

Supporting information

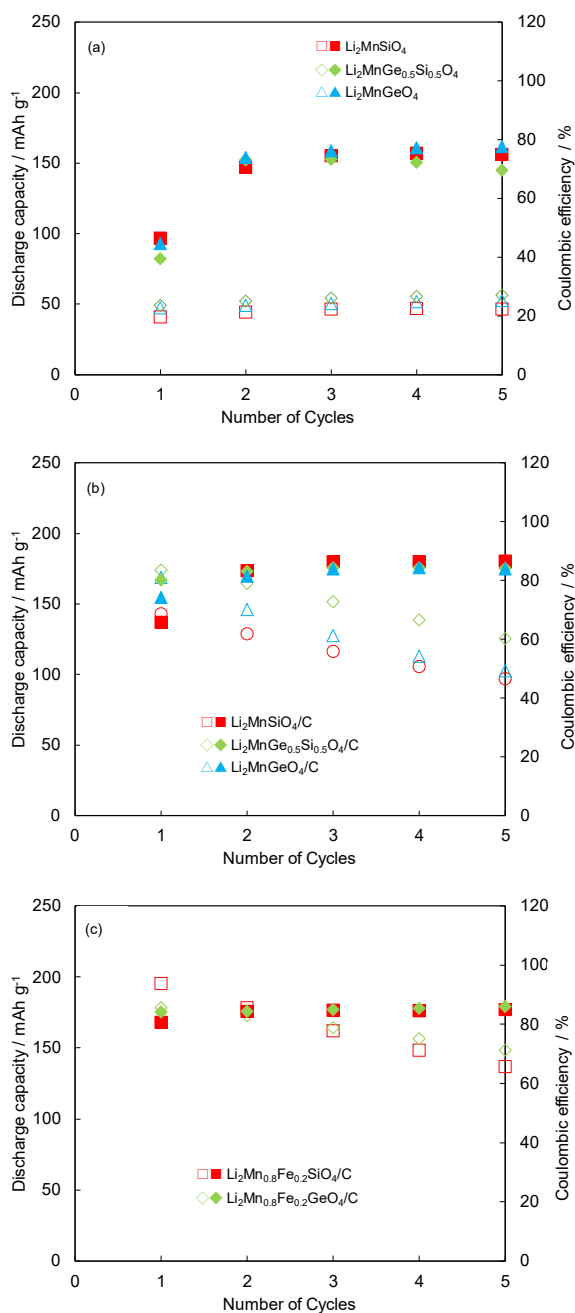


Figure S1. Cycling performances of $\text{Li}_2\text{MnGe}_x\text{Si}_{1-x}\text{O}_4$ ($x = 0, 0.5, 1.0$) (a), $\text{Li}_2\text{MnGe}_x\text{Si}_{1-x}\text{O}_4/\text{C}$ ($x = 0, 0.5, 1.0$) (b), and $\text{Li}_2\text{Mn}_{0.8}\text{Fe}_{0.2}\text{AO}_4/\text{C}$ ($A = \text{Si}, \text{Ge}$) (c). In (a), (b), and (c), hollow markers represent discharge capacities and solid markers represent coulombic efficiencies.

Table S1. $\text{Li}_2\text{MnSiO}_4$ preparation methods and their properties.

	Compound	Synthesis method	Solvent	Primary particle size	Initial discharge capacity	loading weight of active material
Ref. 1	$\text{Li}_2\text{MnSiO}_4/\text{C}$	solid-state reaction	water	20–50 nm	268 mA h g ⁻¹ (0.05 C, RT)	2-5 mg cm ⁻²
Ref. 2	$\text{Li}_2\text{MnSiO}_4/\text{C}$	solid-state reaction	water ethanol	not described	105 mA h g ⁻¹ (0.05 C, RT)	6-10 mg cm ⁻²
Ref. 3	$\text{Li}_2\text{MnSiO}_4/\text{C}$	sol-gel method	water ethanol	not described	250 mA h g ⁻¹ (0.05 C, RT)	1-1.3 mg cm ⁻²
Ref. 4	$\text{Li}_2\text{MnSiO}_4/\text{C}$	sol-gel method	water ethanol	20–30 nm	240 mA h g ⁻¹ (8 mA g ⁻¹ , RT)	1-1.2 mg cm ⁻²
Ref. 5	$\text{Li}_2\text{MnSiO}_4/\text{C}$	emulsification + sol-gel method	Water 1-butanol cyclohexane ethanol	~200 nm cube	290 mA h g ⁻¹ (0.02 C, 40 °C)	N. A.
Ref. 6	$\text{Li}_2\text{MnSiO}_4/\text{C}$	hydrothermal method	water PEG	10-40 nm	188 mA h g ⁻¹ (10 mA g ⁻¹ , N. A.)	1.8–2.2 mg cm ⁻²
Ref. 7	$\text{Li}_2\text{MnSiO}_4/\text{C}$	hydrothermal method	water	pore sizes 9–12 nm	217 mA h g ⁻¹ (0.1C, N.A.)	N. A.
Ref. 8	$\text{Li}_2\text{MnSiO}_4/\text{C}$	hydrothermal method	water	200–400 nm (rod)	275 mA h g ⁻¹ (0.05 C, RT)	1.2–2.4 mg cm ⁻²
Ref. 9	$\text{Li}_2\text{MnSiO}_4/\text{C}$	ionothermal synthesis	ionic liquid	150-250 nm	218 mA h g ⁻¹ (0.1 C, RT)	10–12 mg
This work	$\text{Li}_2\text{MnSiO}_4/\text{C}$	aqueous synthesis	water	not described	143 mA h g ⁻¹ (0.13 mA cm ⁻² , 25 °C)	14.5 mg cm ⁻²

References

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