

Supplementary Information for: Motion-enhancement Assisted Digital Image Correlation of Lithium-ion Batteries during Lithiation

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Masking and Sobel filtering

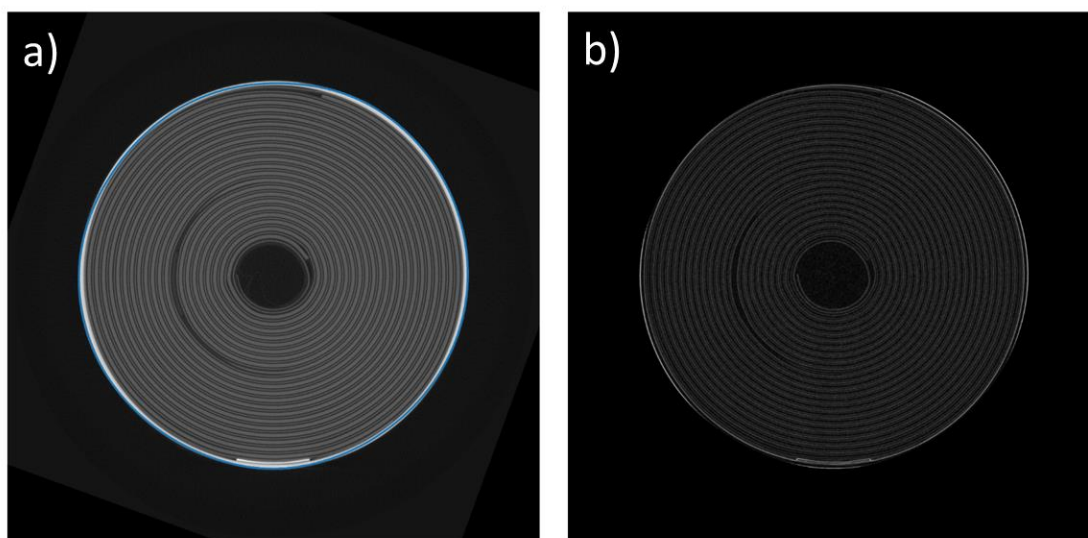


Figure A1: a) An illustrative 'masked' frame of M50-P where the blue line is the outline of the cell casing from the last frame of the video, used to mask any elements outside of its perimeter, b) an illustrative Sobel filtered frame of M50-P.

Cell charging data

All the cells were charged to their upper voltage cut-off limit in four separate charging steps. In the figures below, the different steps have been combined into one graph for visual purposes.

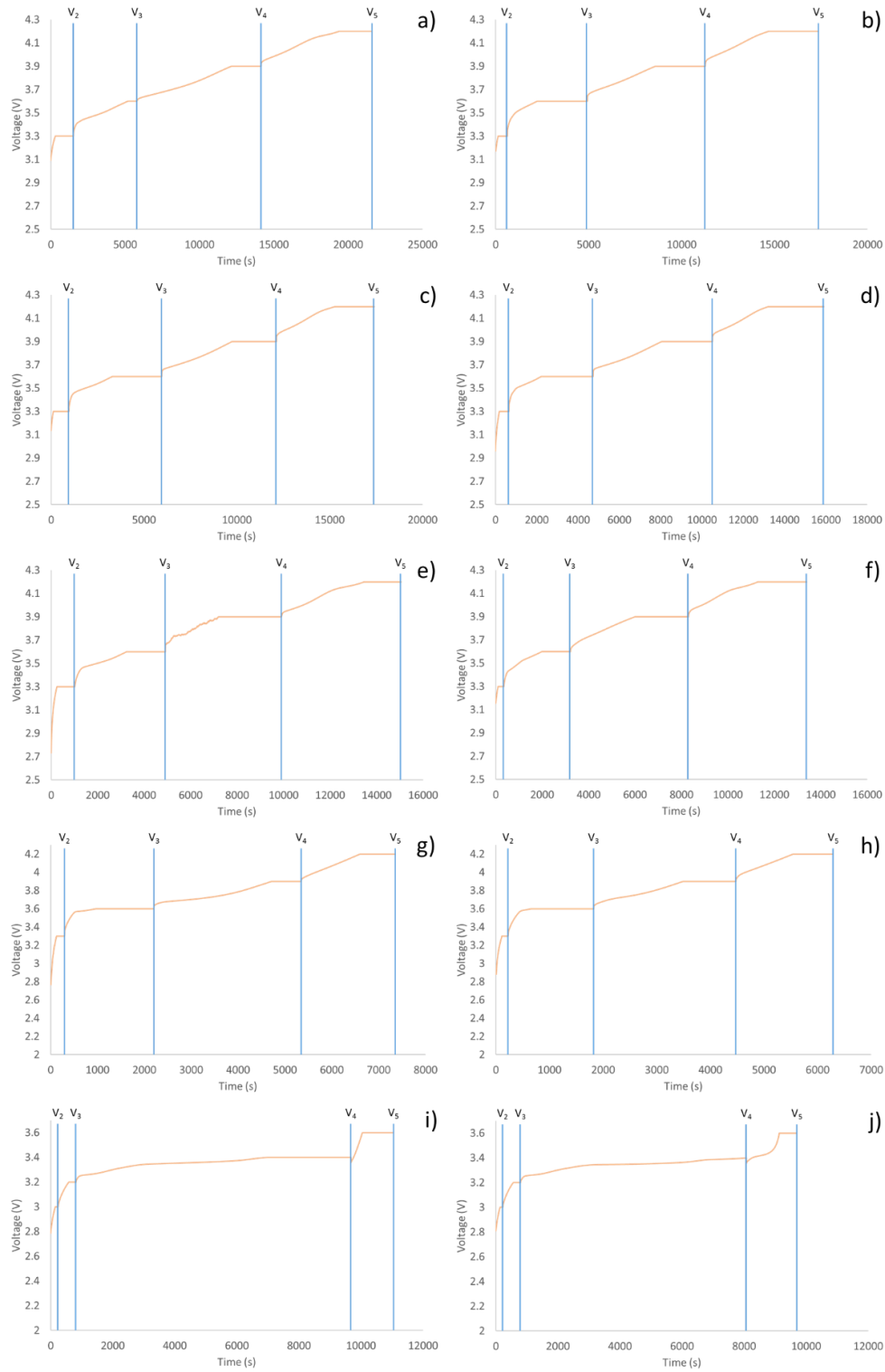


Figure A2: Combined voltage profile during charging of: (a) M50-P, (b) M50-C, (c) MJ1-P, (d) MJ1-C, (e) VTC6-P, (f) VTC6-C, (g) HB6-P, (h) HB6-C, (i) LPC-P, (j) LPC-C.

Source videos of the pristine cells



SI_Video_1_M50_P_S
ource.avi



SI_Video_2_MJ1_P_S
ource.avi



SI_Video_3_VTC6_P_
Source.avi



SI_Video_4_HB6_P_S
ource.avi



SI_Video_5_LPC_P_S
ource.avi

Enhanced videos of the pristine cells



SI_Video_6_M50_P_E
nhanced.avi



SI_Video_7_MJ1_P_E
nhanced.avi



SI_Video_8_VTC6_P_
Enhanced.avi



SI_Video_9_HB6_P_E
nhanced.avi



SI_Video_10_LPC_P_E
nhanced.avi

Source videos of the cycled cells



SI_Video_11_M50_C_
Source.avi



SI_Video_12_MJ1_C_
Source.avi



SI_Video_13_VTC6_C_
_Source.avi



SI_Video_14_HB6_C_
Source.avi



SI_Video_15_LPC_C_
Source.avi

Enhanced videos of the cycled cells



SI_Video_16_M50_C_
Enhanced.avi



SI_Video_17_MJ1_C_
Enhanced.avi



SI_Video_18_VTC6_C_
_Enhanced.avi



SI_Video_19_HB6_C_
Enhanced.avi



SI_Video_20_LPC_C_
Enhanced.avi