Electronic Supplementary Material (ESI) for RSC Advances.

A novel sp^3Al-based porous single-ion polymer electrolyte for lithium ion batteries

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Table S1: Comparison between LiPGAA and other gel single ion electrolytes.

Name of SIPE	Thermal degradation temperature (°C)	Ionic conductivity at 298K (S/cm)	Electrochemical window at 298K (V)	Lithium ion transference number	References
Polymeric lithium tartaric acid borate (PLTB)	330	1.4×10^{-4}	5.0	0.93	Electrochim. Acta. 2013, **92**, 132
Lithium poly (pyromellitic acid borate) (LiPPAB)	220	2.1×10^{-4}	5.0	0.74	J. Mater. Sci. 2014, **49**, 6111
Lithium poly (1,2,3,4-butanetetracarboxylic acid borate) (LiPBAB)	245	2.4×10^{-4}	4.3	0.89	RSC adv. 2014, **4**, 21163
Lithium poly (4-vinylphenol) phenolate borate (LiPVPPB)	120	4.4×10^{-4}	4.5	0.91	Electrochim. Acta. 2014, **139**, 264
Lithium poly [4-styrenesulfonyl (phenylsulfonyl) imide] (PSSPSI)	420	6.3×10^{-3}	*N/A	*N/A	J. Mater. Chem. A 2014, **2**, 2960
Lithiated polyamide (LiPA)	280	3.8×10^{-4}	*N/A	0.88	Energy Technol. 2014, **2**, 698
Poly((2,2'-ethylenedioxy)-bis(ethylamine) isophthalic acid amide)-co-lithium poly((2,2'-ethylenedioxy) bis(ethylamine)bis(phenylsulfoneyl imide)-isophthalate amide) (PEEIA-co-LiPEEPSI	220	3.3×10^{-4}	4.3	0.91	RSC adv. 2014, **4**, 43857
Lithium poly (glutaric acid aluminate) (LiPGAA)	350	1.4×10^{-4}	4.2	0.80	This work

*N/A : not presented in the paper.