

## Empirical Capacity Degradation Model for a Lithium-Ion Battery Based on Various C-Rate Charging Conditions

Dong Hyun Kim<sup>1,2,3</sup>, Juhyung Lee<sup>4</sup>, Kyungseop Shin<sup>5\*</sup>, Kwang-Bum Kim<sup>2\*</sup>, and Kyung Yoon Chung<sup>1\*</sup>

<sup>1</sup>Energy Storage Research Center, Korea Institute of Science and Technology (KIST), 5, Hwarang-ro 14-gil, Seongbuk-gu, Seoul 02792, Republic of Korea

<sup>2</sup>Department of Materials Science and Engineering, Yonsei University, 134 Shinchon-dong, Seodaemoon-gu, Seoul 03722, Republic of Korea

<sup>3</sup>R&D center, Remplir Inc., 129 Songsansandan-gil, Songsan-myeon, Hwaseong-si, Gyeonggi-do, 18545, Republic of Korea

<sup>4</sup>Consumer Product Division & Leisure Product Center, Korea Conformity Laboratories(KCL), 199, Gasan digital 1-ro, Geumcheon-gu, Seoul, 08503, Republic of Korea

<sup>5</sup>Department of Computer Science, Sangmyung University, Hongjimun 2-gil 20, Jongno-gu, Seoul, 03016, Republic of Korea

**Table S1.** Comparison of the charge/discharge capacity and coulombic efficiency of the 2nd and 45th sets of Cases (a) 1 and (b) 2 under different test conditions

(a)					(b)				
C-rate	Case 1 (0.5C)		Capacity Fade		C-rate	Case 2 (1.0C)		Capacity Fade	
	1 <sup>st</sup> Set	45 <sup>th</sup> Set				1 <sup>st</sup> Set	45 <sup>th</sup> Set		
0.5	CC (mAh)	1439.53	1194.19	82.96%	0.5	CC (mAh)	1458.58	973.05	66.71%
0.2	DC (mAh)	1430.9	1197.37	83.68%	0.2	DC (mAh)	1460.59	989.87	67.77%
	CE	99.40%	100.27%			CE (%)	100.14%	101.73%	
0.5	CC (mAh)	1427.79	1195.79	83.75%	1.0	CC (mAh)	1447.15	999.23	69.05%
0.5	DC (mAh)	1406.81	1144.83	81.38%	0.5	DC (mAh)	1393.92	803.66	57.65%
	CE	98.53%	95.74%			CE (%)	96.32%	80.43%	
0.5	CC (mAh)	1409.37	1147.17	81.40%	1.0	CC (mAh)	1399.53	816.31	58.33%
1.0	DC (mAh)	1385.01	1069.72	77.24%	1.0	DC (mAh)	1327.19	710.84	53.56%
	CE	98.27%	93.25%			CE (%)	94.83%	87.08%	
0.5	CC (mAh)	1386.6	1073.02	77.38%	1.0	CC (mAh)	1335.07	721.84	54.07%
2.0	DC (mAh)	1244.68	923.95	74.23%	2.0	DC (mAh)	1255.88	577.21	45.96%
	CE	89.76%	86.11%			CE (%)	94.07%	79.96%	

\*E-mail address: ksshin@smu.ac.kr (K. Shin), kbkim@yonsei.ac.kr (K.-B. Kim), kychung@kist.re.kr (K. Y. Chung)

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