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Supporting Information

Surfactant-Free Nonaqueous Synthesis of Lithium Titanium Oxide (LTO) Nanostructures for Lithium Ion Battery Applications

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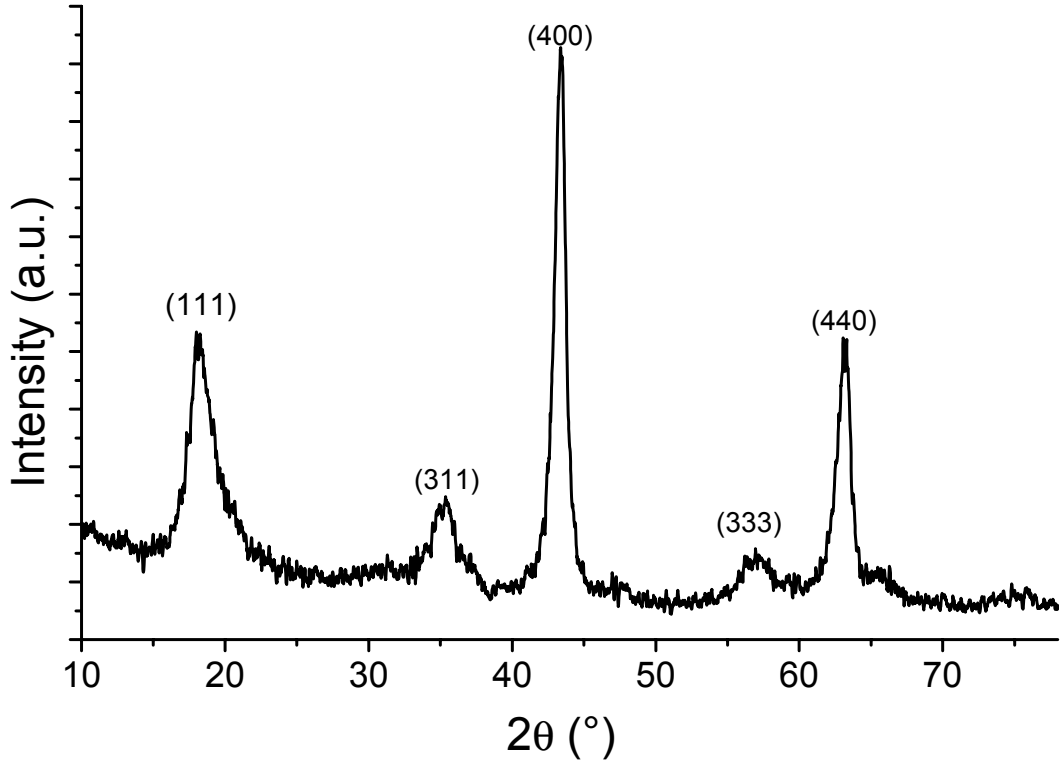

Figure S1. XRD pattern of the as-prepared LTO nanostructures with a Li:Ti concentration ratio of 8.5:8 mmol. The excess of lithium permits to eliminate the TiO_2 anatase phase impurity.

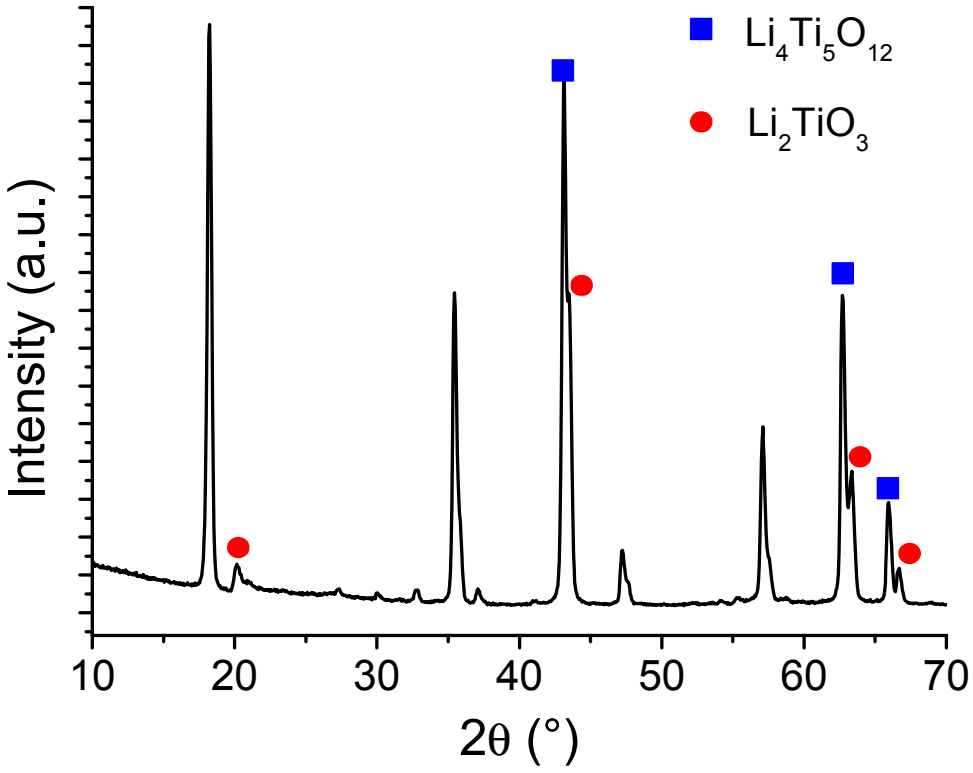

Figure S2. XRD pattern of LTO nanostructures for a Li:Ti concentration ratio of 8.5:8 mmol. The excess of lithium permits to eliminate the TiO_2 anatase phase impurity, however it promote the formation on Li_2TiO_3.

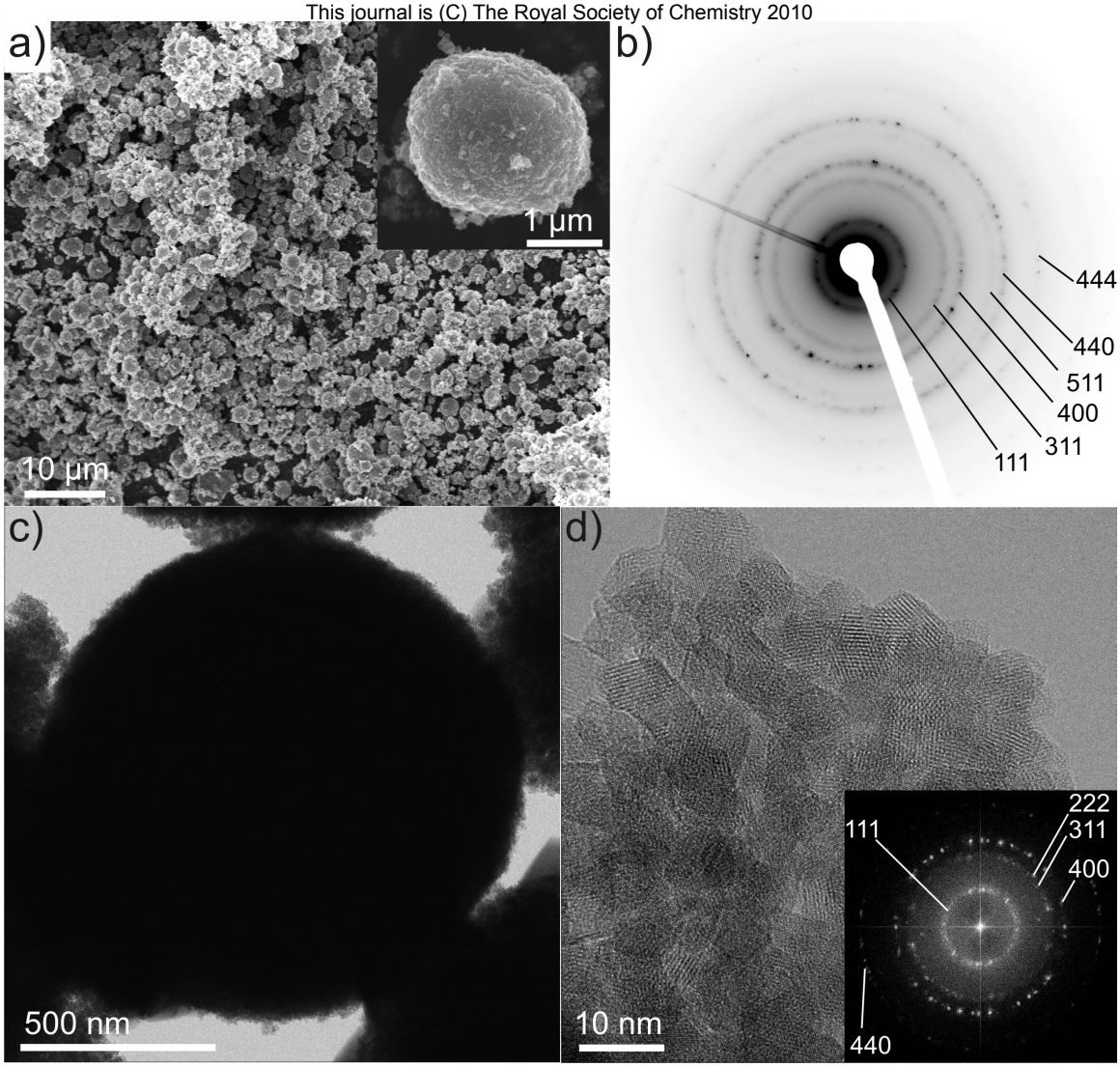

Figure S3. High quality image of Figure 2

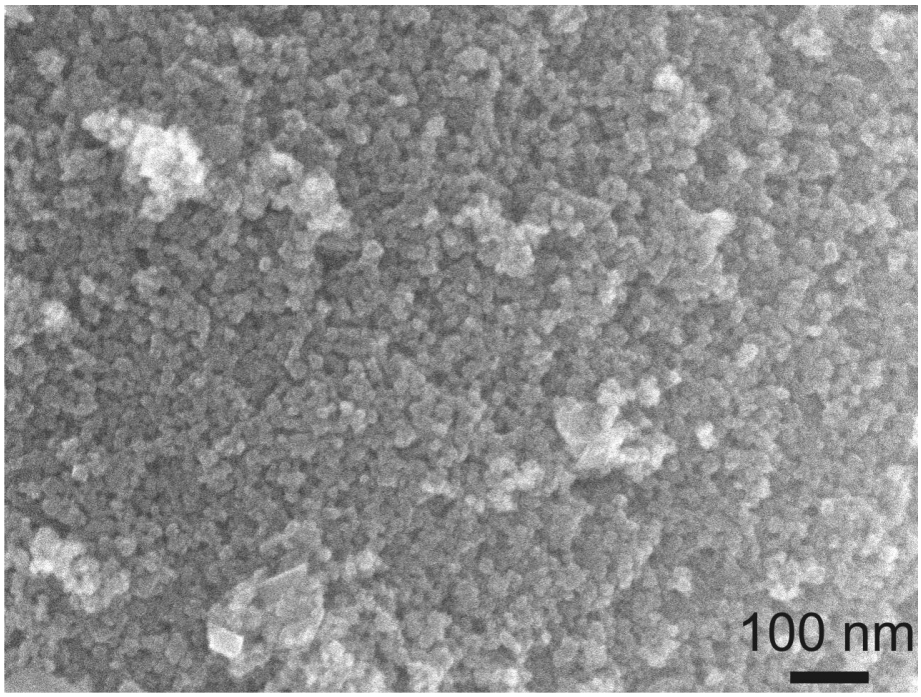

Figure S4. HRSEM image of the surface of as-prepared nanostructured LTO micrometric sized particle.

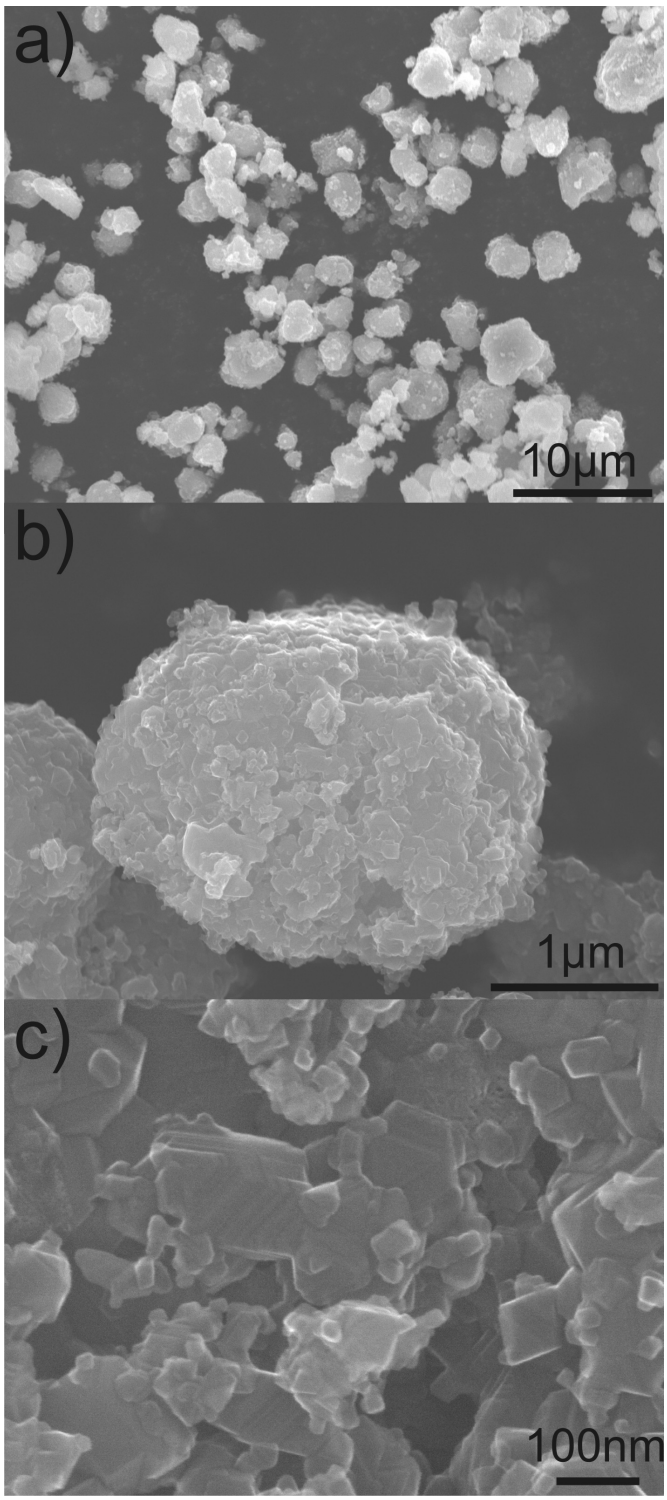

Figure S5. HRSEM images of the LTO micrometric sized particles annealed at 750 °C. a) Overview, b) single particle and c) detail of the nanostructured surface.

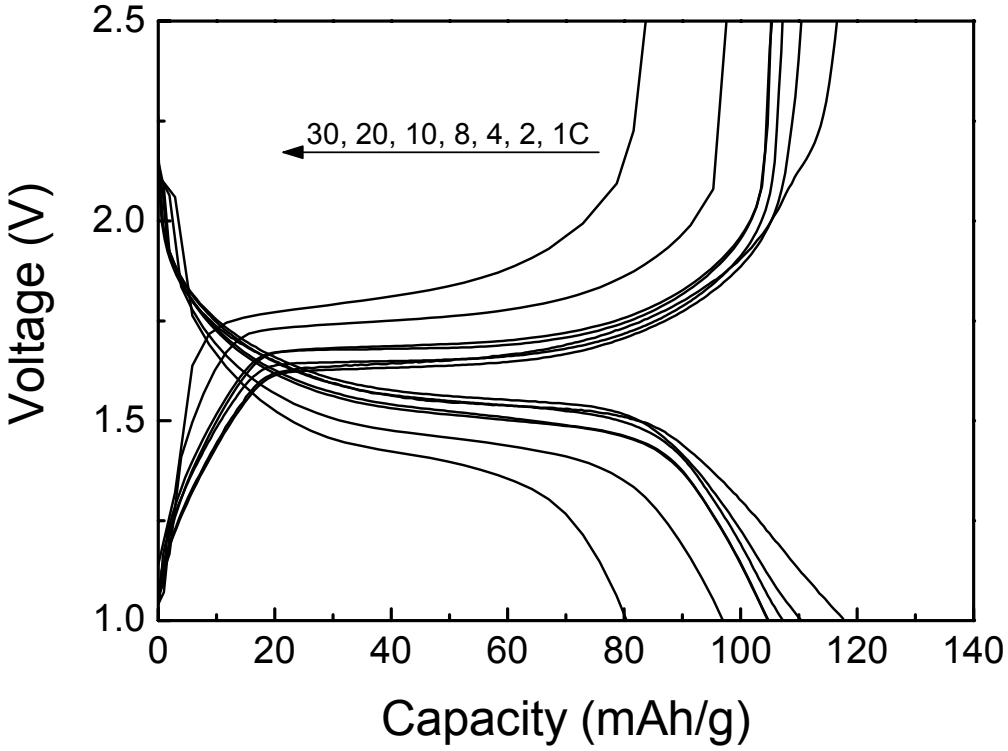

Figure S6. Capacity-voltage profiles for as-synthesized nanocrystalline $Li_4Ti_5O_{12}$

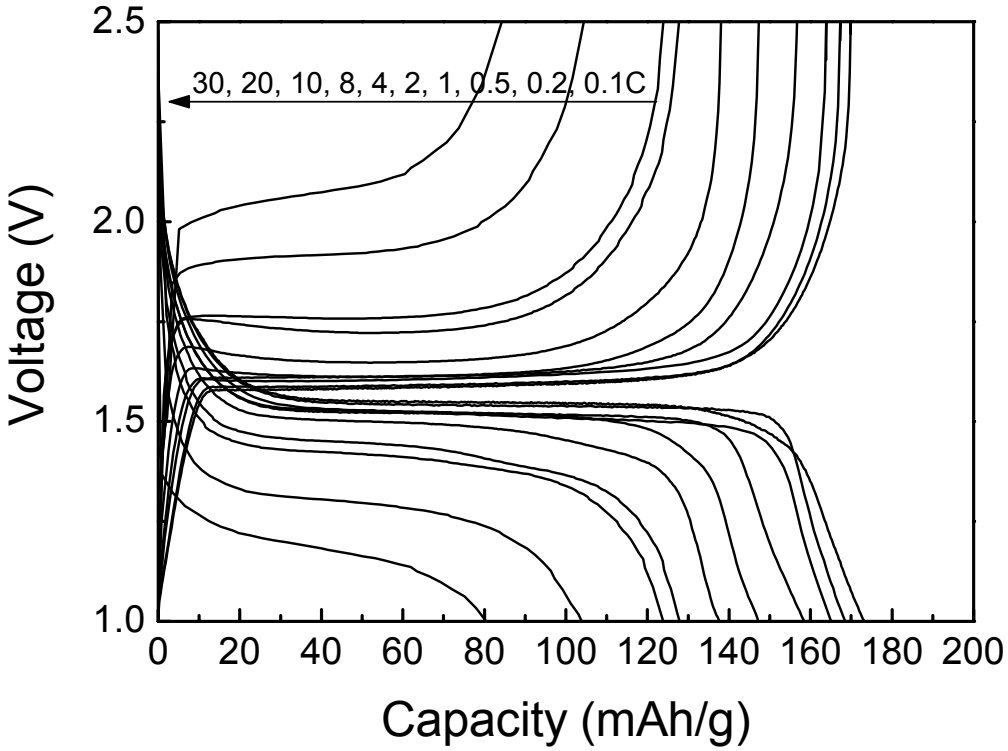

Figure S7. Capacity-voltage profiles for calcined nanocrystalline $Li_4Ti_5O_{12}$