Electronic Supplementary Material (ESI) for Dalton Transactions.

SUPPORTING INFORMATION

$A_3Ti_5NbO_{14}$ (*A* = H, Li and K) family: Ionic exchange, physical and electrochemical properties

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Table S1. Crystallographic details of PEDT data reduction and dynamical refinement.

Chemical formula	$Li_3Ti_5NbO_{14}$
Temperature (K)	293
Crystal system, space group	monoclinic, $P2_1/m$ (SG #11)
a, b, c (Å) and β (°)	9.273(15), 3.788(6), 8.871(3) and 114.33(1)
V (Å³)	283.9
Electron wavelength λ (Å)	0.0251
Number of frames	112
Tilt step (°)	1.0
Precession angle (°)	1.2
$\sin(\vartheta_{max})/\lambda$ (Å^{-1})	0.70
Completeness (%)	81
No. of measured, observed [$I>3\sigma(I)$] reflections	2876, 2816
No. of refined parameters, restraints	169, 0
g_{max} (Å^{-1}), $S_{g,max}$ (Å^{-1}), R_{Sg}, steps	1.6, 0.01, 0.4, 128
R(obs), R(all), wR(all), GoF(all)	0.177, 0.406, 0.179, 0.408

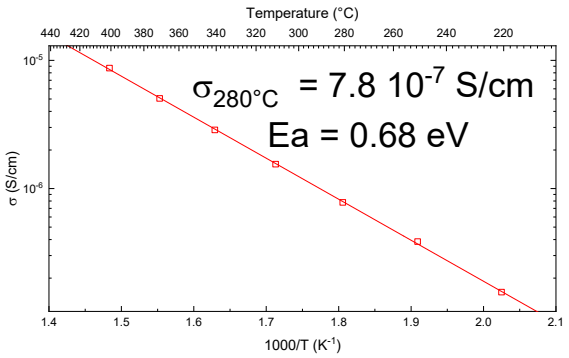

Figure S1. Plot of conductivity as a function of temperature for $K_3Ti_5NbO_{14}$.

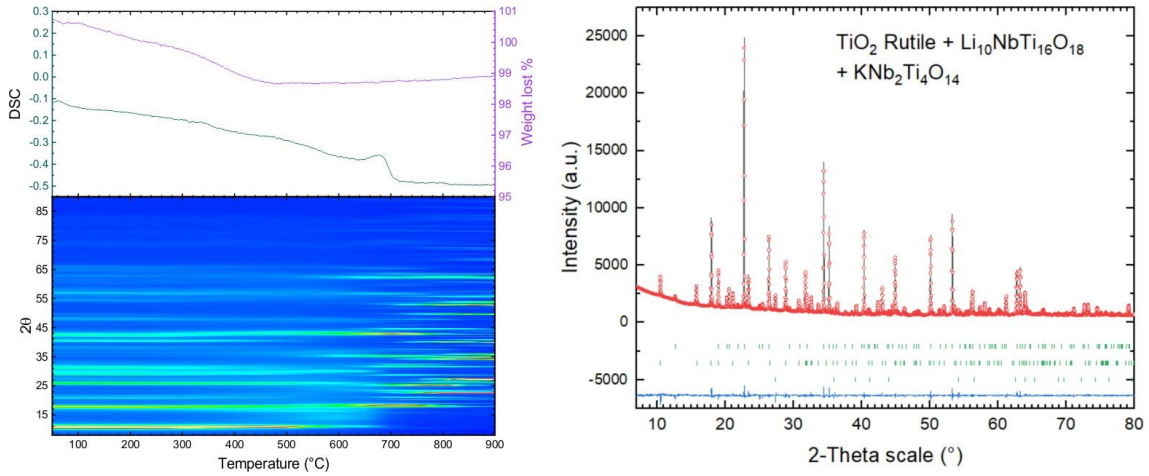

Figure S2. (a) Graphic reporting ATG signal, DSC signal and XRD pattern of the material $Li_3Ti_5NbO_{14}$ in function of the temperature, (b) pattern matching of the compositions obtained after annealing at 900°C.