

# Supplementary Materials: Improving the Electrochemical Performance of $\text{LiNi}_{0.80}\text{Co}_{0.15}\text{Al}_{0.05}\text{O}_2$ in Lithium Ion Batteries by $\text{LiAlO}_2$ Surface Modification

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Table S1 The each, mean and standard deviation of the three discharge of NCA, NCA-0.25-400 °C, NCA-0.25-500 °C and NCA-0.25-600 °C, respectively.

Sample	First discharge capacity at 0.2C (mAh/g)	First discharge efficiency (%)	Discharge capacity at 1C (mAh/g)	110th cycles capacity at 1C (mAh/g)
NCA-1	183.1	88.6	173.0	154.5
NCA-2	181.2	89.6	170.1	154.2
NCA-3	186.0	84.2	174.7	155.5
A.V.	<b>183.4</b>	<b>87.5</b>	<b>172.6</b>	<b>154.7</b>
S.D.	2.0	2.3	1.9	0.6
NCA-0.25-400°C-1	181.1	83.1	166.3	146.5
NCA-0.25-400°C-2	179.6	85.9	162	143.7
NCA-0.25-400°C-3	180	83.3	169.5	143.1
A.V.	<b>180.2</b>	<b>84.1</b>	<b>165.9</b>	<b>144.4</b>
S.D.	0.6	1.3	3.1	1.5
NCA-0.25-500°C-1	184.5	83.8	172.3	162.6
NCA-0.25-500°C-2	183.2	85	173.5	161.5
NCA-0.25-500°C-3	183.2	85	172.5	160.7
A.V.	<b>183.6</b>	<b>84.6</b>	<b>172.8</b>	<b>161.6</b>
S.D.	0.6	0.6	0.5	0.8
NCA-0.25-600°C-1	184.1	84.3	168.6	152.2
NCA-0.25-600°C-2	185.3	84.1	172.6	152.4
NCA-0.25-600°C-3	183.7	81.5	169.3	152
A.V.	<b>184.4</b>	<b>83.3</b>	<b>170.2</b>	<b>152.2</b>
S.D.	0.7	1.3	1.7	0.2

**Commented [M1]:** Please carefully check the accuracy of names. Changes will not be possible after proofreading.

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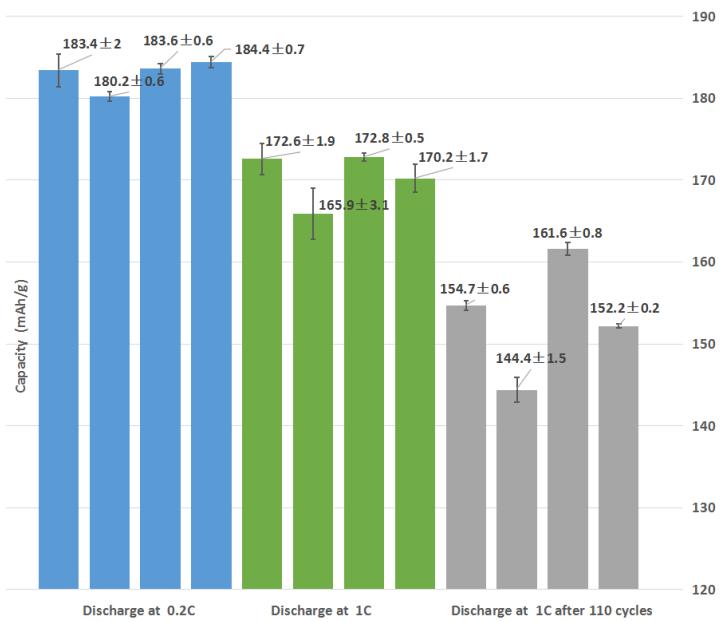


Figure S1 The mean and standard deviation diagrams of the three discharge of NCA series (NCA, NCA-0.25-400 °C, NCA-0.25-500 °C and NCA-0.25-600 °C): blue, green and grey histograms correspond to discharge at 0.2C, discharge at 1C and discharge at 1C after 110 cycles.