

Supplementary Material

Organically-modified magnesium silicate nanocomposites for high-performance heavy metals removal

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Figure S1-S3 and Table S1

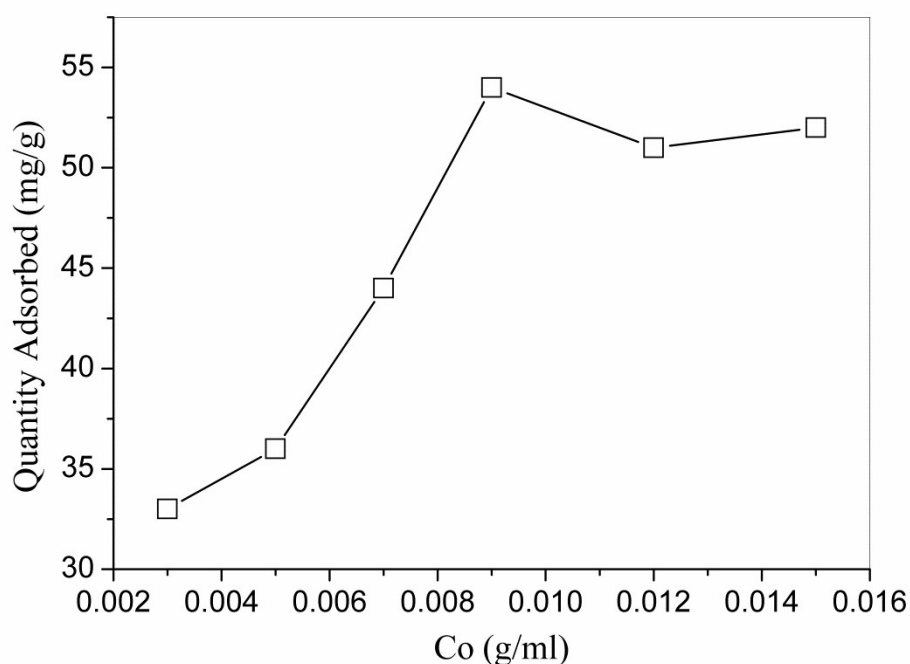


Fig. S1 Effect of PES dosage on the adsorption of Hg²⁺

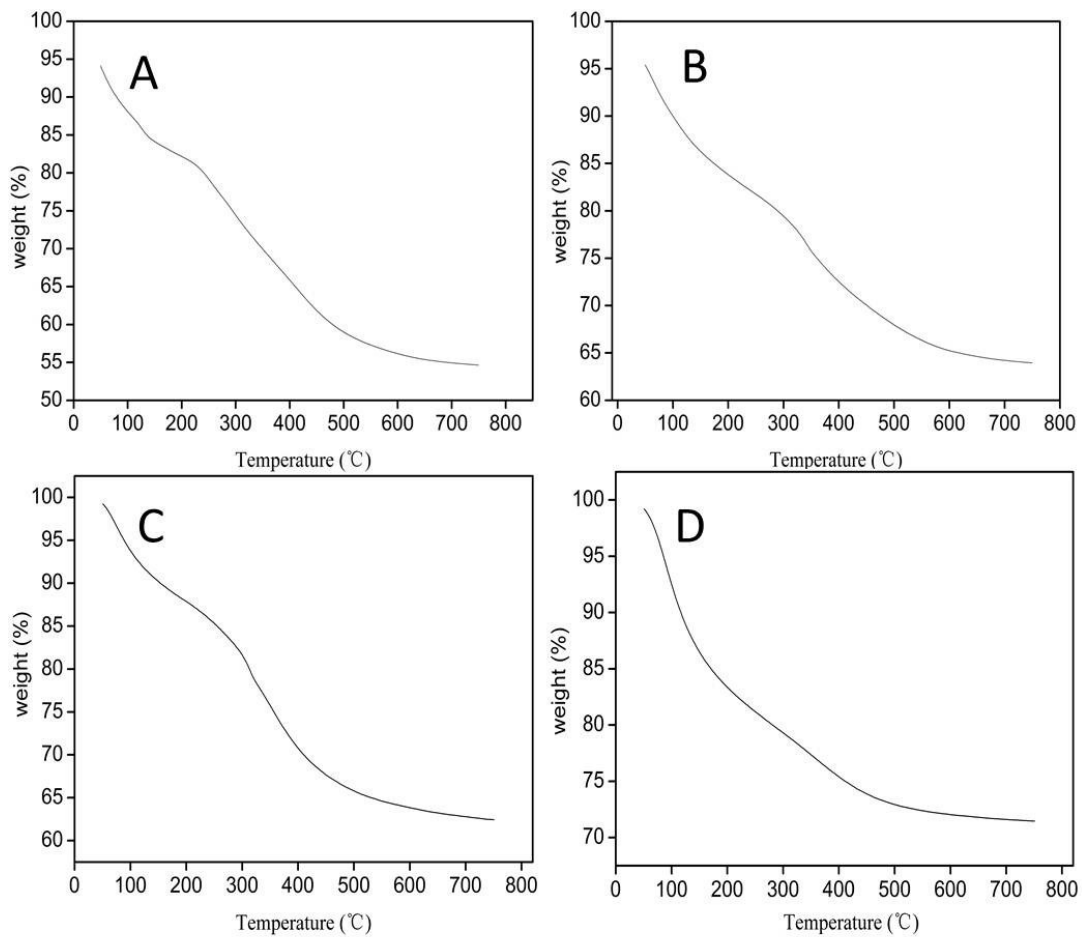


Fig. S2 The thermal gravimetric analysis of PES@Mg₂SiO₄ (A), PEI@Mg₂SiO₄-CS₂ (B), PEI@Mg₂SiO₄ (C) and Mg₂SiO₄ (D)

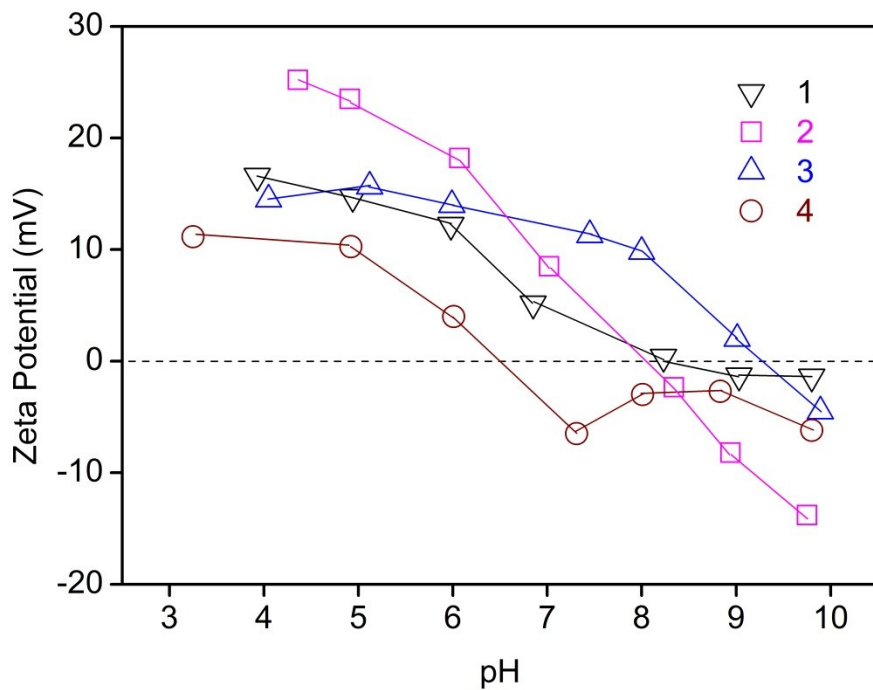


Fig. S3 zeta potential of PES@Mg₂SiO₄ (1), PEI@Mg₂SiO₄-CS₂ (2), PEI@Mg₂SiO₄ (3) and Mg₂SiO₄ (4)

Table S1 Selective adsorption property of Hg²⁺, Pb²⁺ and Cd²⁺

	metal	Adsorption capacity(mmol/g)	Selective coefficient
Hg ²⁺ -Pb ²⁺	Hg ²⁺	0.2066	$\alpha_{Hg^{2+}/Pb^{2+}}=2$
	Pb ²⁺	0.0824	.51
Hg ²⁺ -Cd ²⁺	Hg ²⁺	0.2050	$\alpha_{Hg^{2+}/Cd^{2+}}=3$
	Cd ²⁺	0.0615	.33
Pb ²⁺ -Cd ²⁺	Pb ²⁺	0.1073	$\alpha_{Pb^{2+}/Cd^{2+}}=1.$
	Cd ²⁺	0.0815	32