

## Supplementary Information

# Improved performances of $\text{LiNi}_{0.6}\text{Co}_{0.15}\text{Mn}_{0.25}\text{O}_2$ cathode material with full concentration-gradient for lithium ion batteries

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Fig. S1 Digital photograph of as-prepared full concentration gradient precursor  $\text{Ni}_{0.6}\text{Co}_{0.15}\text{Mn}_{0.25}(\text{OH})_2$ .

**Table S1** Total chemical composition of FCG and CC precursors by ICP analysis

	Measured molar ratio			Designed molar ratio		
	Ni	Co	Mn	Ni	Co	Mn
FCG	0.597	0.147	0.256	0.60	0.15	0.25
CC	0.598	0.149	0.253	0.60	0.15	0.25

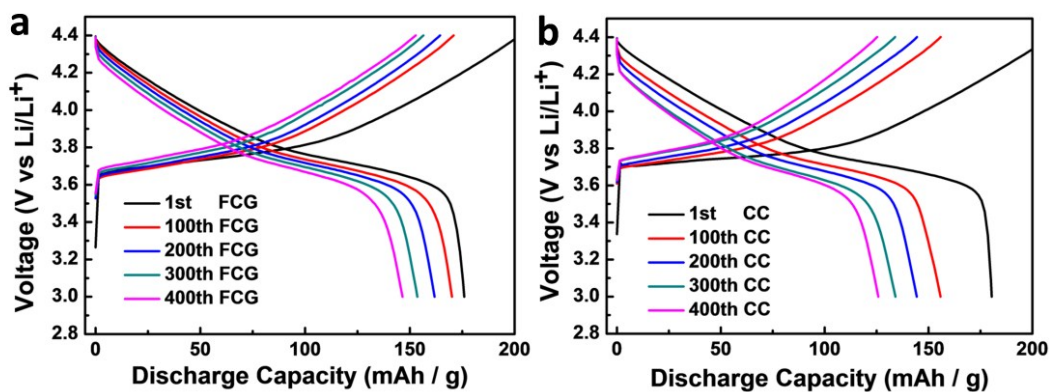


Fig. S2 1st, 100th, 200th, 300th, 400th charge-discharge curves of the FCG and CC

$\text{LiNi}_{0.6}\text{Co}_{0.15}\text{Mn}_{0.25}\text{O}_2$  electrodes at 0.5 C-rate between 3.0 and 4.4 V.

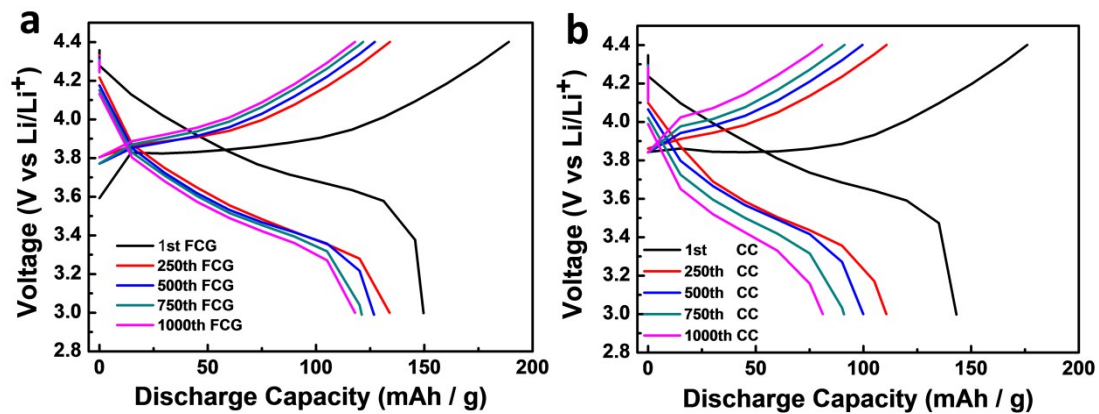


Fig. S3 1st, 250th, 500th, 750th, 1000th charge-discharge curves of the FCG and CC

$\text{LiNi}_{0.6}\text{Co}_{0.15}\text{Mn}_{0.25}\text{O}_2$  electrodes at 5 C-rate between 3.0 and 4.4 V.