

Supplementary materials

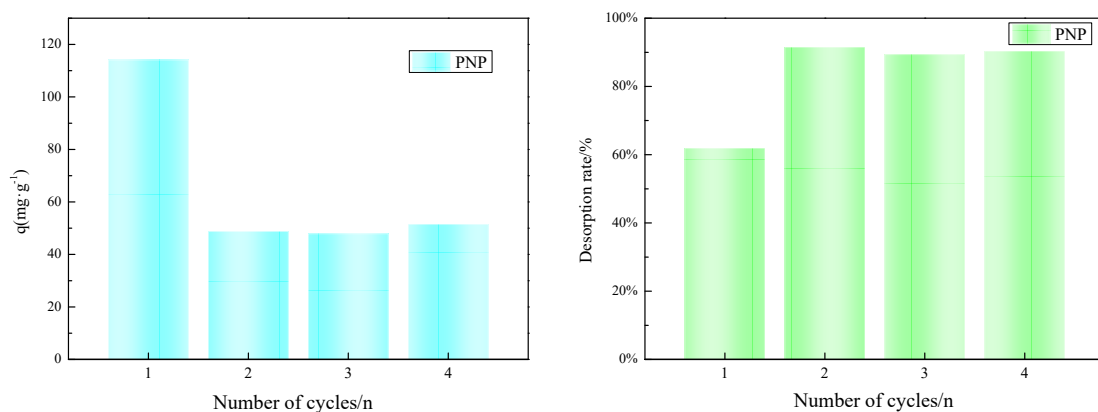


Fig. S1 Adsorption-desorption cycle experiments for PNP

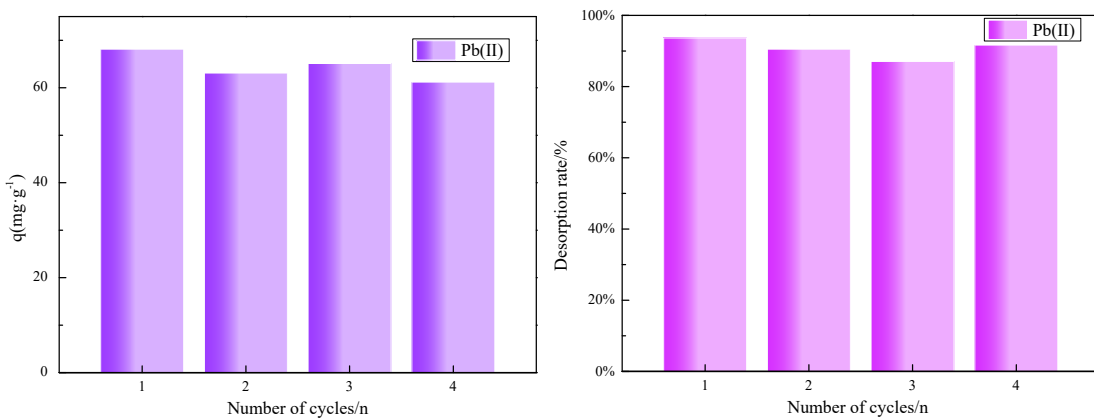


Fig. S2 Adsorption-desorption cycle experiment for Pb(II)

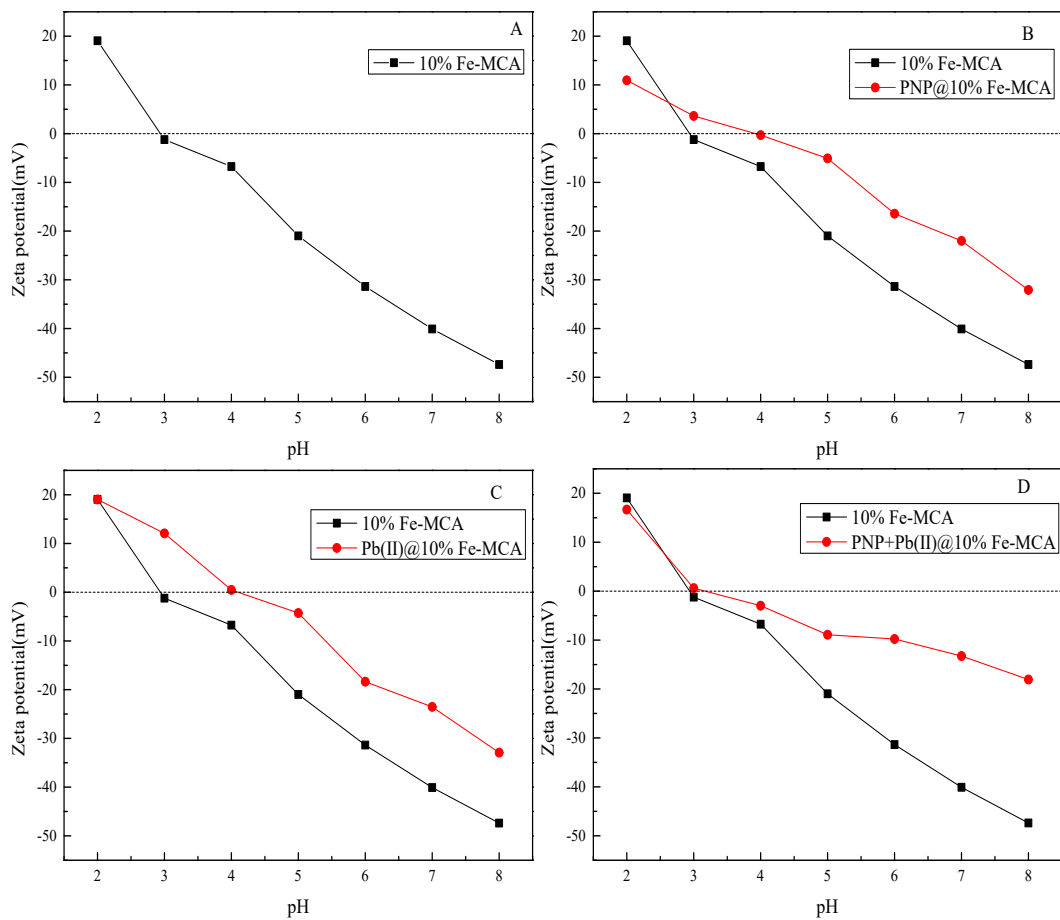


Fig. S3 Zeta potential diagram. A: Zeta potential diagram of 10% Fe-MCA; B: Zeta potential diagram of 10% Fe-MCA and PNP@10% Fe-MCA; C: Zeta potential diagram of 10% Fe-MCA and Pb(II)@10% Fe-MCA; D: Zeta potential diagram of 10% Fe-MCA and PNP+Pb(II)@10% Fe-MCA.

Table S1 Comparison of adsorption and magnetic performance of different adsorbents towards PNP and Pb(II)

Materials	Q_{\max} PNP ($\text{mg}\cdot\text{g}^{-1}$)	Q_{\max} Pb(II) ($\text{mg}\cdot\text{g}^{-1}$)	Number of reuses	Magnetic separation or not	Ref.
Fe/Zn-biochar	170	68	0	yes	[1]
3D-GO-MA	44.8	84.8	5	no	[2]
N-Fe/OMC	230	80	0	yes	[3]
GGTPCBD	59.0	701	0	no	[4]
GMN	19.4	14.9	0	no	[5]
10% Fe-MCA	141	66	4	yes	This work

References

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Table S2 Atomic ratio of different elements of adsorbents before and after adsorbing analytes

Material	C	O	N	Pb
MCA	87.6%	11.3%	1.04%	0%
MCA-PNP	81.5%	16.5%	2.00%	0%
MCA-Pb(II)	82.8%	15.5%	1.01%	0.66%
MCA-(Pb(II)+PNP)	84.3%	13.4%	1.81%	0.49%