

Supplementary Information for Hill *et al.*

High surface area templated LiFePO_4 from a single source precursor molecule

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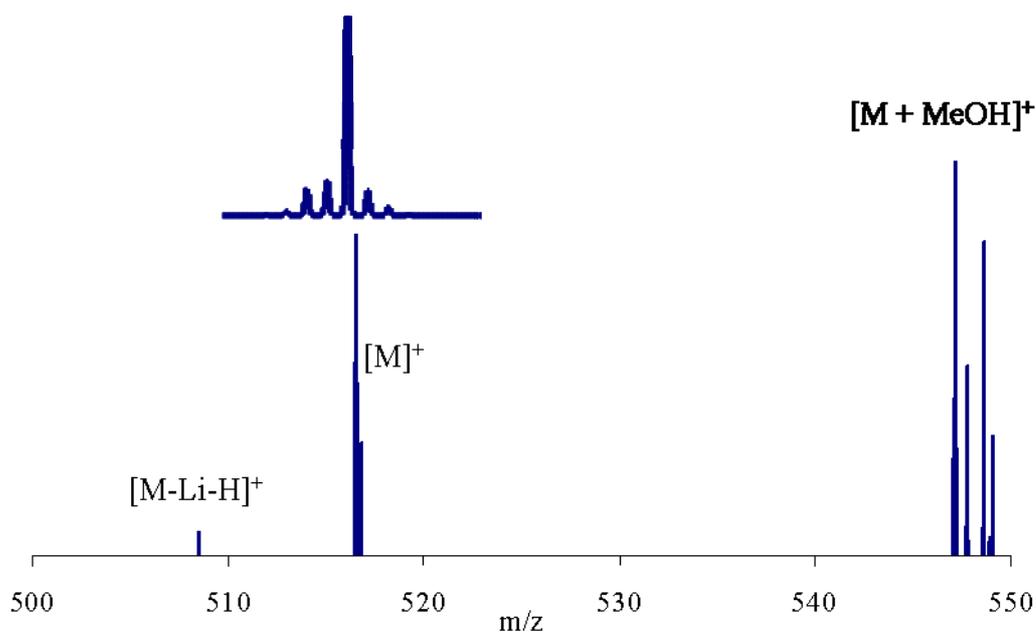


Figure S1. Mass spectrum of the single source precursor **LFP-S**. Theoretical splitting pattern (inset), observed splitting pattern (bottom).

Following the successful preparation of a mesoporous LiFePO_4 / C composite as confirmed from TEM, the potential cathode material was distributed amongst a conductive carbon matrix to prepare the electrode. SEM (**Figure S2**) illustrates the uniform distribution of LiFePO_4 throughout the carbon matrix. LiFePO_4 particles (bright regions in SEM micrographs) are 0.5-5 μm in diameter within a thin film of 10 μm uniform thickness.

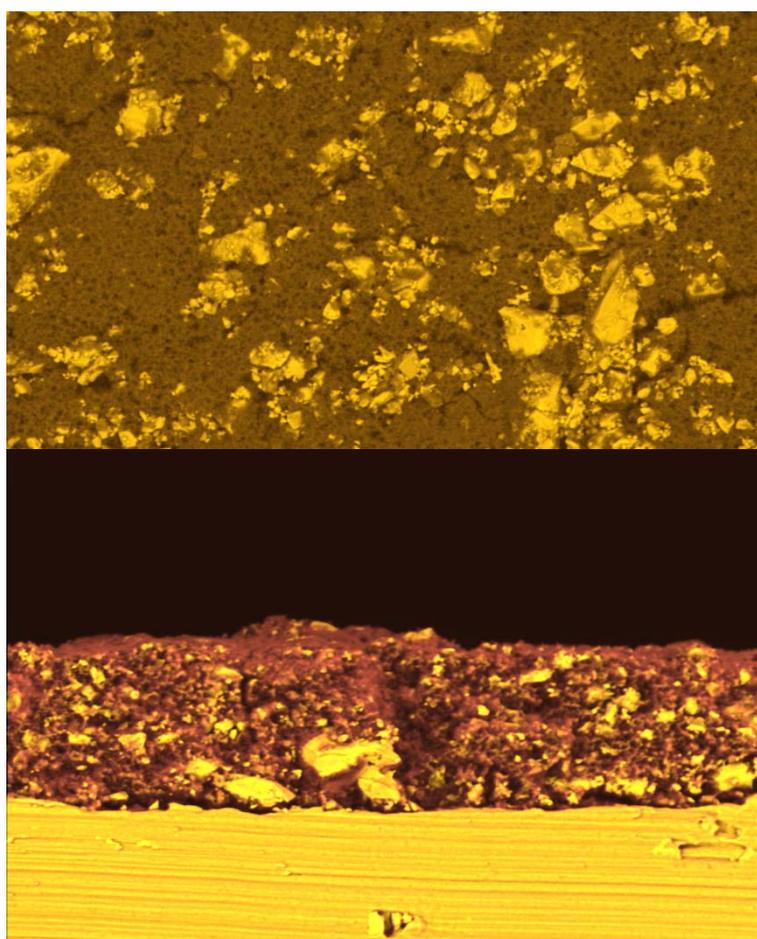


Figure S2. Typical SEM images of LiFePO_4 sample **3** as cast as an electrode. Secondary emission (top) and backscattered electron image (middle) of the same region; an ultramicrotomed cross-section of an electrode coating made from LiFePO_4 sample **3** (bottom) shows secondary emission overlaid with backscattered electron image of the same region. Bright regions are indicative of LiFePO_4 .

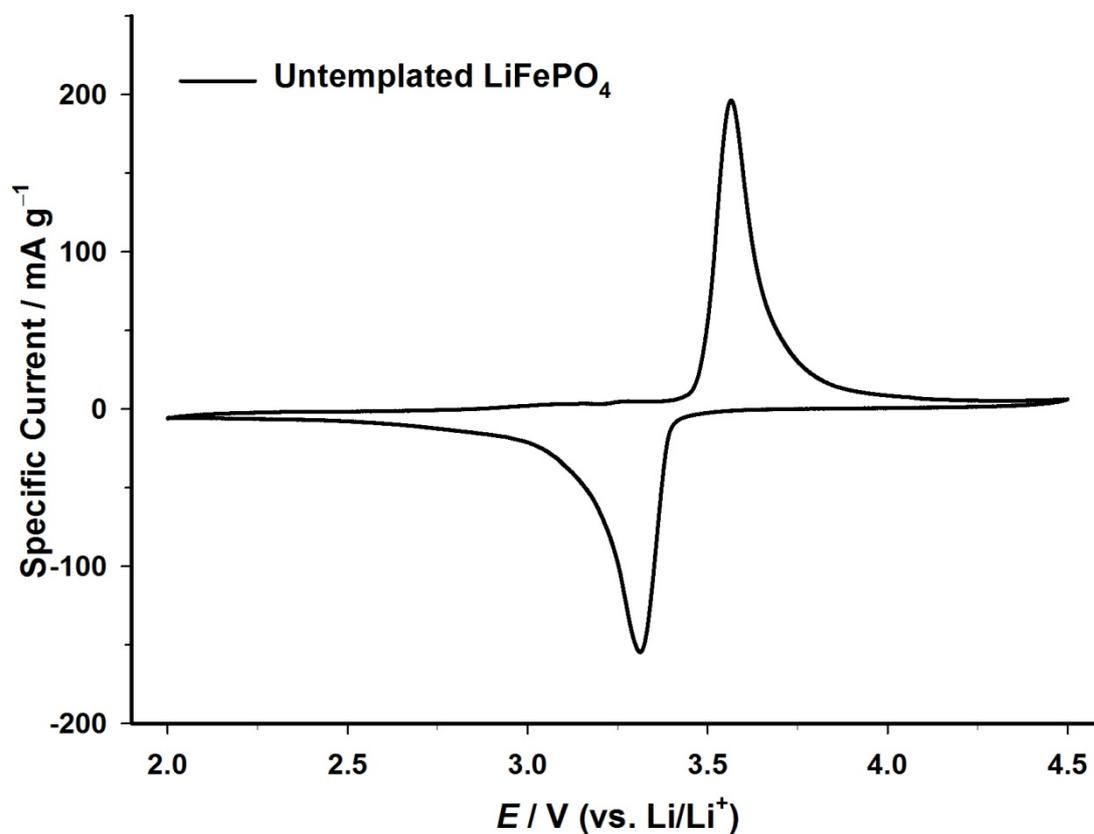


Figure S3. Transient cyclic voltammogram expressed as specific current (mA g⁻¹) in a two-electrode CR 2032 coin cell for Sample 1 as working electrode, with 1M LiPF₆ (50:50 w/w EC:DMC) electrolyte and Li-metal anode as secondary electrode.