

Electronic supplementary information for

Facile solvothermal process for lithium iron phosphate with improved Li-storage performance

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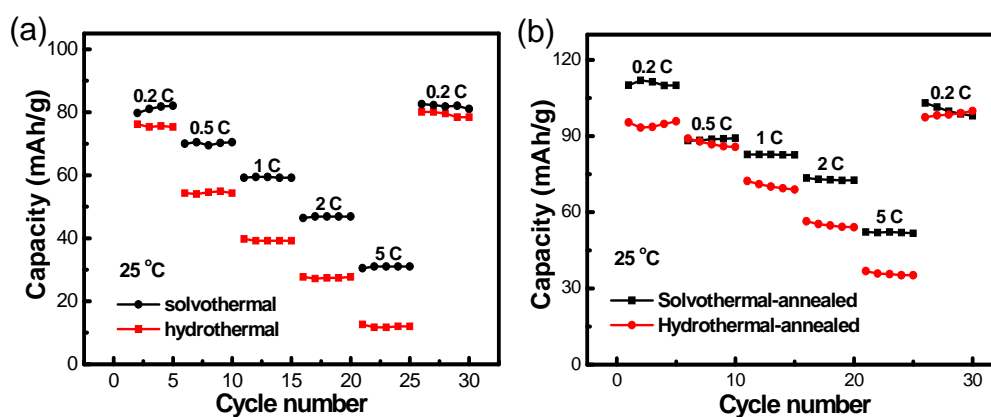


Fig. S1. Rate performance of hydro- and solvo-thermal LiFePO₄ NPs (a) pristine and (b) annealed at 700 °C in Ar/H₂ at the room temperature.

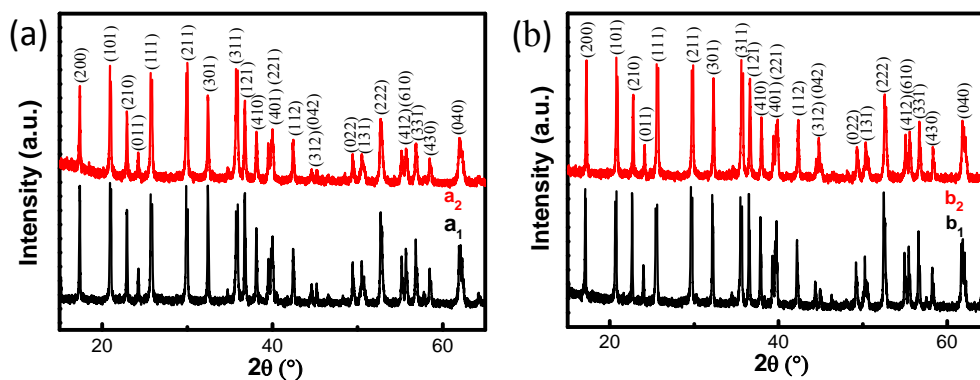


Fig. S2. The XRD patterns of the hydro- and solvo-thermal LiFePO₄ NPs annealed (a) with or (b) without carbon source at 700 °C in the Ar/H₂. a₁, b₁: hydrothermal LiFePO₄ annealed NPs and LiFePO₄/C NPs; a₂, b₂: solvothermal LiFePO₄ annealed NPs and LiFePO₄/C NPs.

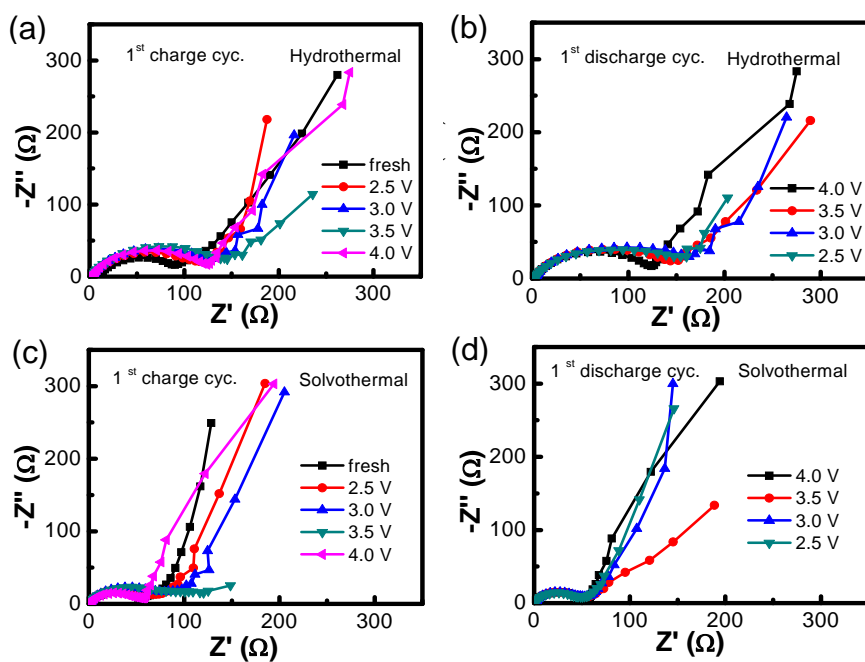


Fig. S3. Nyquist plots (Z' vs $-Z''$) of hydro- and solvo- thermal LiFePO_4/C vs. Li/Li^+ during (a, c) first charge cycle and (b, d) discharge cycle at various voltage.

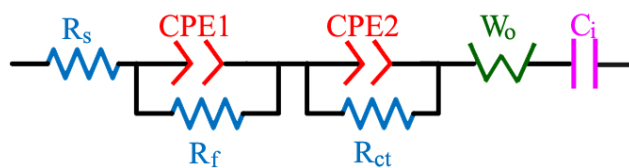


Fig. S4. Equivalent circuit of the corresponding Nyquist plots.

Table S1. Impedance parameters of hydro- and solvo- thermal LiFePO₄/C during first charge and discharge cycle at various voltages.

Potential		OCV	2.5	3.0	3.5	4.0
Hydrothermal 1 st charge cyc	Rs(±0.3), Ω	11	5	4	4	4
	R(f+ct) (±3), Ω	70	97	105	102	100
Hydrothermal 1 st discharge cyc	Rs(±0.3), Ω	-	4	4	4	4
	R(f+ct) (±3), Ω	-	112	122	119	100
Solvothermal 1 st charge cyc	Rs(±0.3), Ω	2	2	2	2	2
	R(f+ct) (±3), Ω	54	61	69	87	43
Solvothermal 1 st discharge cyc	Rs(±0.3), Ω	-	2	2	2	2
	R(f+ct) (±3), Ω	-	43	44	47	43