Electronic Supplementary Material (ESI) for RSC Advances.

Al-doped H_2TiO_3 ion sieve with enhanced Li^+ adsorption performance

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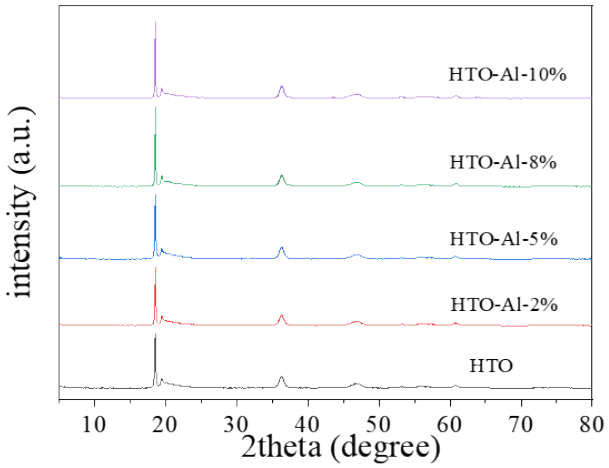

Fig. S1 XRD patterns of HTO and HTO-Al-x.

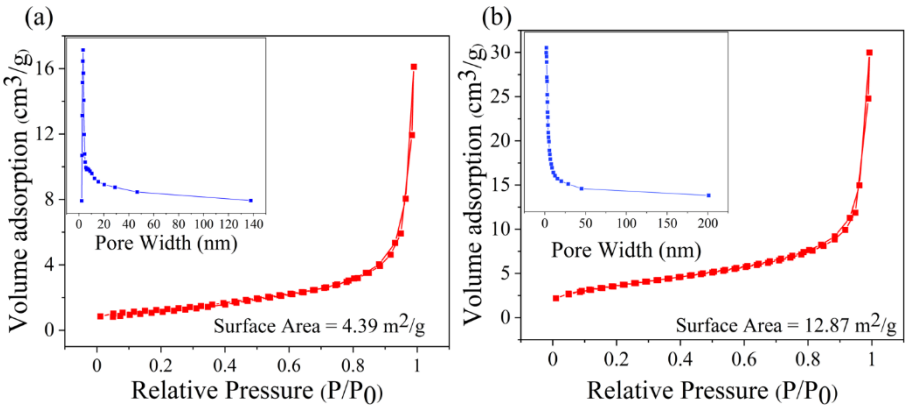

Fig. S2 Nitrogen adsorption/desorption isotherms and pore size distribution of (a) undoped HTO and (b) HTO-Al-2%.

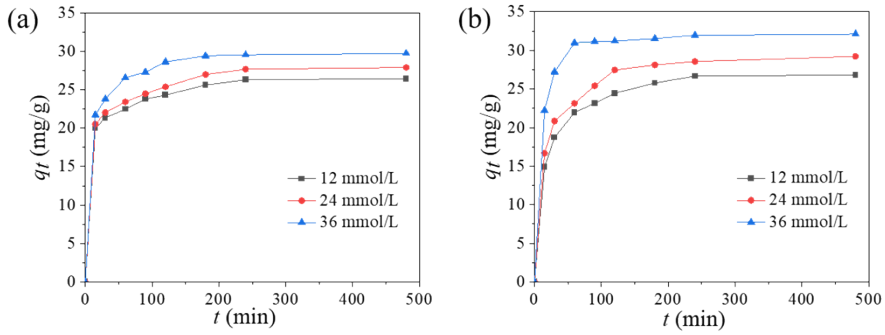

Fig. S3 Effect of different concentration on the Li^+ adsorption capacity. (a) HTO; (b) HTO-Al-2%

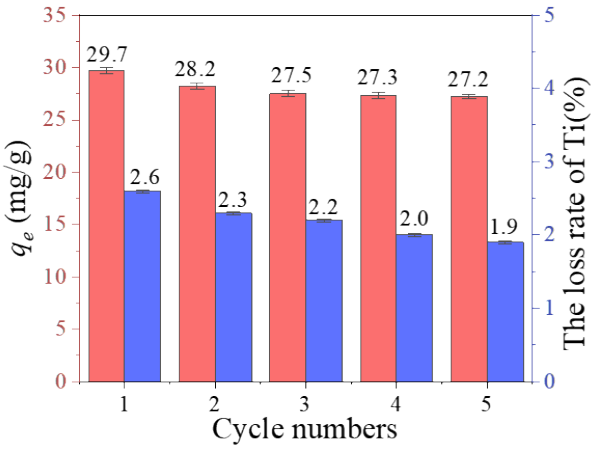

Fig. S4 The adsorption and Ti dissolution of HTO in each regeneration process.

Table S1 Selective adsorption of HTO-Al-2% in the mixed solution

Metal ions	q_e (mmol/g)	K_d (ml/g)	αLi M
Li^+	4.59	162.38	1.00
Na^+	0.21	5.83	27.85
K^+	0.28	7.86	20.66
Rb^+	0.15	4.13	39.32
Cs^+	0.28	7.90	20.55