Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A.

A New Approach for Synthesizing Bulk-type All-solid-state Lithium-ion Batteries

Linchun He[1], Chao Chen[1,2], Masashi Kotobuki[1,2], Feng Zhen[1], Henghui Zhou[3,#], Li Lu[1,2,*]

[1] Department of Mechanical Engineering
National University of Singapore, Singapore 117575

[2] National University of Singapore Suzhou Research Institute
Suzhou 215123, P. R. China

[3] College of Chemistry and Molecular Engineering
Peking University, Beijing 100871, China

[*] mpeluli@nus.edu.sg
[#] hhzhou@pku.edu.cn

Supplementary Information

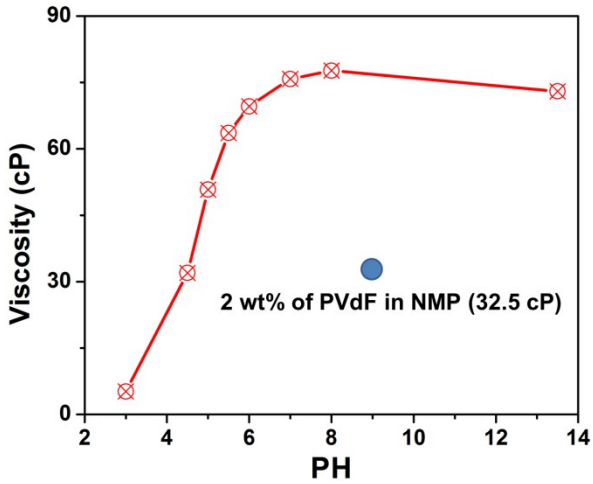

Figure S1 Viscosity of 2 wt.% PAALi solution changed with PH

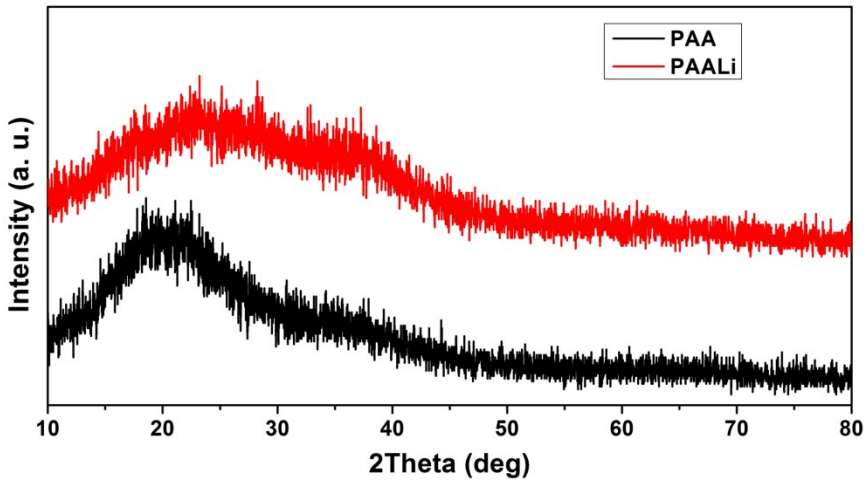

Figure S2 XRD spectrum of PAA and PAALi

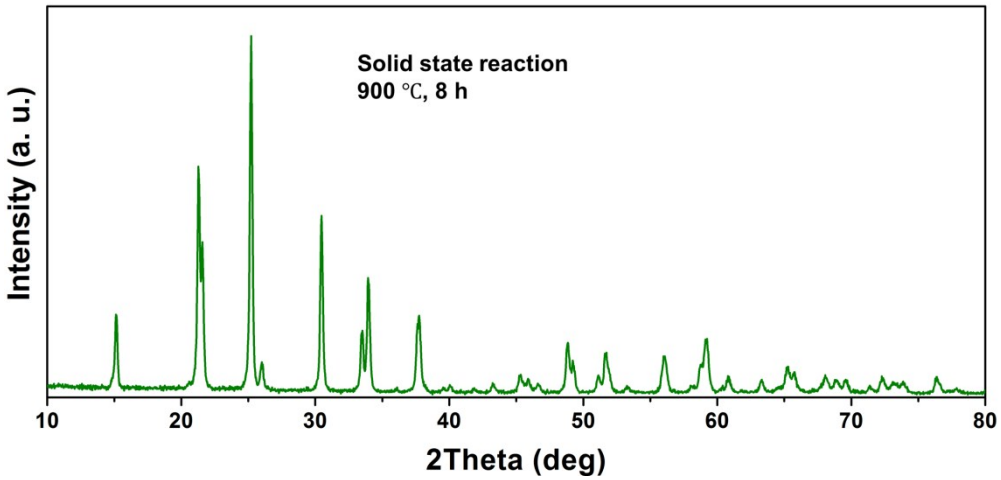

Figure S3 XRD pattern of LAGP pellet with NASICON structure

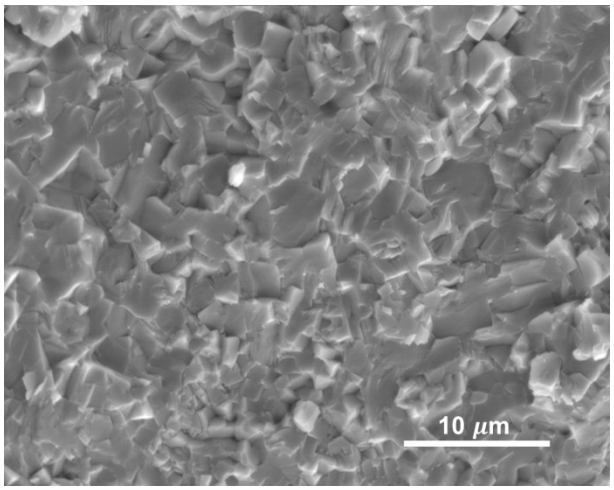

Figure S4 FE-SEM cross-section image of the LAGP pellet

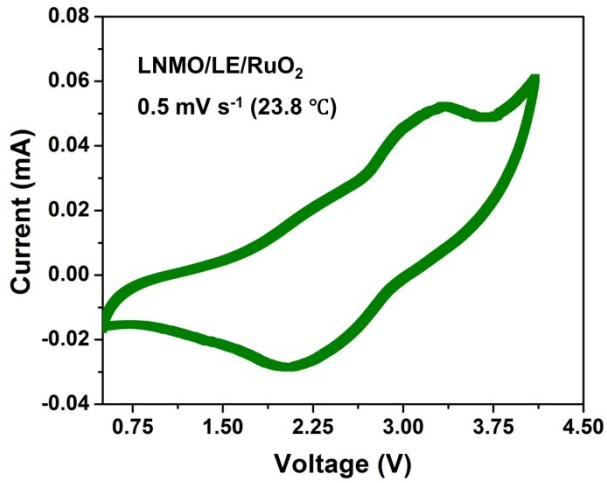

Figure S5 CV curve of LNMO/Liquid electrolyte (LE)/RuO_2 showing an oxidation peak between 2.3 V and 3.7 V and a reduction peak between 2.8 and 0.5 V

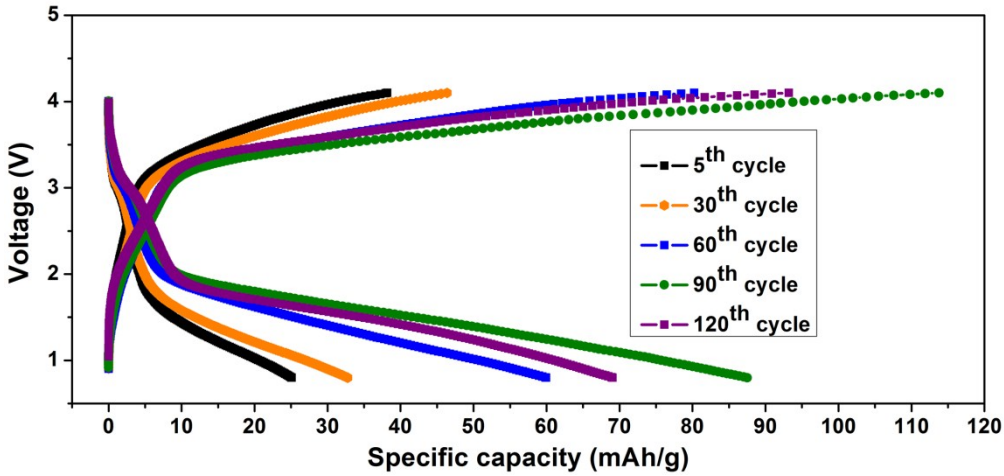

Figure S6 Voltage –specific capacity curves for charge/discharge at the 5th, 30th, 60th, 90th and 120th cycle for cell LNMO/LAGP/RuO_2 at room temperature

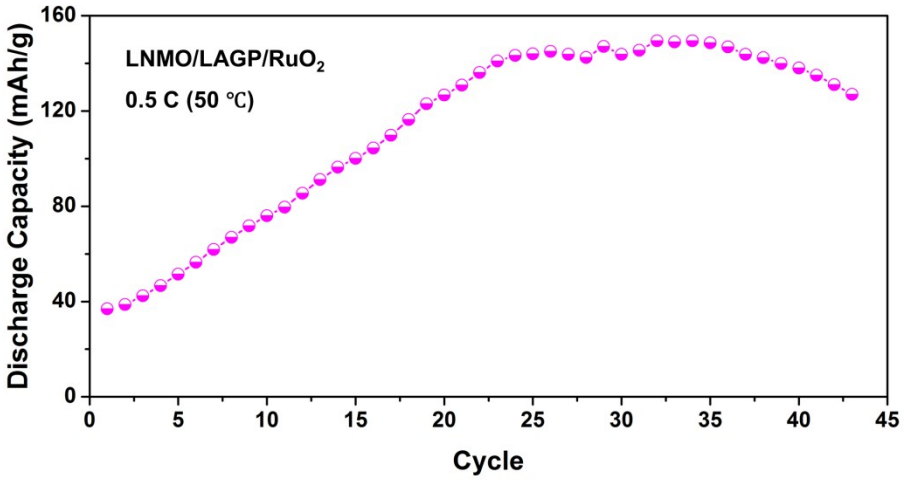

Figure S7 Discharge capacity of LNMO/LAGP/RuO_2 at 0.5 C (1 C=146.7 mAh g^{-1}) at 50 ℃