

Supporting Information for

A Guide to Water Free Lithium Bis(oxalate) Borate (LiBOB)

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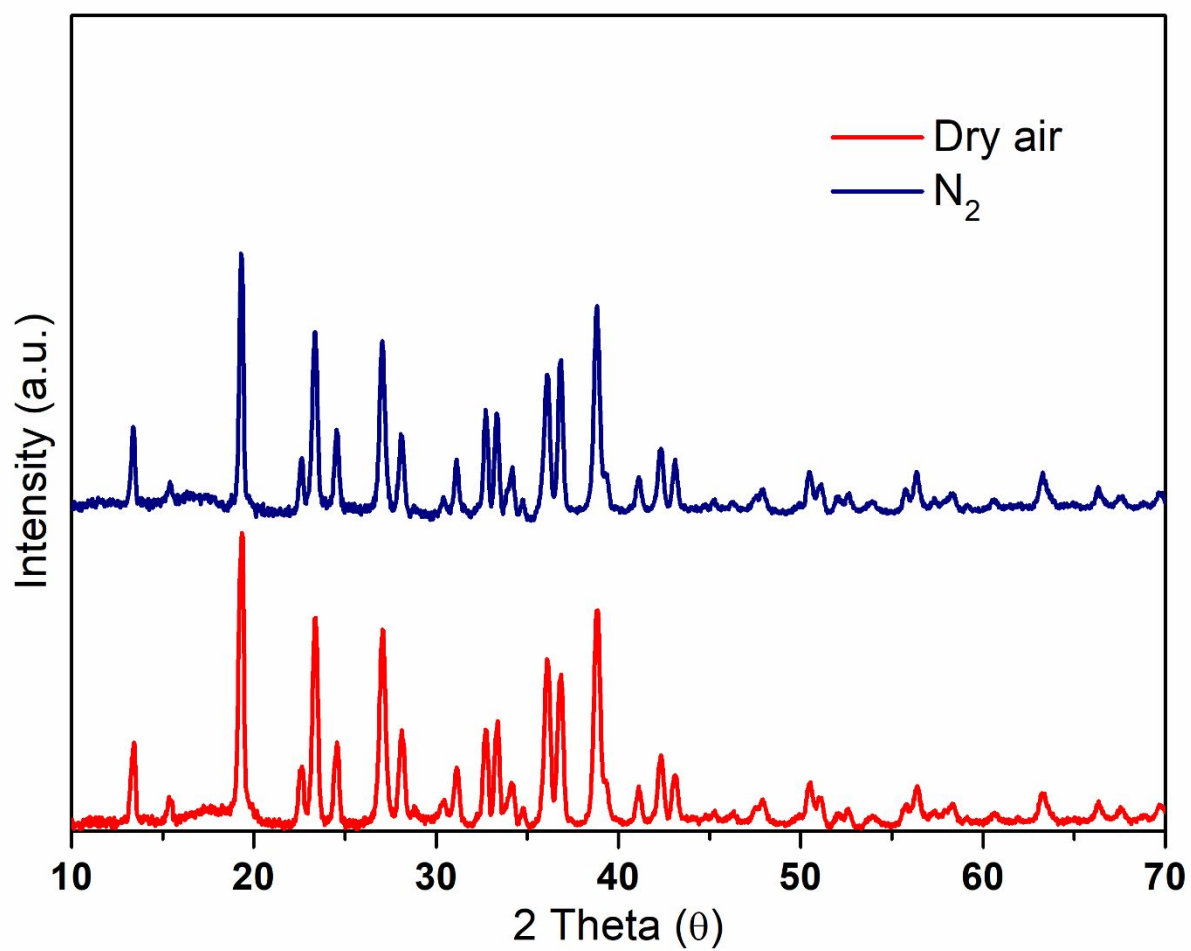


Figure S1. XPRD patterns of high purity anhydrous LiBOB synthesized using different protective gases (dry air and N_2).

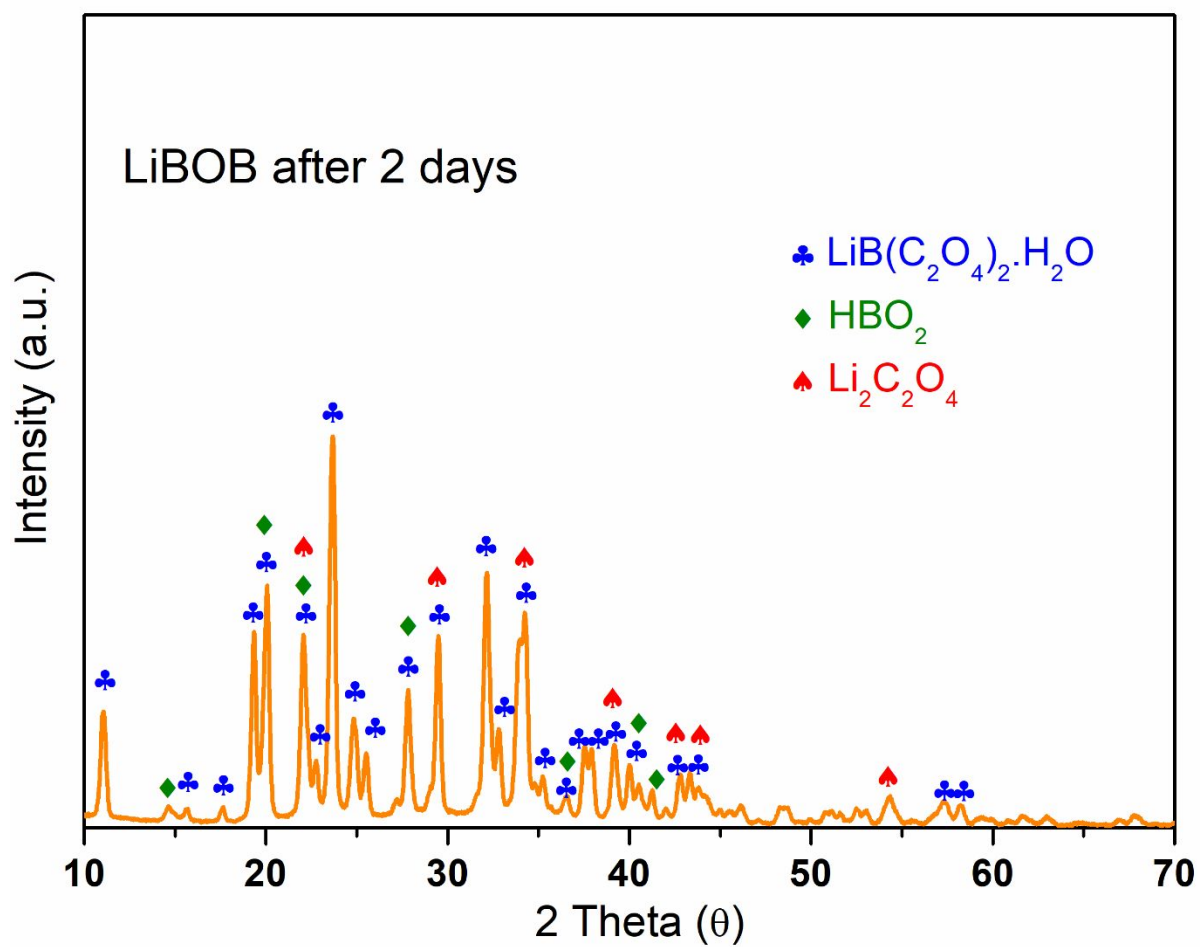


Figure S2. XRPD pattern showing crystalline water, HBO_2 , and $\text{Li}_2\text{C}_2\text{O}_4$ formation after aging the anhydrous LiBOB for 2 days under ambient conditions.

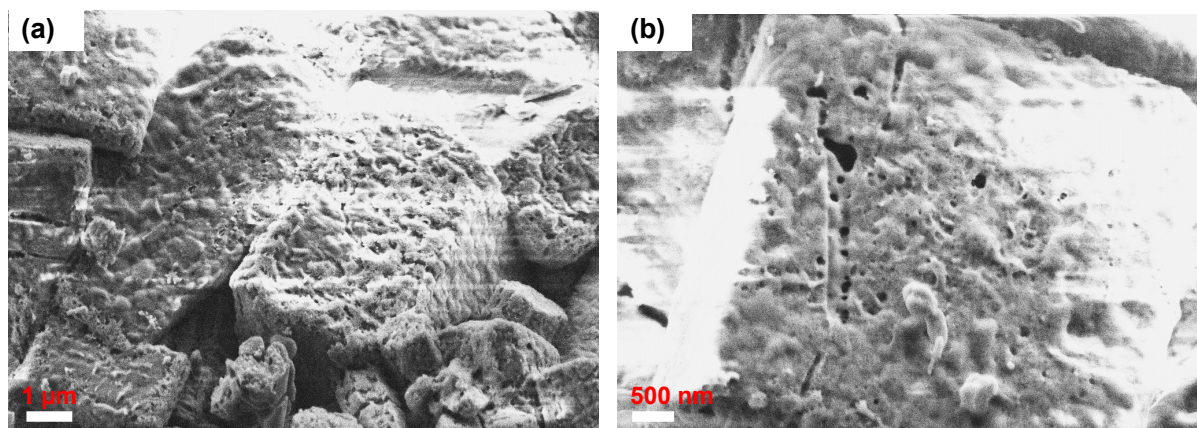


Figure S3. SEM micrographs for anhydrous LiBOB aged under ambient conditions showing changes in the prismatic morphology and formation of pores.

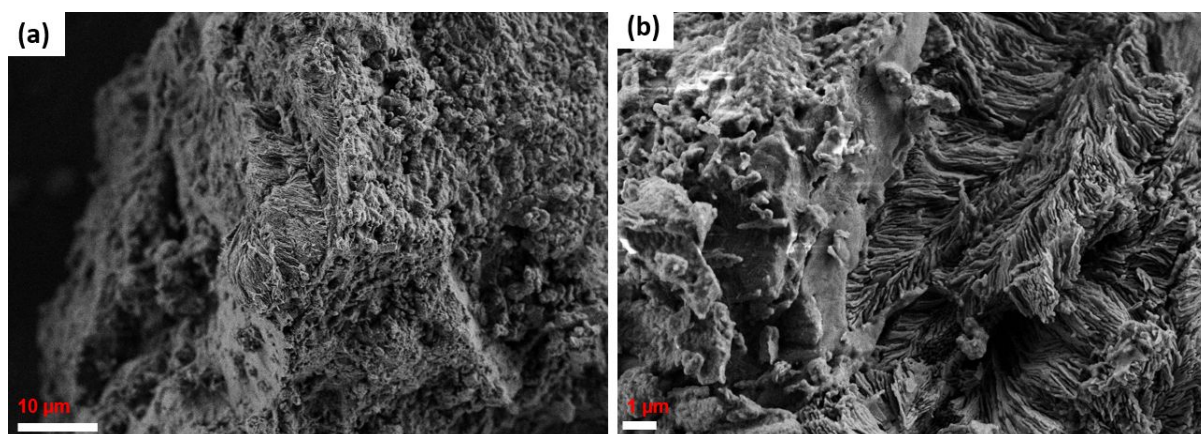


Figure S4. SEM micrographs showing the morphology of the products synthesized at 150-200 °C.

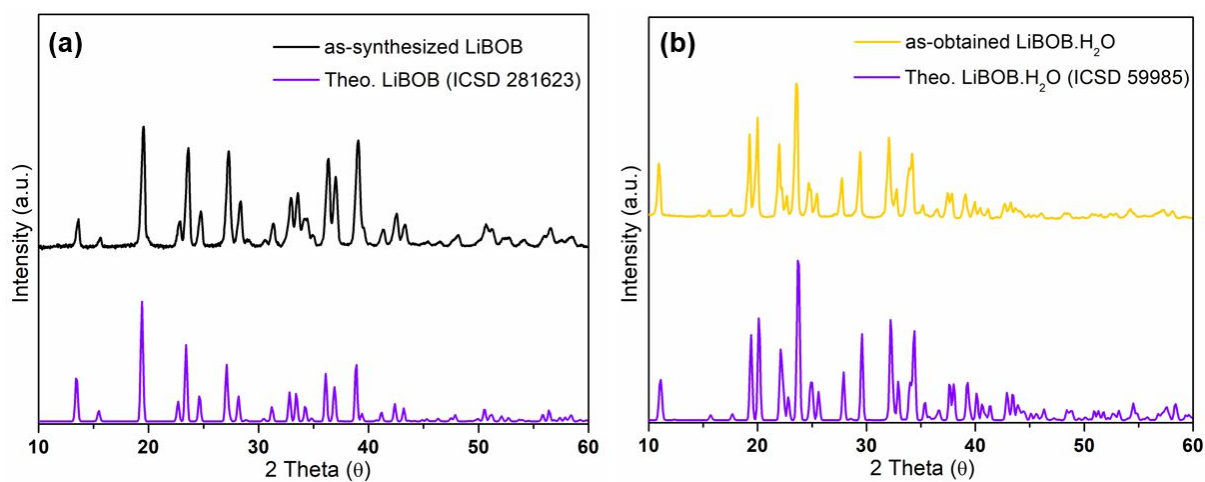


Figure S5. XRPD patterns of (a) theoretical anhydrous LiBOB (violet) and as-synthesized anhydrous LiBOB (black), (b) theoretical LiBOB.H₂O (violet) and as-obtained LiBOB.H₂O (30 mins air exposed sample) (yellow).

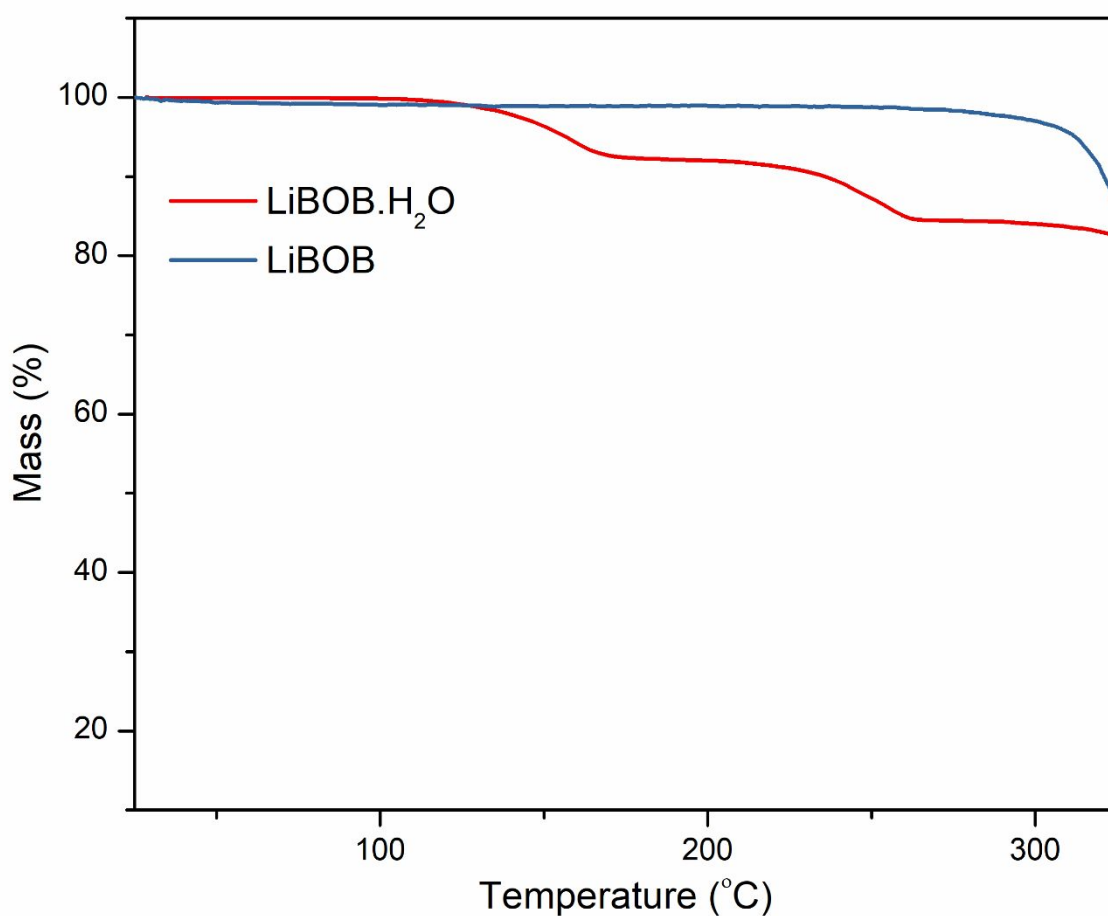


Figure S6. The comparison of TGA curves of the as-synthesized anhydrous LiBOB (blue), (b) LiBOB.H₂O (red).