

## Supporting Information

for

### **Magnetic amino-functionalized graphene oxide nanocomposite for PFAS removal from water**

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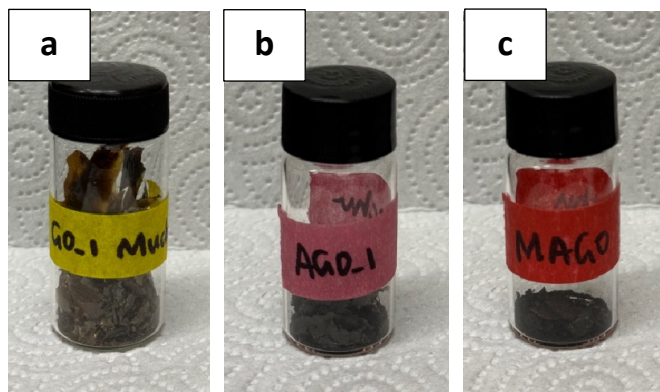
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**Fig. S1.** The mixture 1 before and after the centrifugation.



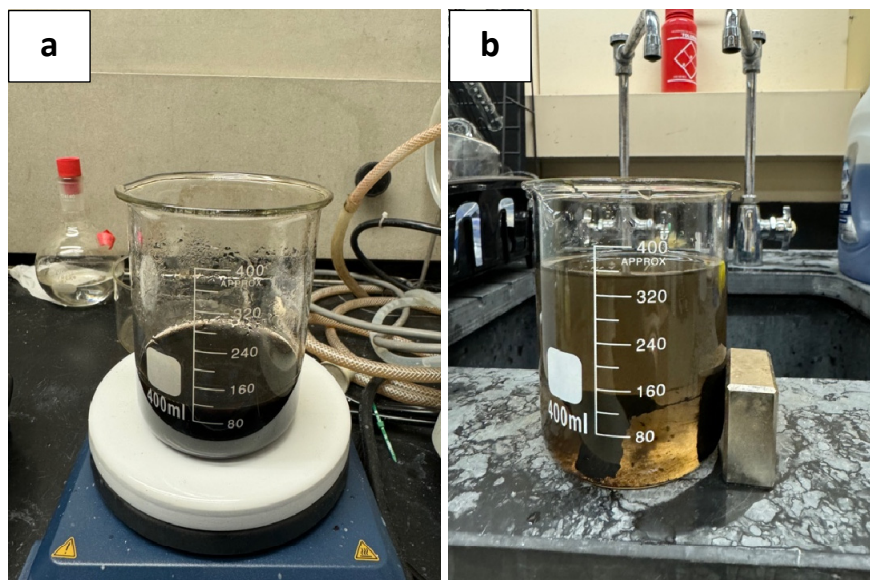
**Fig. S2.** The wet GO before vacuum drying.



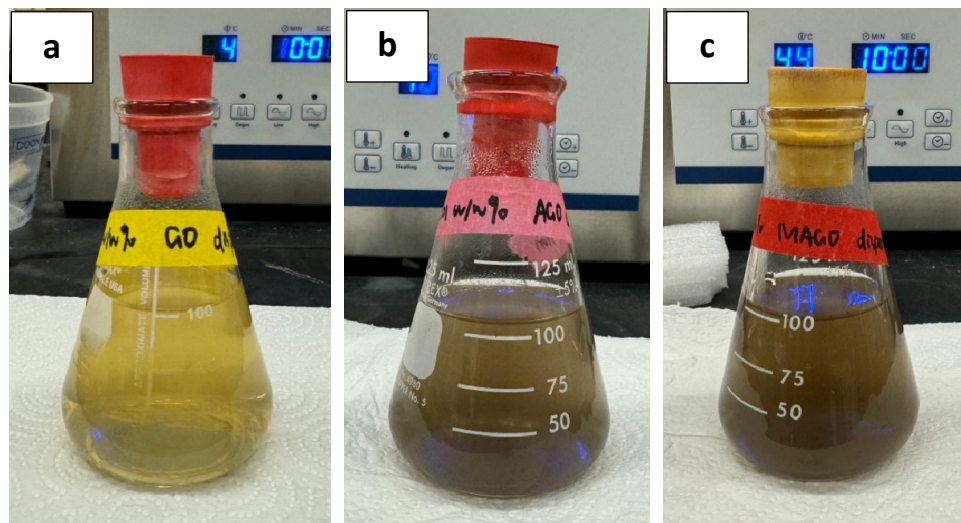
**Fig. S3.** The resultant dried (a) GO, (b) AGO, and (c) MAGO.



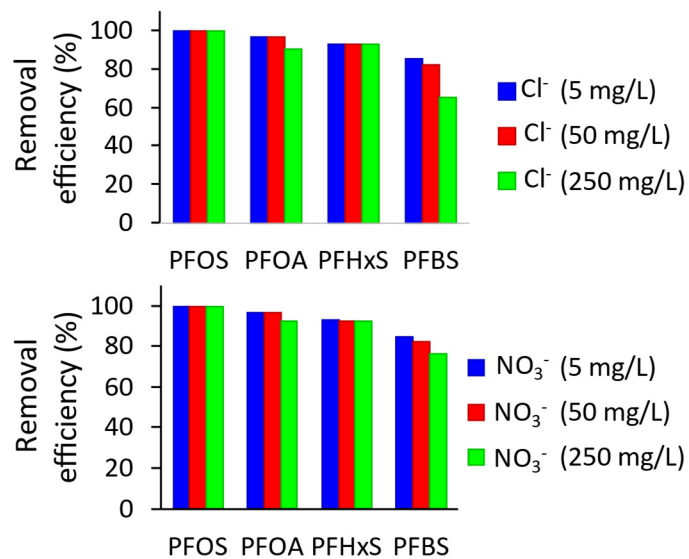
**Fig. S4.** GO dispersed in the ethanol.



**Fig. S5.** (a) The mixture 2 after heating at 65 °C with stirring for 1 h. And (b) the separation of MAGO by using the magnet.



**Fig. S6.** 0.01 w/w % (a) GO, (b) AGO, and (c) MAGO dispersions after 1 h ultrasonication.



**Fig. S7.** Effect of background anions on PFAS removal efficiency.

## Data

Effect of adsorbent type

	PFOS	PFOA	PFHxS	PFBS
GO	55.4	51.7	40.2	3.6
MGO	67.8	56.1	49.5	14.4
MAGO	99.2	94.1	93.9	85.3
Fe <sub>3</sub> O <sub>4</sub>	11.4	11.6	10.7	15.5

Effect of the solution pH

pH	PFOS	PFOA	PFHXS	PFBS
3	99.1	90.7	92.7	78.8
4	97.5	96.3	92.6	80.8
5	99.2	94.4	92.9	80.9
6	99.7	96.1	92.5	79.7
7	99.5	96.7	90.6	76.5
8	92.2	83.4	82.4	52.3
9	87.4	77.4	72.4	35.8

Effect of the adsorbent amount

adsorbent (mg)	PFOS	PFOA	PFHXS	PFBS
5	78.2	75.5	68.7	66.8
10	98.5	96.3	85.6	79.8
15	99.3	96.9	91.9	80.3
20	98.9	96.2	92.5	79.9
25	99.1	96.8	92.3	80.6
30	98.8	94.6	91.8	79.3

Effect of contact time

Time (min)	PFOS	PFOA	PFHxS	PFBS
0	0	0	0	0
1	28.8	20.8	13.4	5.7
2	45.2	49.9	30.6	17.1
5	85.7	73.4	52.4	32.8
10	94.5	87.6	77.9	55.4
15	98.1	92.4	85.8	68.1
20	99.5	96.6	90.8	75.4
30	99.6	96.5	92.7	79.2
45	99.3	96.5	92.3	84.4
60	99.4	96.3	92.6	85.3

Effect of the initial concentration

C (µg/L)	PFOS	PFOA	PFHXS	PFBS
25	95.1	91.9	92.3	83.6
50	97.2	93.2	93.1	82.5
100	98.6	95.8	92.6	84.5
200	99.8	96.5	91.9	84.1
500	99.1	96.8	91.2	82.2

Effect of competing ions

	PFOS	PFOA	PFHxS	PFBS
Cl <sup>-</sup> (5 mg/L)	99.5	96.7	92.5	85.2
Cl <sup>-</sup> (50 mg/L)	99.4	96.3	92.7	82.1
Cl <sup>-</sup> (250 mg/L)	99.6	90.2	92.5	65.1

	PFOS	PFOA	PFHxS	PFBS
NO <sub>3</sub> <sup>-</sup> (5 mg/L)	99.6	96.4	92.7	84.8
NO <sub>3</sub> <sup>-</sup> (50 mg/L)	99.4	96.5	92.5	82.4
NO <sub>3</sub> <sup>-</sup> (250 mg/L)	99.2	92.1	92.4	76.3

Regeneration of the adsorbent

	PFOS	PFOA	PFHxS	PFBS
1	99.5	96.2	92.3	78.6
2	99.7	96	92.1	76.5
3	99.2	96.1	91.8	76.1
4	99.4	95.8	92.7	76.2
5	99.2	95.2	91.1	73.7