

## Supplementary Materials

*for*

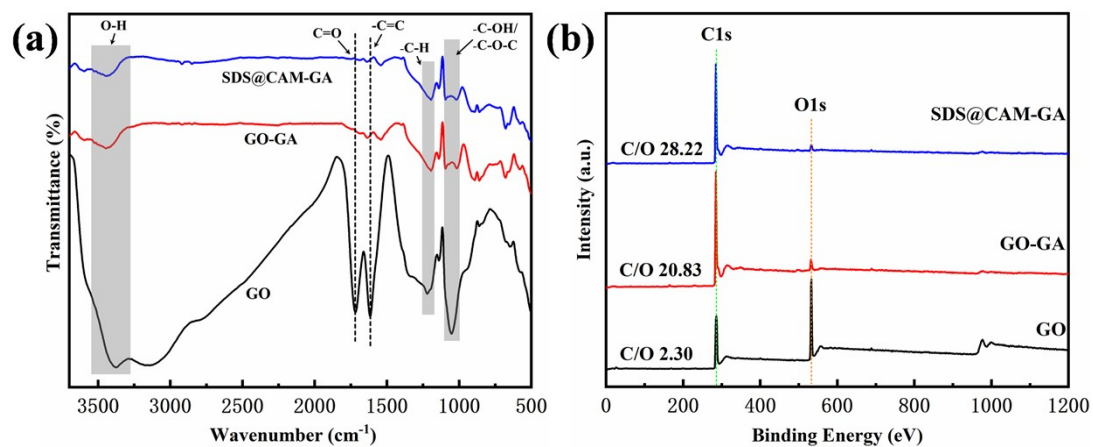
### **A superelastic and ultralight graphene aerogel with a hydrophobic honeycombed structure for efficient absorption of hazardous organics**

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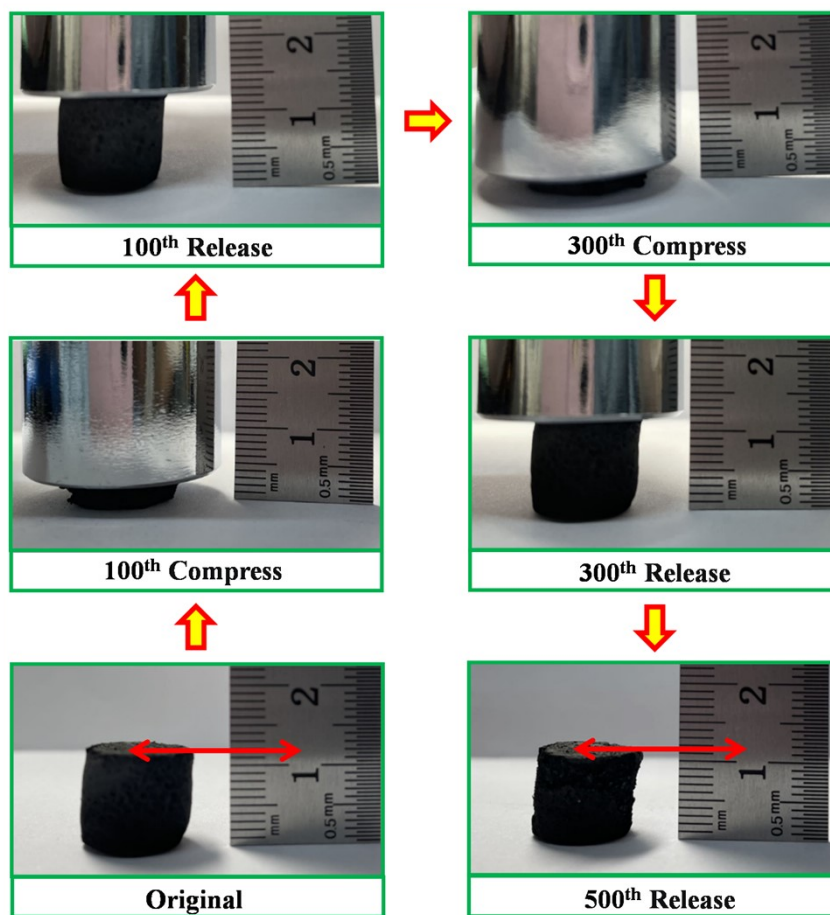
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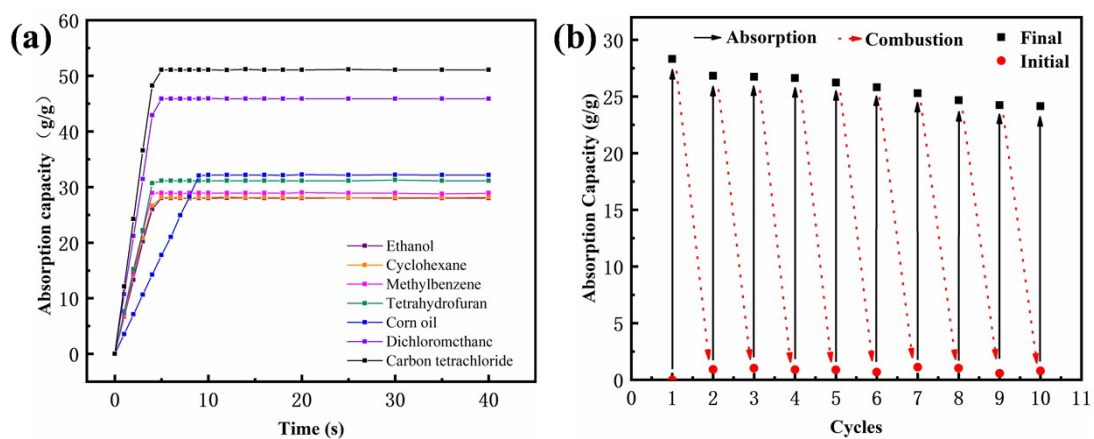
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**Fig. S1 (a)** FTIR spectra of GO, GO-GA, and SDS@CAM-GA; **(b)** XPS spectra of C1s and O1s of GO, GO-GA and SDS@CAM-GA.

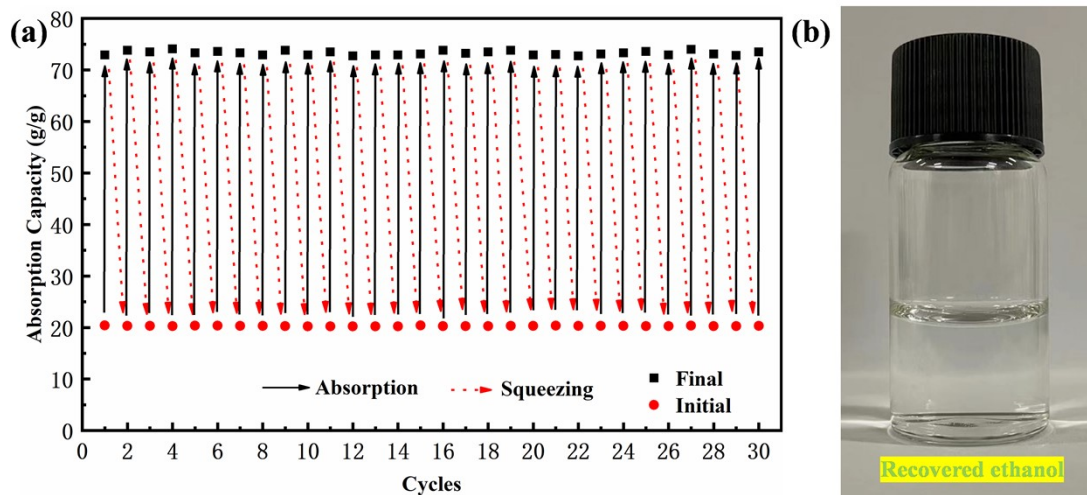


**Fig. S2** Snapshots of SDS@CAM-GA during 500 compression-recovery cycles with a 70% maximum strain.



**Fig. S3 (a)** Absorption capacity of GO-GA for different organics over time; **(b)**

Absorption-combustion process and circulating absorption of ethanol by GO-GA.



**Fig. S4 (a)** 30 absorption-extrusion recycling of ethanol by SDS@CAM-GA; **(b)**

Photograph of recovered ethanol in a glass bottle.