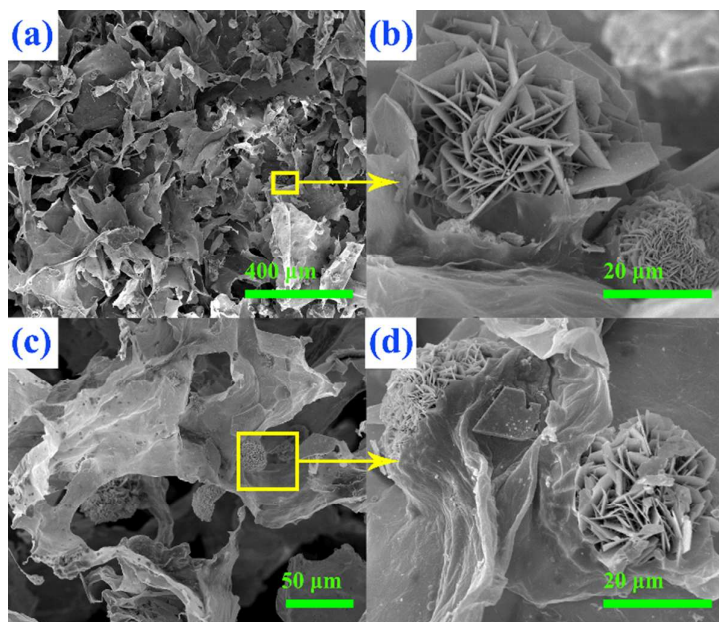


Figure S3. The micro-morphology of FL- δ -Bi₂O₃ aerogel before and after selectively captured radioactive I⁻ anions. (a) and (b) Before the reaction. (c) and (d) After the reaction.

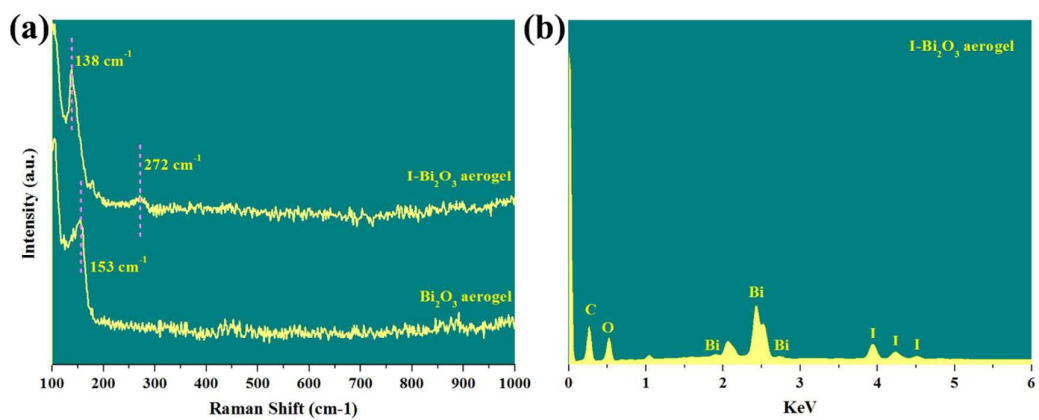


Figure S4. (a) Raman spectrum and energy spectrum of δ -Bi₂O₃ aerogel before and after I⁻ anions adsorption. (b) The corresponding energy spectrum of I- δ -Bi₂O₃ aerogel.

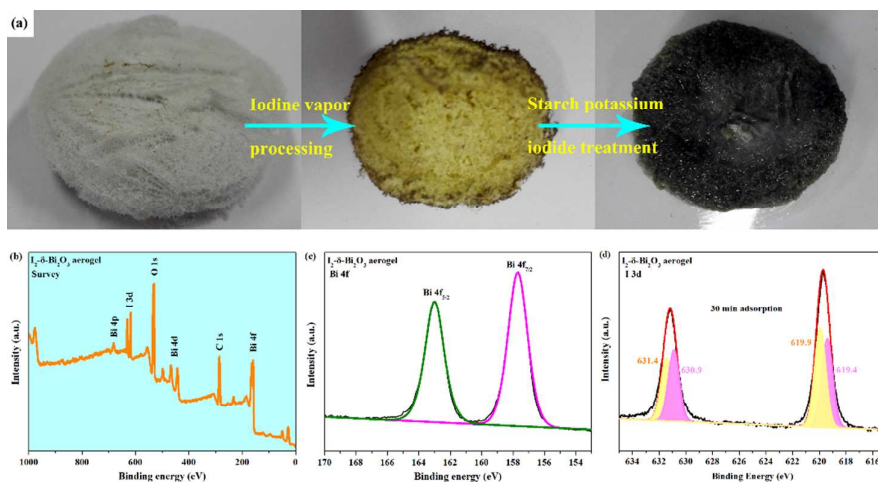


Figure S5. (a) Pictures of FL- δ -Bi₂O₃ aerogel treated with iodine vapor and starch potassium iodide solution (b-d) XPS spectrum of FL- δ -Bi₂O₃ aerogel after captured a great number of I₂.

Table S1. Comparison of several iodide sorption materials that already reported.

Material	pH Value	Temperature (°C)	Adsorption capacity (mmol/g)	Reference
Active Carbon	7	25	1.51	Ref. 24
Si-Fe ₃ O ₄	7	25	1.11	Ref. 25
Mg-Al(NO ₃)	9	25	0.30	Ref. 26
BiOI	7	25	-	Ref. 27
Cu ₂ O	6	25	2.0×10^{-3}	Ref. 8
Hg ₂ S	5	25	0.005	Ref. 28
MR- δ -Bi ₂ O ₃	7	25	1.24	In this work
FL- δ -Bi ₂ O ₃ Aerogel	7	25	2.04	In this work