Supplemental Information:

Authors	Date	Cathode Material	Anode Material	Voltage Range	Cycling Rate	Cycling Temperature (°C)	Capacity (mAh/g)	Capacity Retention	
Zhao *et al.*	June 2016	$LiFePO_4$	Li	3.0-3.8V	0.5C	60	148.6	92.5% after 50cycles	[124]
Zhao *et al.*	May 2016	$LiFePO_4$	Li	3.0-3.8V	1C	60	108	90% after 50 cycles	[45]
Zhang *et al.*	Jan 2017	$LiFePO_4$	Li	2.5-4.0 V	1C	20	127	95% after 200 cycles	[64]
Zhang *et al.*	Sept 2017	$LiCoO_2$-based cathode	Li	3.0- 4.2V	0.4C	20	150	98% after 120 cycles	[42]
Cheng *et al.*	May 2017	$LiFePO_4$	Li	2.5-4.0 V	1C	60	140	83% after 500 cycles	[125]
Zhang *et al.*	Nov 2017	$LiFePO_4$	$Li_4Ti_5O_{12}$	2.5-4.0 V	1C	RT	100	95% after 200cycles	[64]
Zhao *et al.*	Oct 2017	$LiFePO_4$	Li	2.5-3.8 V	0.1C	60	150	13% after 100 cycles	[126]
Li *et al.*	Feb 2018	$LiFePO_4$	Li	2.9-3.8V	0.2C	60	144	99.5% after 100 cycles	[40]
Lin *et al.*	April 2018	$LiFePO_4$	Li	2.5-4.0 V	0.5C	18	105	92% after 200 cycles	[76]
Yao *et al.*	April 2018	NMC	Li	3.0-4.2V	0.3C	RT	121	98.5% after 200 cycles	[127]
Wang *et al.*	June 2019	$LiFePO_4$	Li	2.5-3.8V	0.6C	60	139	87.4% after 400 cycles	[44]
Chen *et al.*	Feb 2019	$LiFePO_4$	Li	2.5-4.2V	0.5C	25	146	92% after 200cycles	[41]
Huo *et al.*	Jan 2019	$LiFePO_4$	Li	2.8-3.8V	1C	60	106	85.4% after 300cycles	[128]

Lu *et al.*	Jan 2019	$LiFePO_4$	Li	2.7-4.2V	0.5C	25	101	Retained full capacity after 500cycles	[96]
Pan *et al.*	Sept 2019	$LiFePO_4$	Li	2-5V	0.33C	60	140	91.4% after 100cycles	[56]
Sun *et al.*	Jan 2019	$LiFePO_4$	Li	2.8-4.0V	0.2C	60	161	97.3% after 100cycles	[129]
Tang *et al.*	Jan 2019	$LiFePO_4$	Li	2.5-3.8V	0.5C	35	133	82% after 200cycles	[130]
Sivaraj *et al.*	Feb 2020	Li_2FeSiO_4	graphite	2.5-3.8V	0.6C	60	87	85% after 30cycles	[27]

Table S2

Authors	Date	Ionic conductivity (S/cm) at RT	Structure	Ceramic Material	Polymer	Lithium Salt	Scale (nm)	Polymer Ionic conductivity at RT (S/cm)	
*Capuano *et al.*	July 1991	$1.1x10^{-6}$	Particles	$LiAlO_2$	PEO	$LiClO_4$	500	$1x10^{-8}$	36
Kumar *et al.*	Dec 1994	$2x10^{-6}$	Particles	Li_3N	PEO	$LiBF_4$	--	--	80
*Nairn *et al.*	July 1996	$1x10^{-4}$	Particles	LATP	3PEG	$LiCF_3SO_3$	--	--	70
*Croce *et al.*	July 1998	$2x10^{-5}$	Inert Particles	TiO_2	PEO	$LiClO_4$	10	$1x10^{-8}$	69
		$5x10^{-6}$	Inert Particles	Al_2O_3	PEO	$LiClO_4$	10	$1x10^{-8}$	
Appetecchi *et al.*	Dec 1998	$5x10^{-7}$	Particles	$LiAlO_2$	PEO	$LiBF_4$	4000	$1x10^{-7}$	131
Appetecchi *et al.*	Jan 1999	$3x10^{-7}$	Particles	$LiAlO_2$	PEO	$LiBF_4$	100000	--	132
*Croce *et al.*	Dec 1999	$2x10^{-5}$	Inert Particles	TiO_2	PEO	$LiClO_4$	13	$5x10^{-8}$	68
		$1.5x10^{-5}$	Inert Particles	Al_2O_3	PEO	$LiClO_4$	6	$5x10^{-8}$	
Croce *et al.*	Nov 2000	$3x10^{-7}$	Particles	$LiAl_2O$	PEO	$LiBF_4$	4000	$7x10^{-8}$	133
		$2.9x10^{-6}$	Particles	$LiAl_2O$	PEO	$LiCF_3SO_3$	4000	$7x10^{-8}$	
		$1x10^{-5}$	Inert Particles	Al_2O_3	PEO	$LiClO_4$	6	$7x10^{-8}$	
		$2.3x10^{-5}$	Inert Particles	TiO_2	PEO	$LiClO_4$	13	$7x10^{-8}$	
Croce *et al.*	May 2001	$2.1x10^{-5}$	Inert Particles	Al_2O_3	PEO	$LiCF_3SO_3$	6	$1x10^{-7}$	77
Chung *et al.*	July 2001	$6x10^{-6}$	Inert Particles	TiO_2	PEO	$LiClO_4$	11	$7x10^{-8}$	134
		$7x10^{-6}$	Inert Particles	Al_2O_3	PEO	$LiClO_4$	6	$7x10^{-8}$	
Ikeda *et al.*	July 2001	$3.3x10^{-6}$	Particles	Li_2S-SiS_2-Li_4SiO_4 glass	POE	None	7000	--	135
*Chen *et al.*	July 2001	$1.6x10^{-4}$	Inert Particles	clay	PEO	$LiCF_3SO_3$	2	$5.6x10^{-7}$	67
Hayashi *et al*.	Aug 2001	$3x10^{-5}$	Particles	Li_4SiO_4	POE	$LiClO_4$	2000	--	136
Kohjiya *et al.*	Dec 2002	$3x10^{-5}$	Particles	Li_2S-SiS_2-Li_4SiO_4 glass	POE	$LiClO_4$	2000	--	137

Dissanayake *et al.*	June 2003	$7x10^{-5}$	Inert Particles	Al_2O_3	PEO	$LiCF_3SO_3$	6	$4x10^{-7}$	62
		$9.9x10^{-6}$	Inert Particles	Al_2O_3	PEO	$LiCF_3SO_3$	37	$8x10^{-7}$	
Fan et al.	Oct 2003	$5x10^{-6}$	Inert Particles	SiO_2	PEO	$LiClO_4$	10	$2x10^{-7}$	75
Ikeda et al.	Nov 2004	$1.6x10^{-6}$	Particles	$Li_4B_7O_{12}Cl$	PEG	$LiN(SO_2CF_3)_2$	100000	--	138
*Wang et al.	Dec 2004	$5x10^{-5}$	Wires and Fiber Mats	LLT	PEO	$LiN(SO_2CF_2CF_3)_2$	250,000	--	71
		$1.5x10^{-4}$	Wires and Fiber Mats	LLT	PEO	$LiN(SO_2CF_2CF_3)_2$	15000		
*Kumar et al.	July 2010	$4x10^{-4}$	Particles	Li_2O	PEO	LiBETI	--	$2x10^{-4}$	66
Choi *et al.*	Jan 2015	$1x10^{-5}$	Inert Particles	Al_2O_3	PEO	$LiClO_4$	100	$7x10^{-8}$	91
		$1x10^{-5}$	Particles	LLZO	PEO	$LiClO_4$	750	$7x10^{-8}$	
*Liu *et al.*	April 2015	$2x10^{-5}$	Wires	LLTO	PAN	$LiClO_4$	140	$5 x10^{-9}$	35
Jung *et al.*	Feb 2015	$1.5x10^{-5}$	Particles	LAGP	PEO	$LiClO_4$	7000	$4x10^{-7}$	139
		$7.2x10^{-7}$	Inert Particles	Al_2O_3	PEO	$LiClO_4$	3	$4x10^{-7}$	
Zhao *et al.*	Nov 2016	$5x10^{-5}$	Particles	LAGP	PEO	LiTFSI	500	$6x10^{-6}$	45
		$2.5x10^{-5}$	Particles	LAGP	PEO	LiTFSI	30000	$6x10^{-6}$	
*Fu *et al.*	June 2016	$2.5x10^{-4}$	Wires	Al-LLZO	PEO	LiTFSI	256	$1x10^{-7}$	86
*Zhang *et al.*	Jan 2017	$3.2x10^{-4}$	Particles	SiO_2	PPC	LiTFSI	--	$3.9x10^{-4}$	64
		$3.3x10^{-4}$	Particles	Al_2O_3	PPC	LiTFSI	--	$3.9x10^{-4}$	
		$3.8x10^{-4}$	Particles	TiO_2	PPC	LiTFSI	--	$3.9x10^{-4}$	
		$5.2x10^{-4}$	Particles	LLZTO	PPC	LiTFSI	30	$3.9x10^{-4}$	
Wang *et al*.	Feb 2017	$1.7x10^{-4}$	Particles	LATP	PEO	$LiClO_4$	65	$2x10^{-8}$	43
Buvana *et al.*	Mar 2017	$2x10^{-4}$	Particles	LLBTO	PEO	$LiClO_4$	2000	--	115
Liu *et al*.	April 2017	$1x10^{-6}$	Particles	LLTO	PAN	$LiClO_4$	--	$3.6x10^{-7}$	38
		$5.4x10^{-6}$	Wires	LLTO	PAN	$LiClO_4$	138	$3.6x10^{-7}$	
		$6.0x10^{-5}$	Aligned Wires	LLTO	PAN	$LiClO_4$	138	$3.6x10^{-7}$	
Safanama *et al*.	April 2017	$1x10^{-4}$	Particles	LAGP	PEO	$LiBF_4$	3000	--	140
Yang *et al.*	July 2017	$1x10^{-4}$	Wires	LLZO	PAN	$LiClO_4$	223	$4x10^{-7}$	84
*Zhang *et al.*	Sept 2017	$5x10^{-4}$	Particles	LLZTO	PVDF	$LiClO_4$	30	--	42
Zhao *et al.*	Oct 2017	$1x10^{-5}$	Particles	LLZTO	PEO	LiTFSI	8700	--	126

Cheng *et al.*	Nov 2017	$3.1x10^{-6}$	Particles	LLZTO	PEO	$LiClO_4$	1400	$3x10^{-7}$	125
Chen *et al.*	Dec 2017	$7.5\ x10^{-5}$	Particles	LLZO	PEO/ PEG	LiTFSI	10000	$1x10^{-5}$	94
*Bae *et al*.	Feb 2018	$9x10^{-5}$	Other	LLTO	PEO	LiTFSI	150	$2x10^{-6}$	28
Mohapatra *et al.*	Mar 2018	$3x10^{-5}$	Inert Particles	CeO2	PEO	$LiClO_4$	25	$3x10^{-7}$	78
Xie *et al.*	Mar 2018	$1.1x10^{-4}$	Wires	LLZO	PEO	LiTFSI	750	$1x10^{-6}$	87
Chen *et al.*	April 2018	$7.8\ x10^{-5}$	Particles	LLZTO	PEO	LiTFSi	6500	$4.6x10^{-5}$	90
Ban *et al.*	May 2018	$9.4x10^{-6}$	Particles	LATP	PEO	$LiClO_4$	150	$1x10^{-6}$	141
*Zhang *et al.*	June 2018	$5.8x10^{-4}$	Inert Columnar holes	Al_2O_3	PEO	LiTFSI	200	$6x10^{-6}$	63
Lin *et al.*	Aug 2018	$5.5x10^{-4}$	Inert Connected Network	SiO2	PEO	LiTFSI	20	$1.8x10^{-4}$	76
Karthik *et al.*	Oct 2018	$4.4x10^{-4}$	Particles	Al-LLZO	PEO	$LiClO_4$	343	--	85
Chen *et al.*	Nov 2018	$3.4x10^{-5}$	Particles	LLZO	PEO	LiTFSI	25000	$2.9x10^{-6}$	142
Huo *et al.*	Mar 2019	$3.1x10^{-5}$	Particles	CMOF	PEO	LiTFSI	100	$3.9x10^{-6}$	128
Sun *et al.*	April 2019	$2.3x10^{-6}$	Inert Particles	g-C_3N_4	PEO	LiTFSI	--	$4.7x10^{-7}$	129
Tang *et al.*	April 2019	$1.9x10^{-4}$	Inert Sheets	vermiculte	PEO	LiTFSI	1.5	$7.9x10^{-7}$	130
Zagorski *et al.*	May 2019	$3.4x10^{-7}$	Particles	LLZO	PEO	LiTFSI	1400	$1.3x10^{-6}$	81
Li *et al.*	June 2019	$7x10^{-6}$	Particles	LSPS	PEO	LiTFSI	--	$2.3x10^{-6}$	143
Huang *et al.*	June 2019	$1.2x10^{-4}$	Particles	LLZTO	PEO	LiTFSI	120	--	144
*Wang *et al.*	June 2019	$1.7x10^{-4}$	Nanowalls	LAGP	PEO	LiTFSI	150000	$2x10^{-5}$	44
Lu *et al.*	July 2019	$8.8x10^{-5}$	Particles	LLZTO	PVDF-HFP	LiTFSI	250	$2.8x10^{-6}$	96
Li *et al.*	July 2019	$1x10^{-4}$	3D Network	Ga-LLZO	PEO	LiTFSI	20000	--	88
Pan *et al.*	Sept 2019	$2x10^{-5}$	Inert Particles	MXen	PEO	LiTFSI	1	$6.4x10^{-6}$	56
Fu *et al.*	Oct 2019	$2.2\ x10^{-5}$	Porous Network	LLZAO	PEO	$LiClO_4$	10000	$7x10^{-7}$	89
*Sivaraj *et al.*	Mar 2020	$2x10^{-3}$	Particles	LLTO	PVDF	$LiClO_4$	10000	$5.7x10^{-5}$	27