Supporting information

Toward a Low-Cost Uranium-Adsorbing Material based on Nonwoven Fabrics and Photografting Technology

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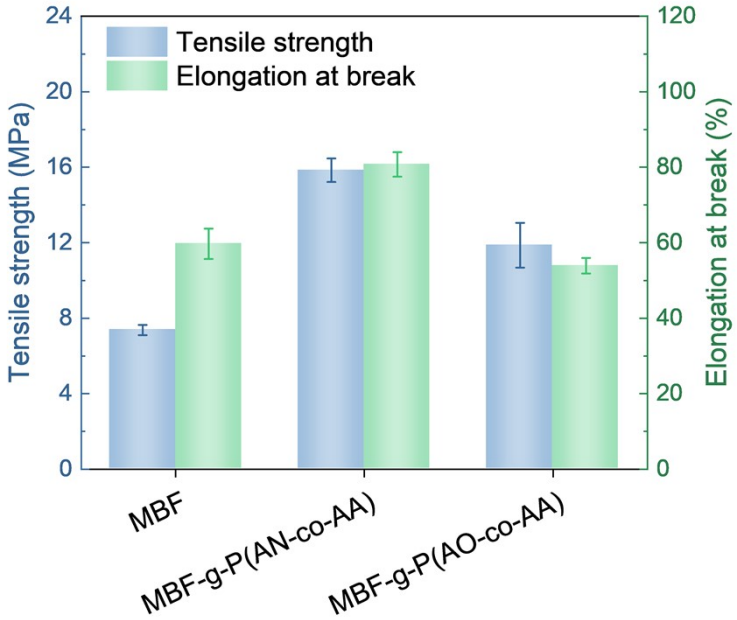

Fig. S1. Tensile strength and elongation at break of (a) MBF, (b) MBF-g-P(AN-co-AA), (c) MBF-g-P(AO-co-AA).

Table S1
Comparison of the uranium adsorption capability of the prepared MBF-g-P(AO-co-AA) with other amidoxime adsorbents reported in the literature

preparation method	adsorbents		Max U uptake in spiked system (mg/g)	U and V uptake in simulated seawater		References
	substrate	grafted monomers		U (mg/g)	V (mg/g)	
grafting	polyethylene nanofibrous membranes	AN, AA	228.53	10.19	5.58	1
	ultra-high molecular weight polyethylene (UHMWPE) fiber	AN, AA	-	3.62~8.1	-	2
	UHMWPE fiber	AN, AA	-	15.98	0.33	3
	UHMWPE fiber	AN, MAA	112.4	7.4	-	4
	PP/PE fiber	AN, AA	-	1.3~5.73	-	5
	UHMWPE fiber	AN, AA	-	4.54	-	6
direct synthesis	poly(amidoxime) porous network membranes		881	32.95	~31	7
	polyamidoxime/alginate sponge		718.38	17.22	20.61	8
	poly(imide dioxime) (PIDO)/alginate sponge		291.51	6.90	7.72	9
	poly(amidoxime) (PAO) hydrogel membrane		556	13.1	10.4	10
	poly(imide dioxime) nanofiber		1124.22	30.8	23.4	11
	hydroxyapatite aerogel		2087.6	-	-	12
	polyurea-cross-linked calcium alginate		2023	-	-	13
	Reduced graphene oxide/ZIF-67		1888.55	-	-	14
	3D alumina-doped magnesium oxide		1046.9	-	-	15
grafting	melt-blown nonwoven fabric	AN, AA	400	3.8	3.2	This work

Note: "-" represents the corresponding data is undetermined or unmentioned in the references.

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