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Title	Controlled synthesis of $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ cathode materials with superior electrochemical performance through urea-based solution combustion synthesis
Author(s)	Zhu, Chunyu; Han, Cheng-gong; Akiyama, Tomohiro
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Electronic Supplementary information for
Controlled synthesis of $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ cathode materials with
superior electrochemical performance through urea-based
solution combustion synthesis

By Chunyu Zhu *, Cheng-gong Han, Tomohiro Akiyama

Center for Advanced Research of Energy & Materials, Hokkaido
University, Sapporo 060-8628, Japan.

[*] Dr. C. Zhu, E-mail: chunyu6zhu@eng.hokudai.ac.jp

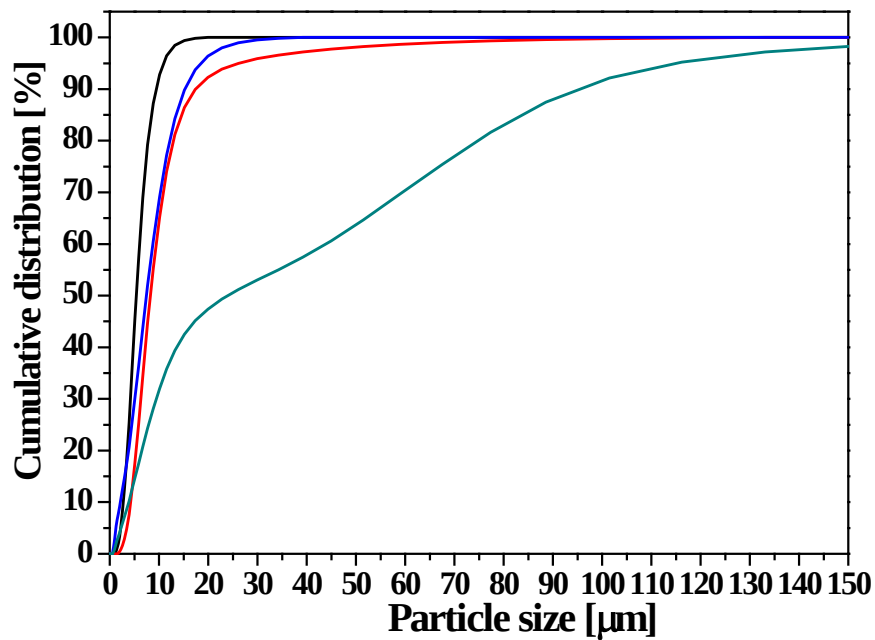
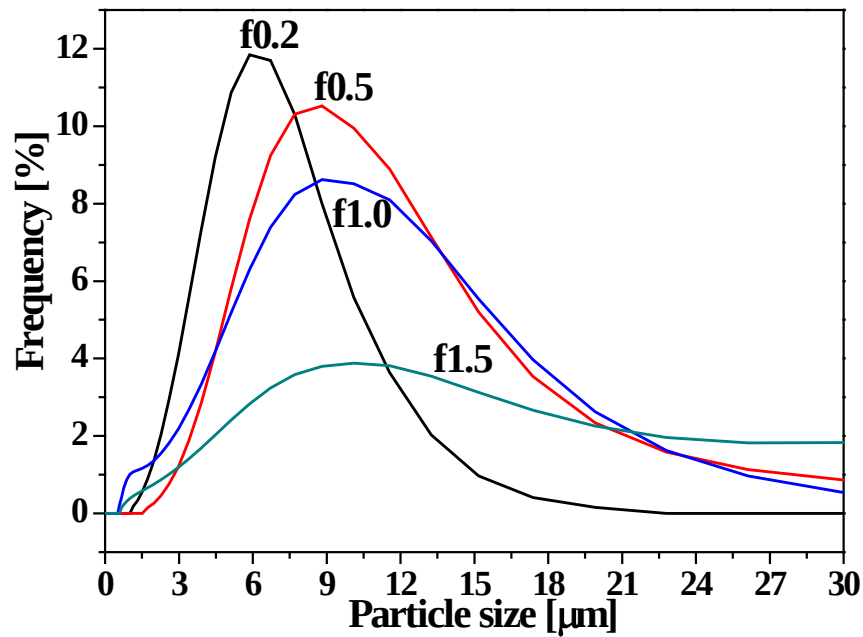
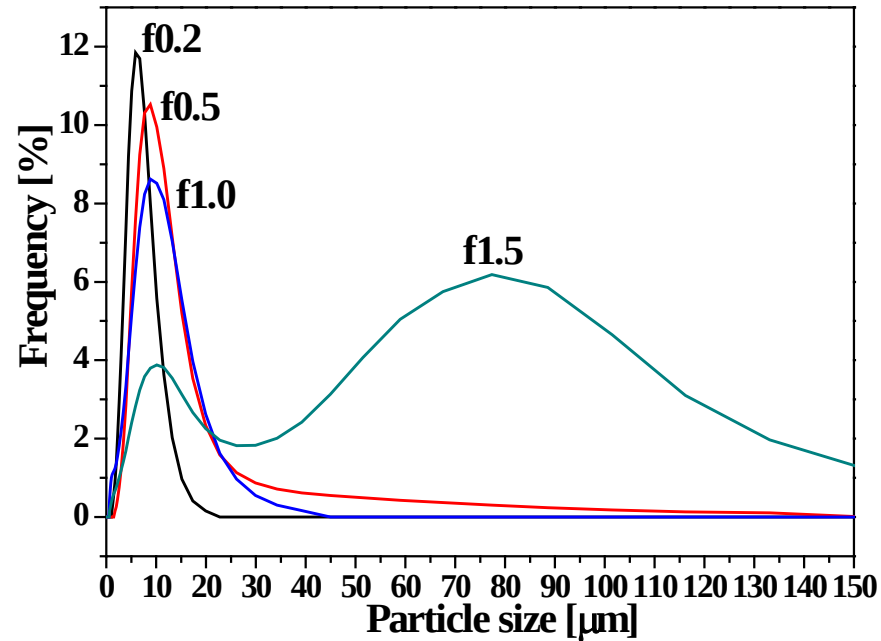


Figure S1. Particle size distribution of the products.

Table S1. Particle size distribution of the obtained products

Sample name	Average diameter [μm]	Median diameter /d50 [μm]	Modal diameter [μm]	Geometric mean diameter [μm]
f0.2-800C24h	5.8	5.4	5.5	5.2
f0.5-800C24h	10.9	8.2	8.2	8.6
f1.0-800C24h	8.4	7.5	8.3	6.5
f1.5-800C24h	40.7	23.9	72.4	21.3

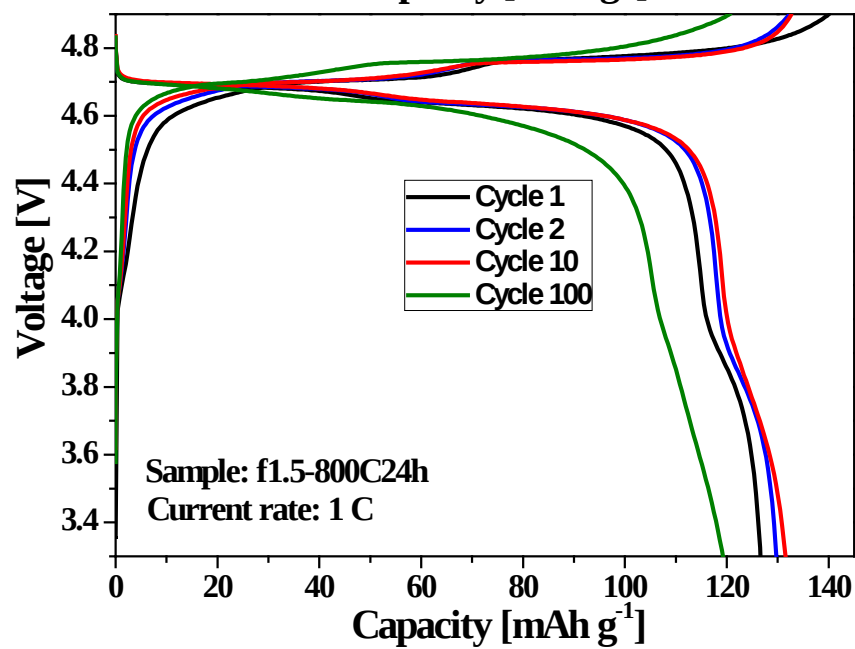
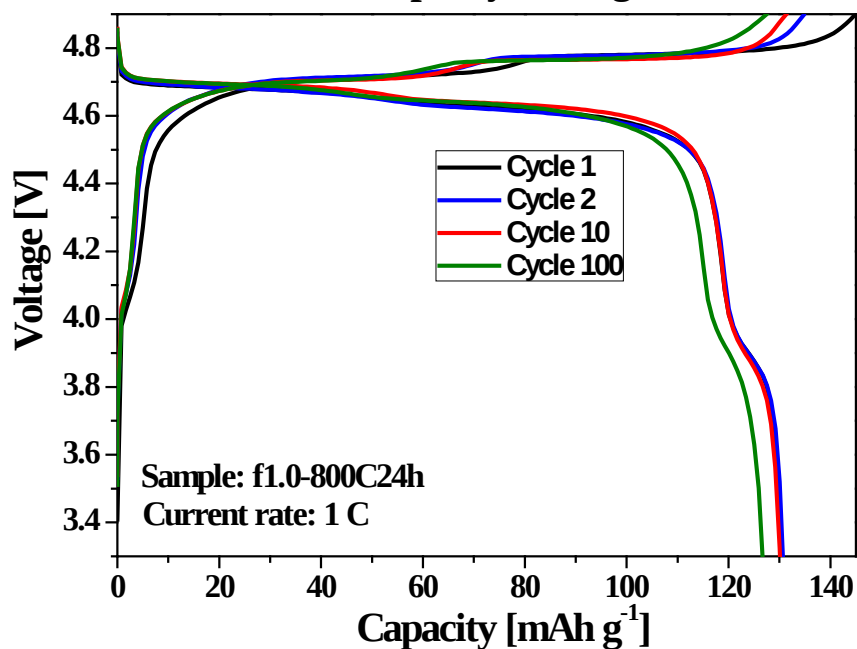
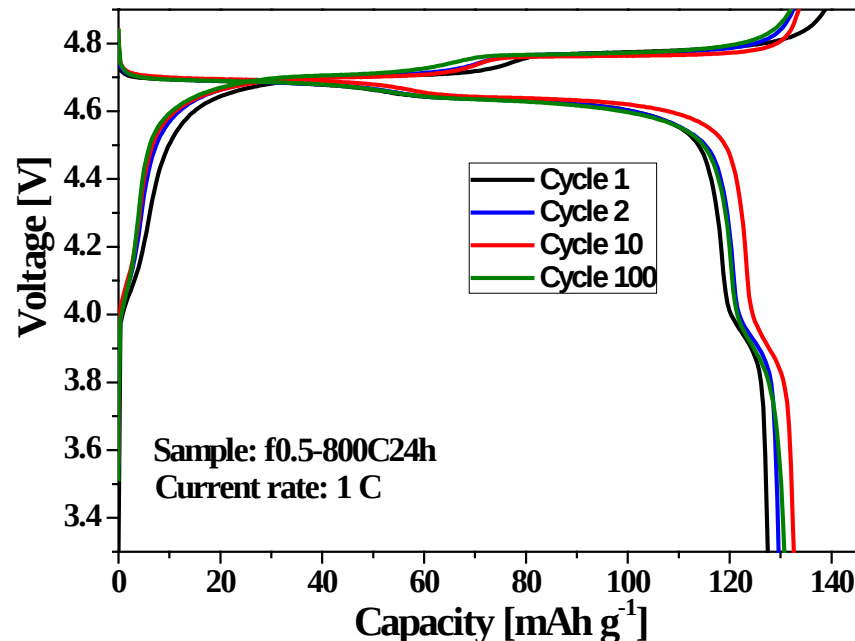
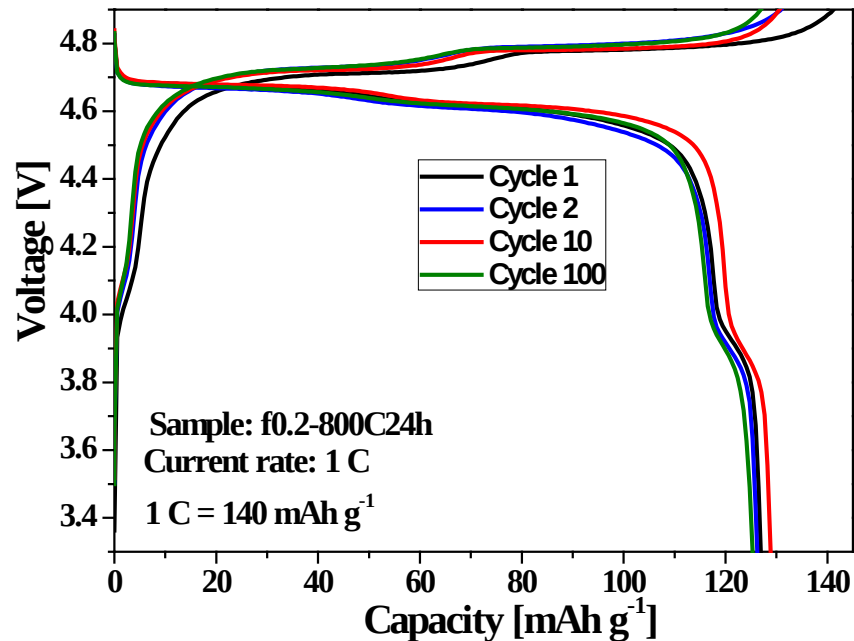


Figure S2. Charge-discharge curves of the samples at different cycles at a current rate of 1 C.

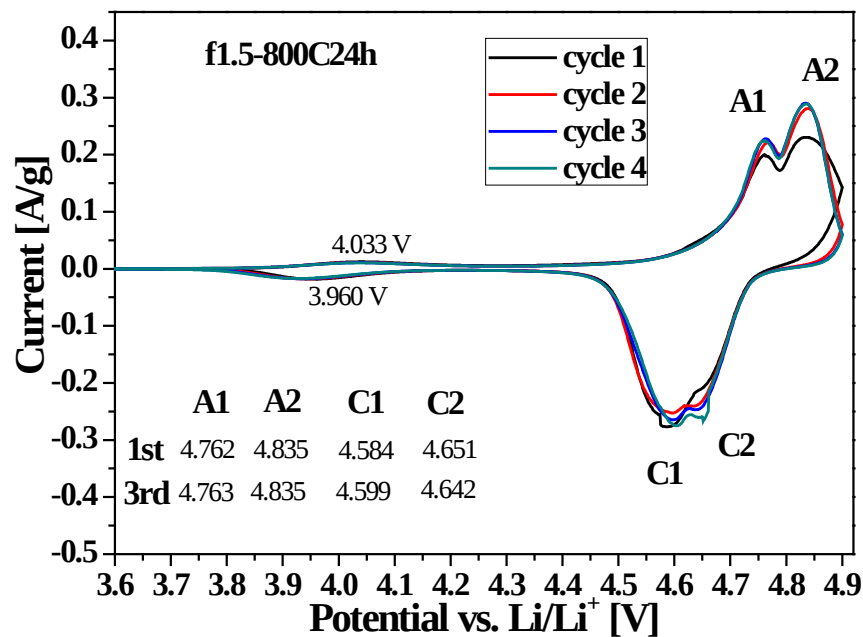
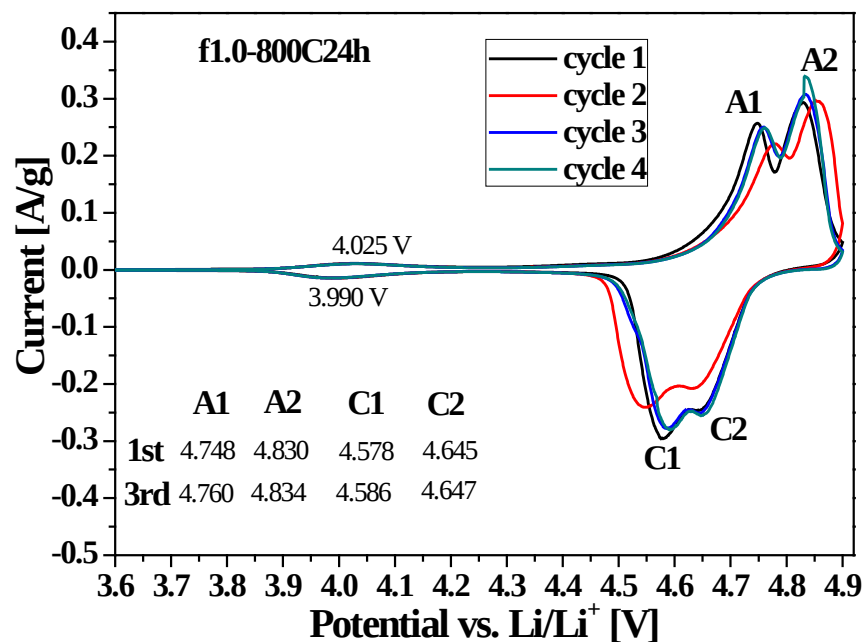
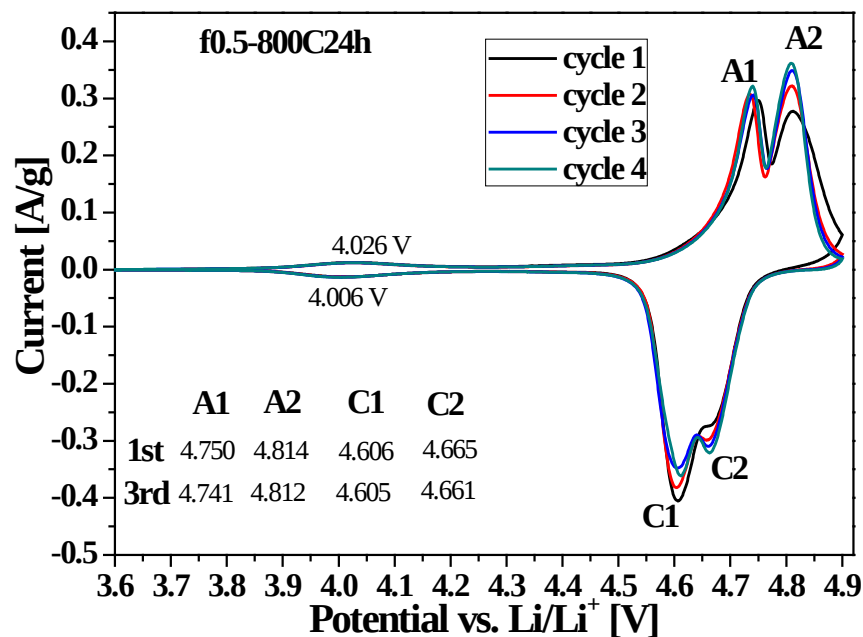
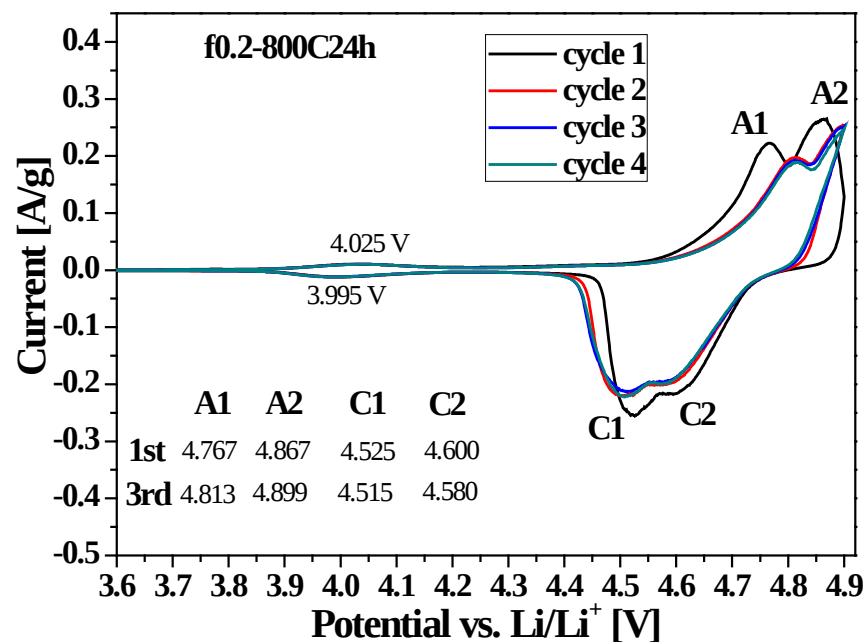


Figure S3. CV curves of the samples at a scanning rate of 0.1 mV s^{-1} .

Table S2. Difference between anodic and cathodic peak potentials of CV

	A1-C1 [V]	A2-C2 [V]	A1-C1 [V]	A2-C2 [V]
	<i>1st cycle</i>		<i>3rd cycle</i>	
f0.2-800C24h	0.242	0.267	0.298	0.319
f0.5-800C24h	0.144	0.149	0.136	0.151
f1.0-800C24h	0.170	0.185	0.174	0.187
f1.5-800C24h	0.178	0.184	0.164	0.193

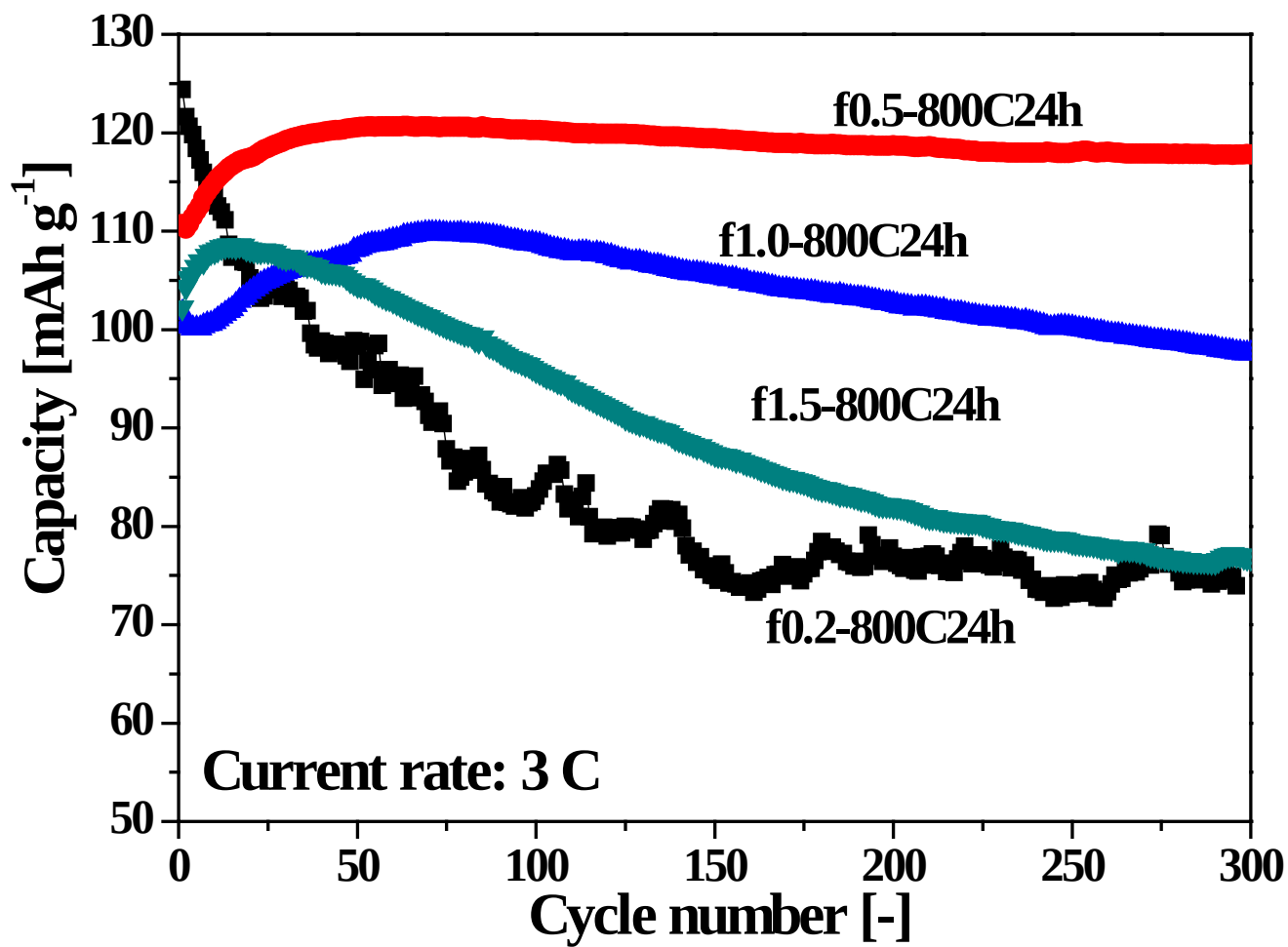


Figure S4. Cycling performance of the samples at a current rate of 3 C.

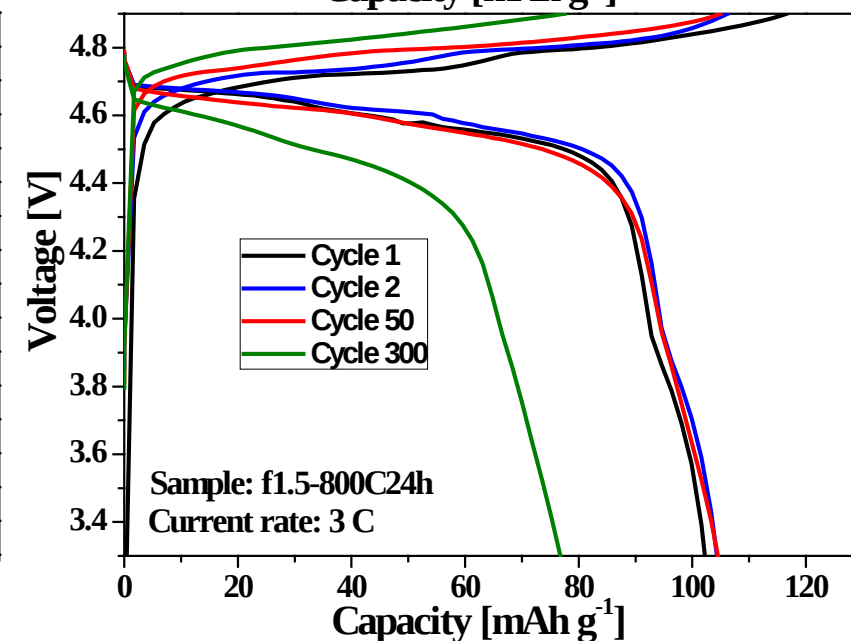
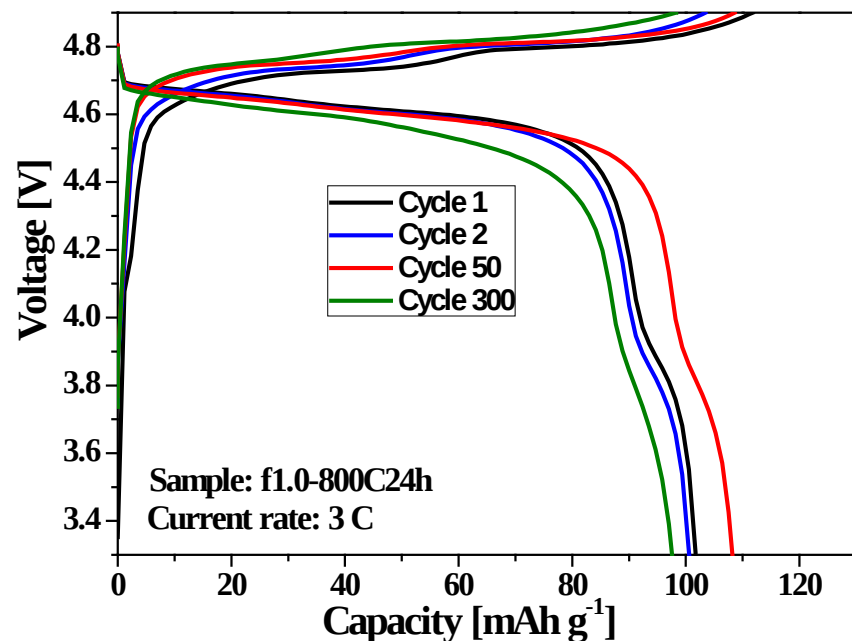
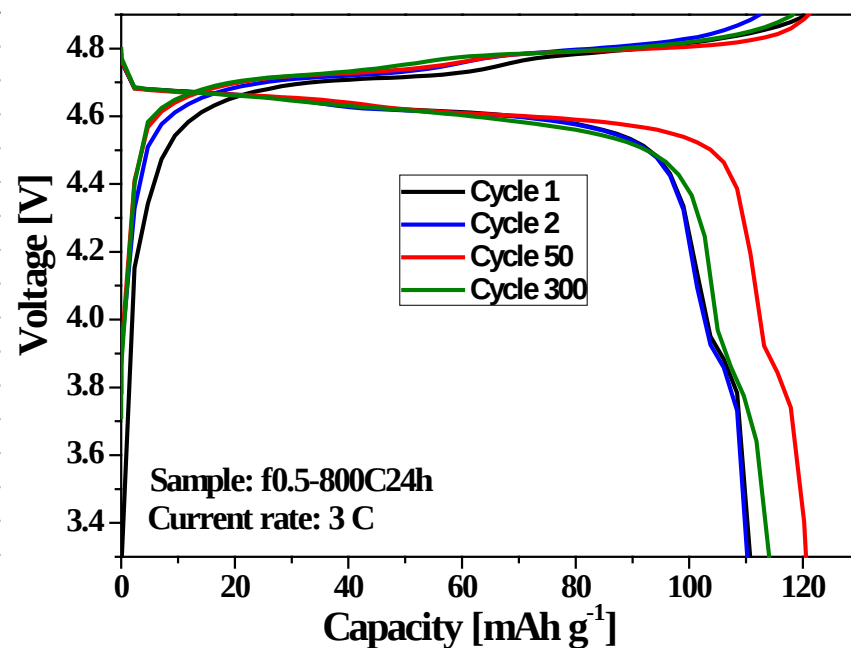
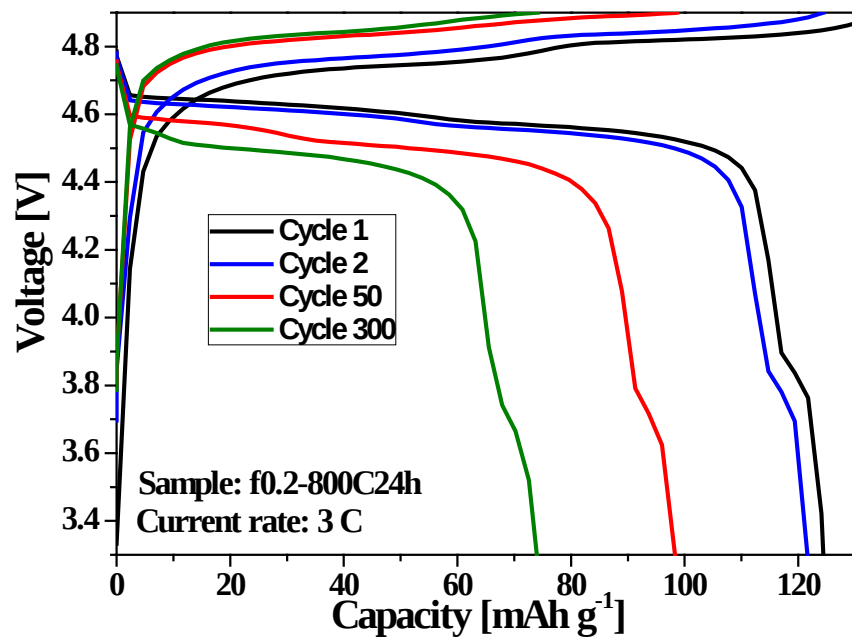


Figure S5. Charge-discharge curves of the samples at different cycles at a current rate of 3 C.

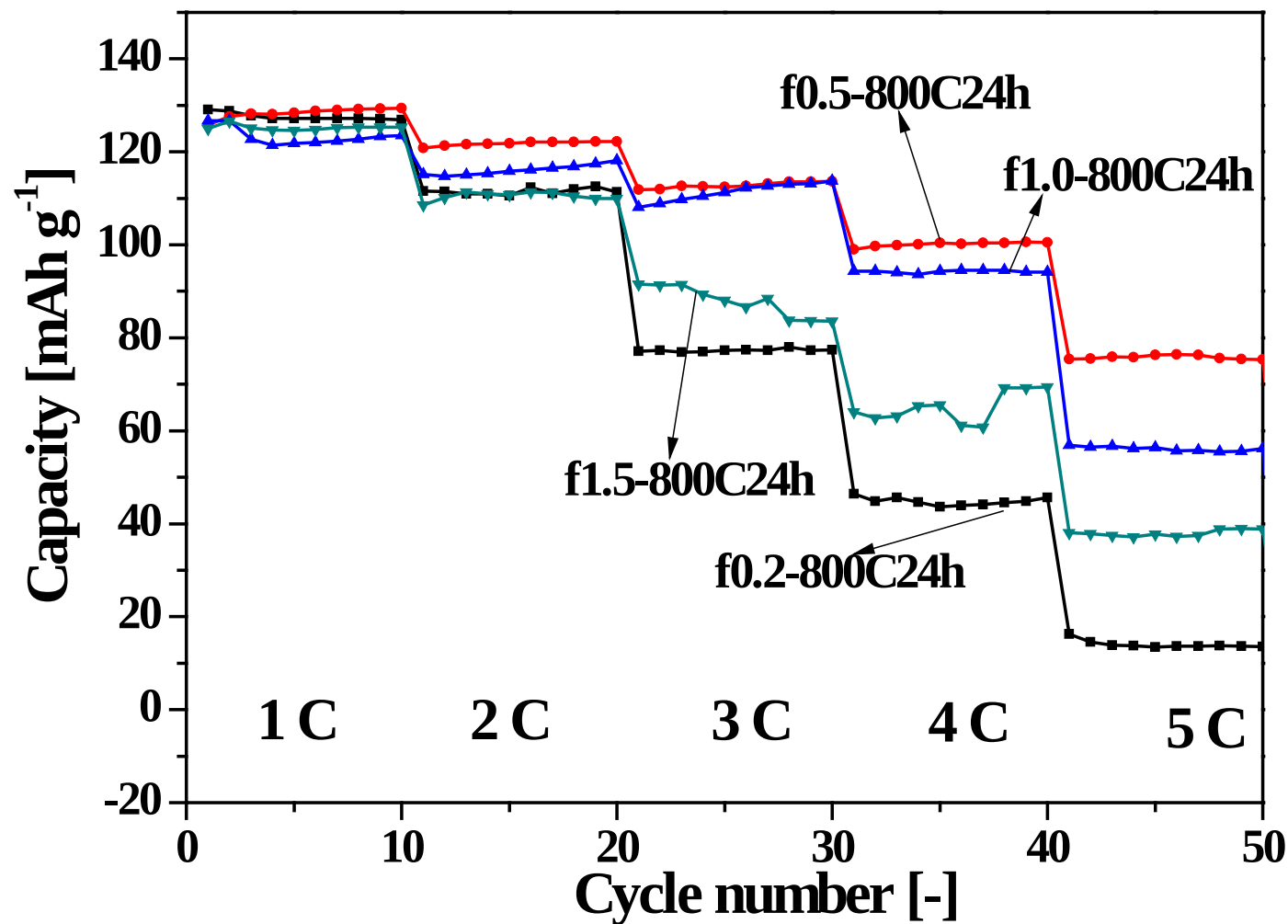


Figure S6. Cycling performance at various C rates.

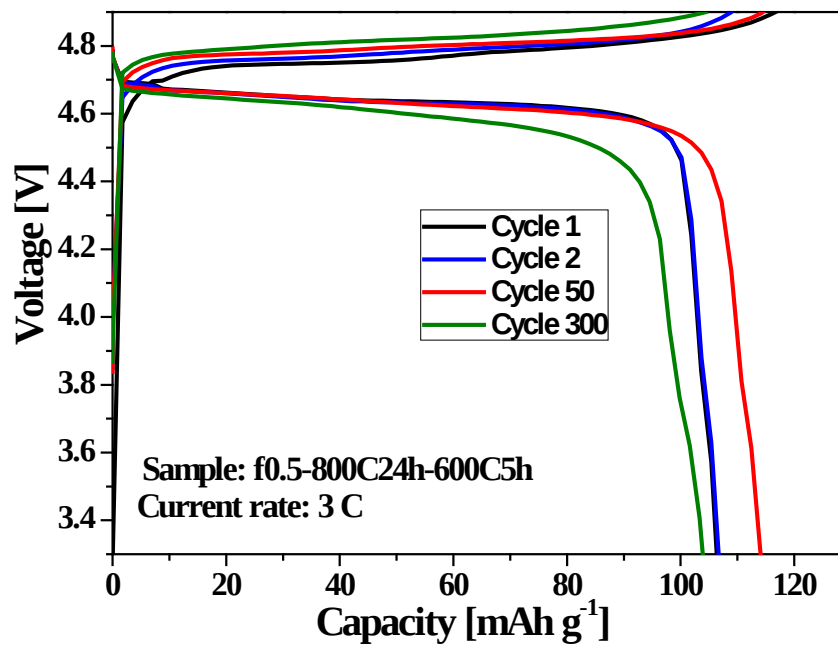
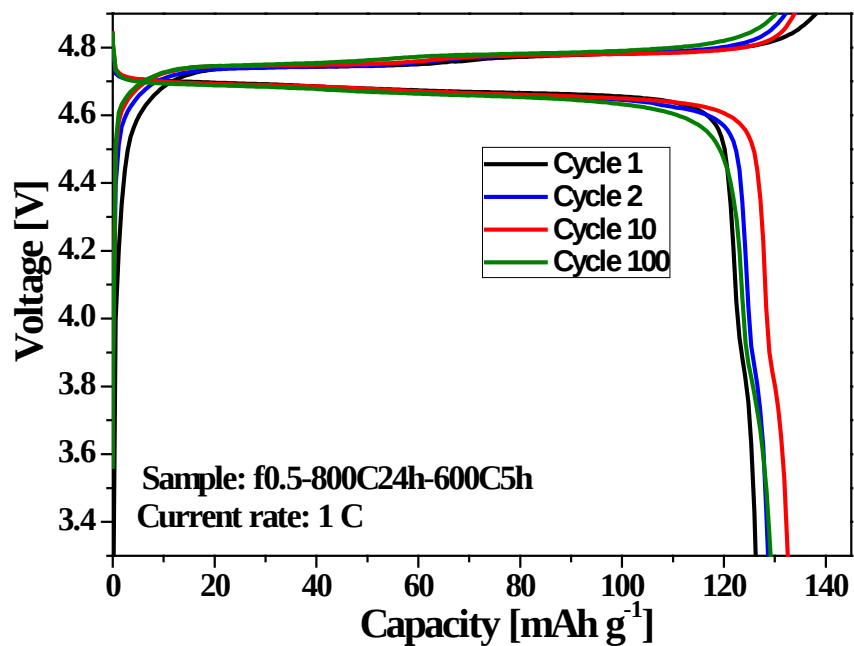


Figure S7. Charge-discharge curves of the samples of f0.5-800C24h-600C5h at 1 C and 3 C.