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A template-free synthesis and structural characterization of hierarchically nano-structured lithium-titanium-oxide films

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Fig. S1

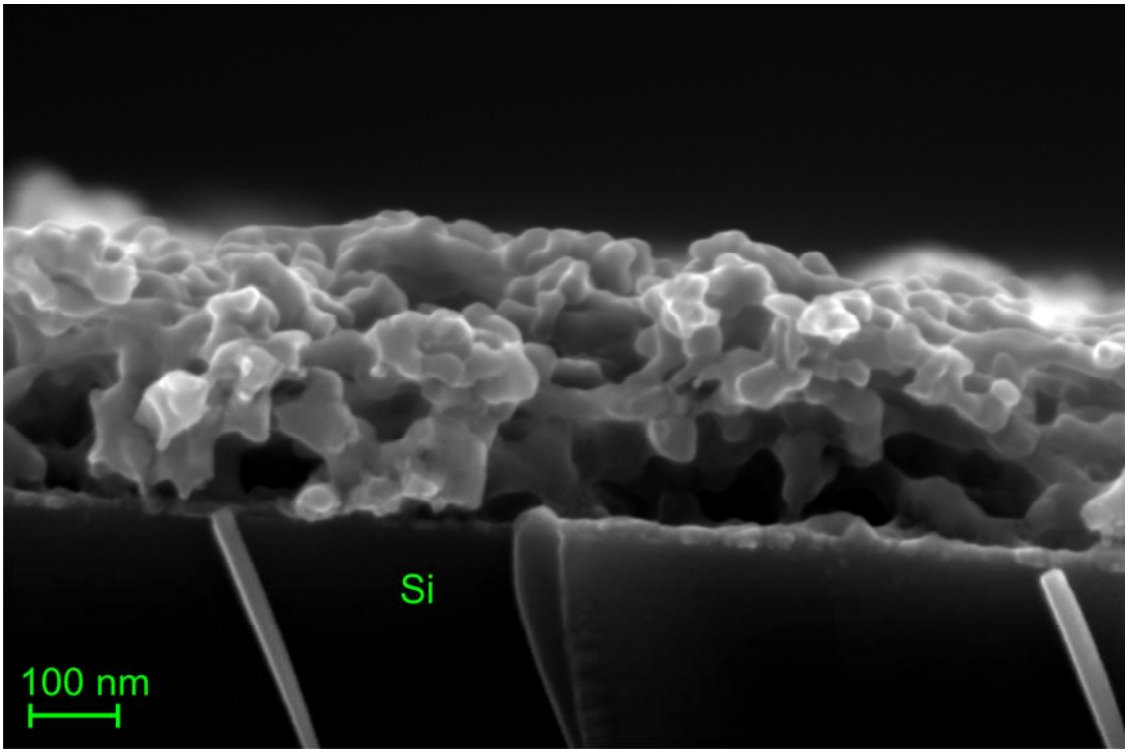

Fig. S1: cross-section SEM micrograph showing the hierarchical film morphology. The film was obtained from 3 sequential layer depositions and finally annealed at 400°C. Film thickness is approximately 300 nm.

Fig.S2

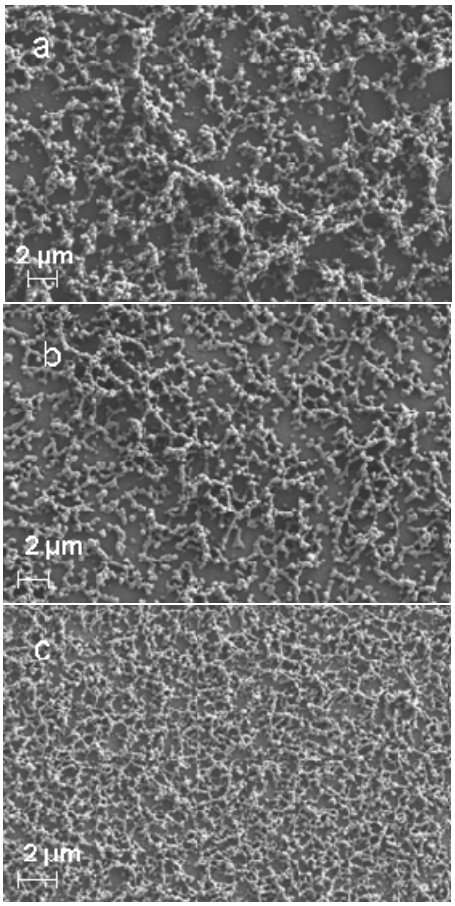

Fig. S2: SEM images of Li-Ti-O films prepared with different Li:Ti molar ratios in the sol and annealed at 400 ^{o}C: (a) Li:Ti = 8.3: 8.6 mmol, (b) Li:Ti = 4.3: 8.6 mmol and (c) Li:Ti = 2.1: 8.6 mmol.

Fig. S3

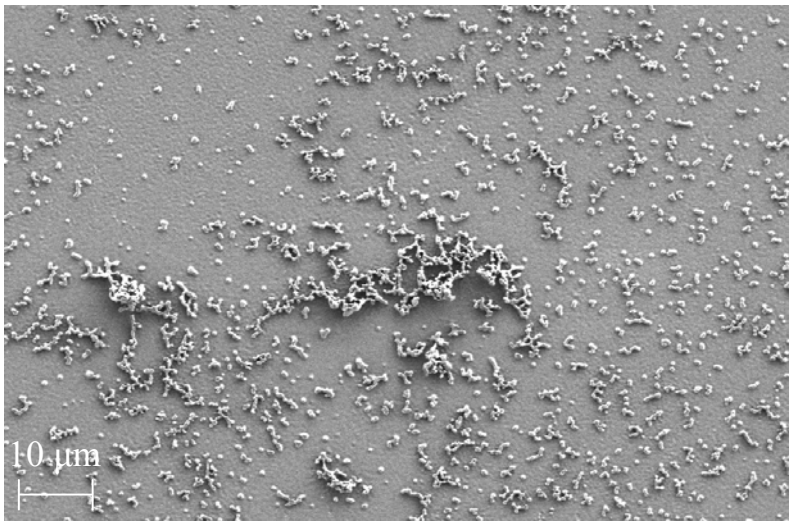

Fig. S3 SEM image of TiO_2 film formed at 400 ^oC using lithium acetate as the lithium source in the TiO_2 sol. Notice the hierarchical TiO_2 nanostructure formation was hindered.

Fig. S4

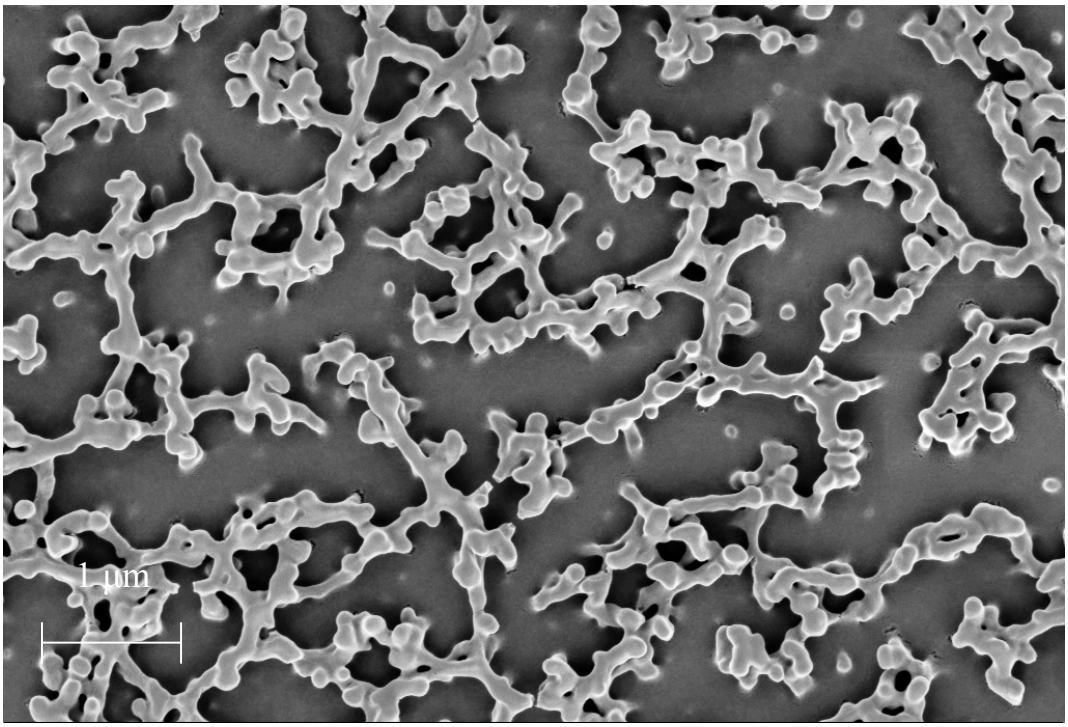

Fig. S4 SEM image of hierarchical TiO_2 nanostructure films formed at 100 ^{o}C.