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Electronic Supplementary Information (ESI)

Poly(alkyl-biphenyl pyridinium) anion exchange membranes with a hydrophobic side chain for mono-/divalent anions separation

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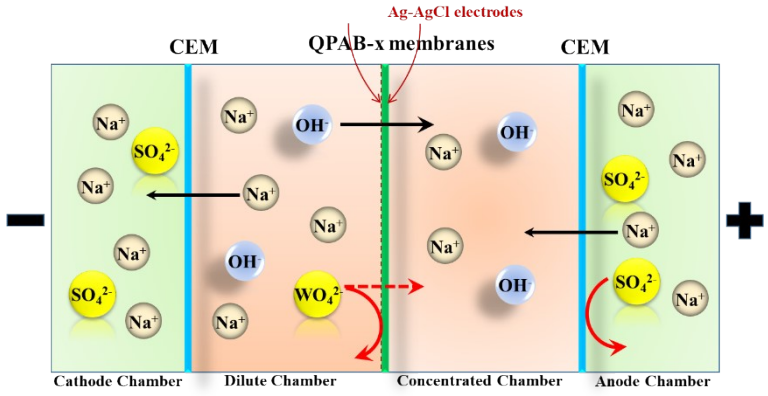

Fig. S1. Graphic diagram of ED stack for mono-/divalent anions separation.

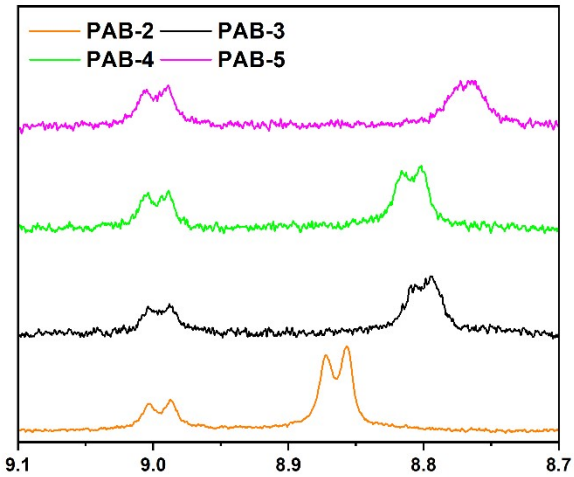

Fig. S2. The ^{1}H NMR of QPAB-x membranes with chemical shift between 8.7-9.1 ppm.

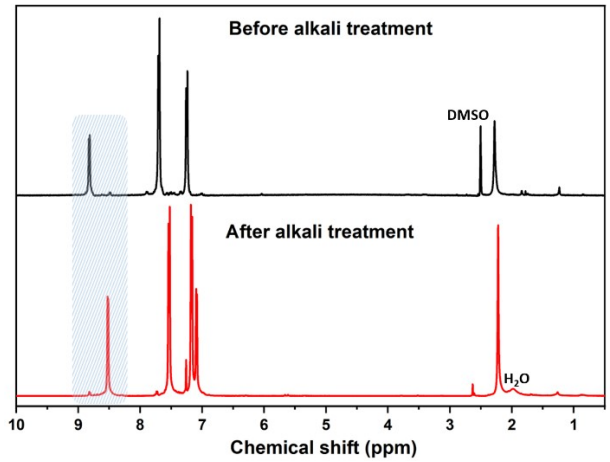

Fig. S3. The ^{1}H NMR spectra of PAB polymer before (black line) and after (red line) immersing in 1 mol L^{-1} NaOH solution for 10 days.

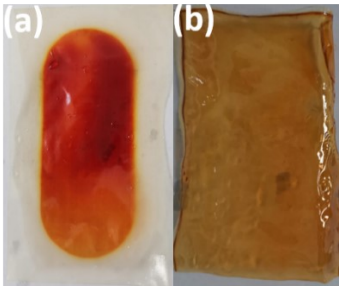

Fig. S4. The photos of (a) the Neosepta ACS membrane after 1 h of ED test in OH-/WO_4^{2-} system; and (b) the QPAB-2 membrane after 20 h of ED test in OH-/WO_4^{2-} system.

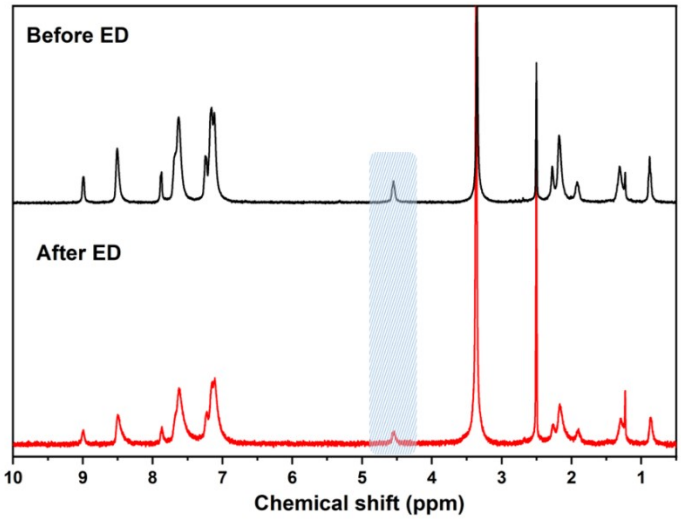

Fig. S5. The ^{1}H NMR of the QPAB-2 membrane before and after the ED test in OH^-/WO_4^{2-} system for structure reconfirmation.

Table S1. Mechanical properties of QPAB-x membranes

S. No.	Polymer	Tensile strength (MPa)	Elongation at break (%)
1	**QPAB-2**	**35.13**	**16.5**
2	**QPAB-3**	**36.14**	**12.6**
3	**QPAB-4**	**33.30**	**13.5**
4	**QPAB-5**	**37.13**	**16.8**