

Electronic Supporting Information for

Defects in $\text{Li}_4\text{Ti}_5\text{O}_{12}$ induced by carbon deposition: analysis of unidentified bands in Raman spectra

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Extended Raman Study

It is demonstrated the carbon content is increasing with prolonged dwelling time, but without notable changes in the carbon structure. We think that in terms of carbon coverage, M0 is already enough. The Raman spectra of cLTO/C is also looking a little bit different with the G-band shifted to lower wavenumber. All samples are normalized by the maximum intensity. Therefore, the direct comparison of intensities are somewhat reasonable.

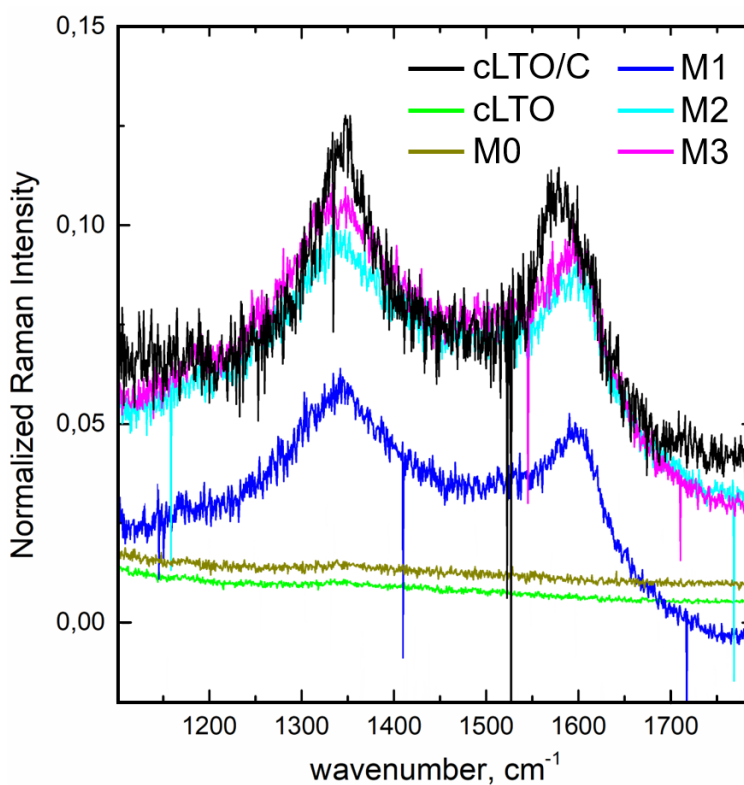


Fig S1. The extended Raman spectra of pristine LTO (cLTO and M0) and LTO/C composites (cLTO/C and M1-M3)

SEM Study

Commercial obtained LTO and LTO/C composites were obtained from MSE Supplies LLC. With the same processing method (for M1-M3) and given the short dwelling times, the grain size and morphology are not expected to vary. The FE-SEM images shown in Figure 2 reveal that all samples have similar granularity.

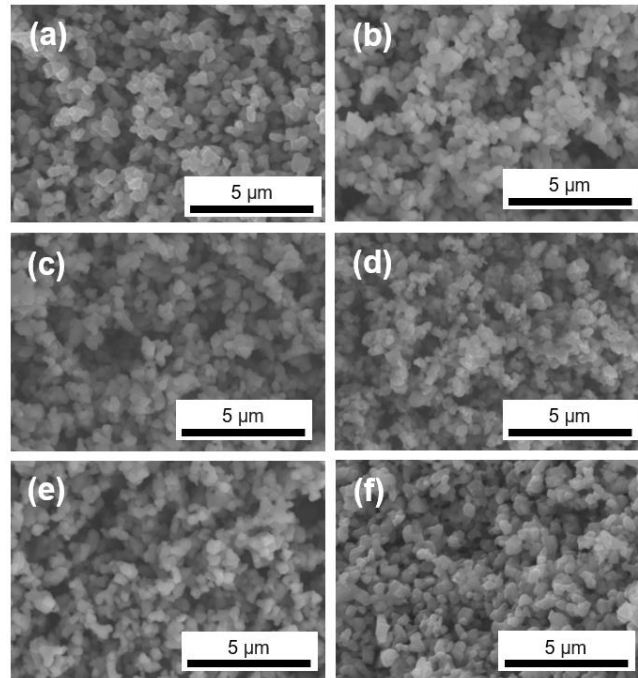


Figure S2 (a) FE-SEM images of the various LTO powders. (A) LTO-P; (B) LTO-C; (C) LTO-M0; (D) LTO-M1; (E) LTO M-2 and; (F) LTO-M3