Hierachical $Cu_4V_{2.15}O_{9.38}$ Micro-/Nanostructures: A Promising Cathode Material for Primary Lithium Ion Batteries

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Supporting Information

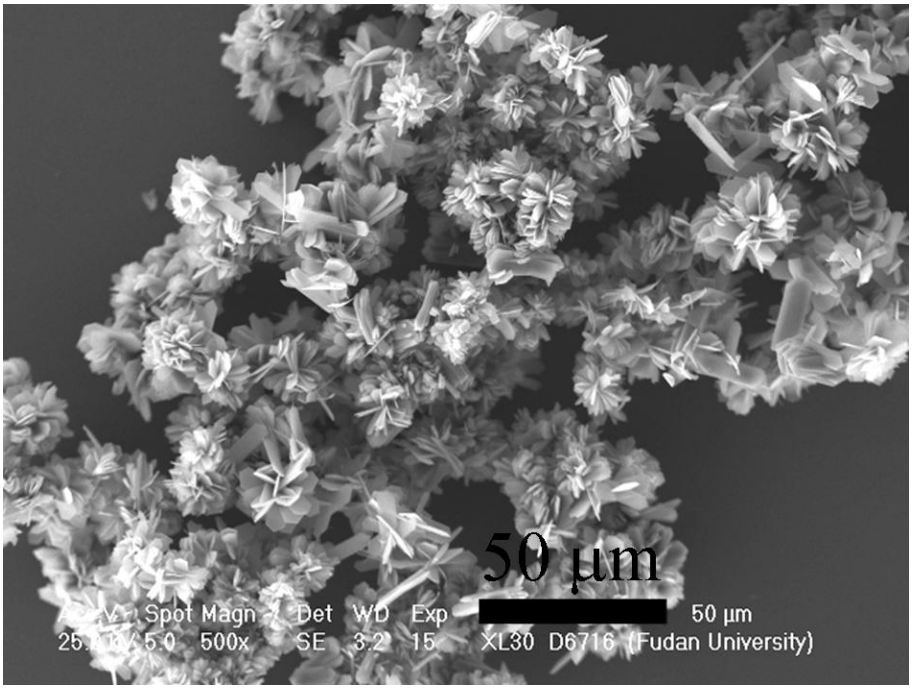

Figure S1. SEM images showing the overall morphologies of $Cu_4V_{2.15}O_{9.38}$ hierarchical structures.

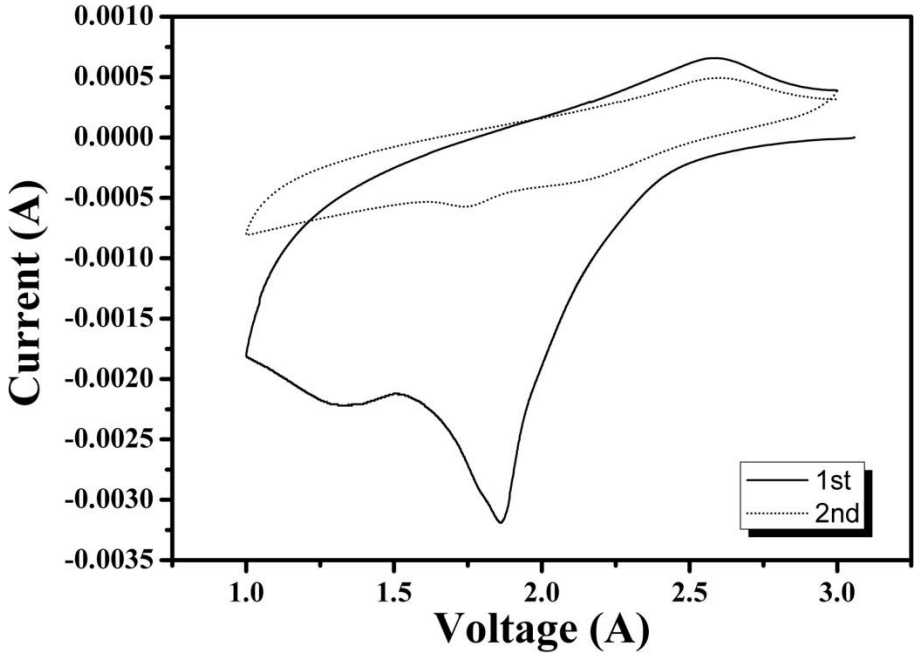

Figure S2. CVs of the electrode made from the as-prepared hierarchical $Cu_4V_{2.15}O_{9.38}$ micro-/nanostructures.

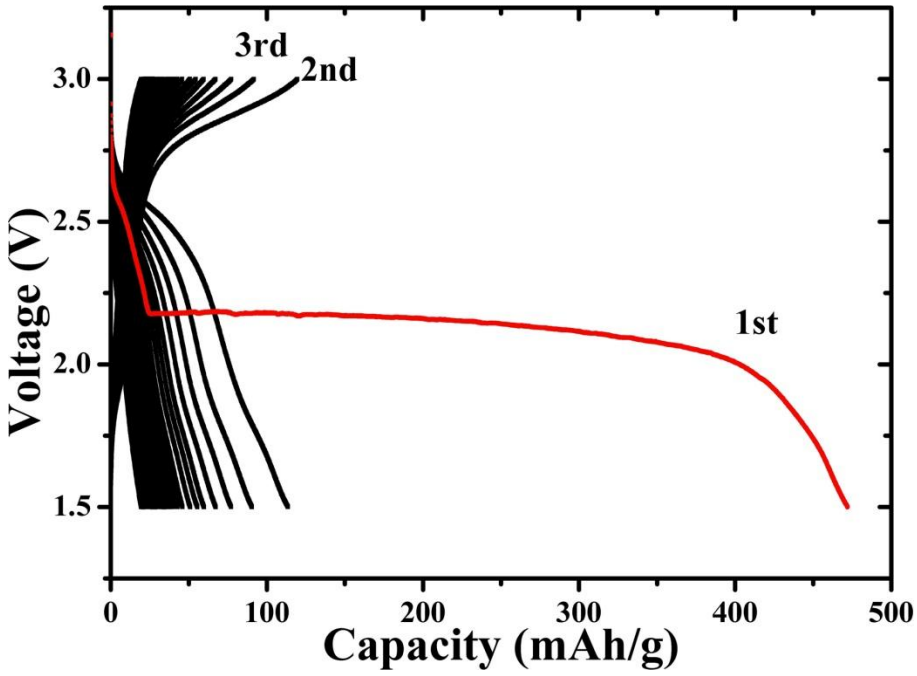

Figure S3. Discharge profiles of the cell made from $Cu_4V_{2.15}O_{9.38}$ micro-/nanostructures at the current density of 20 mA/g between 3.0 and 1.5V.

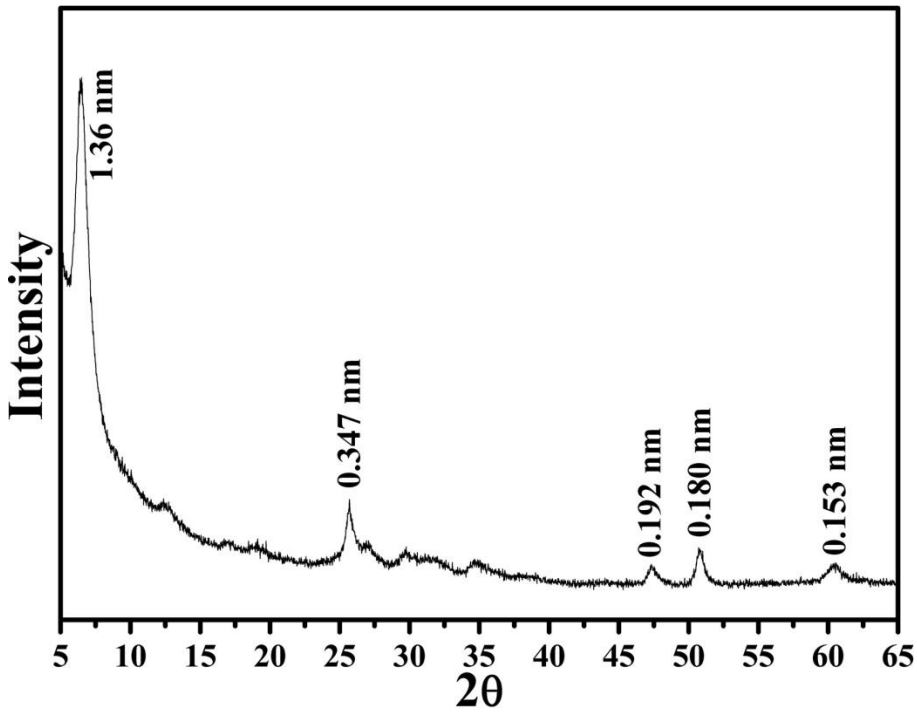

Figure S4. XRD pattern of layered vanadium oxide hydrate phase. (The synthesis conditions were identical with those of hierarchical $Cu_4V_{2.15}O_{9.38}$ in this case except no urea was used.)

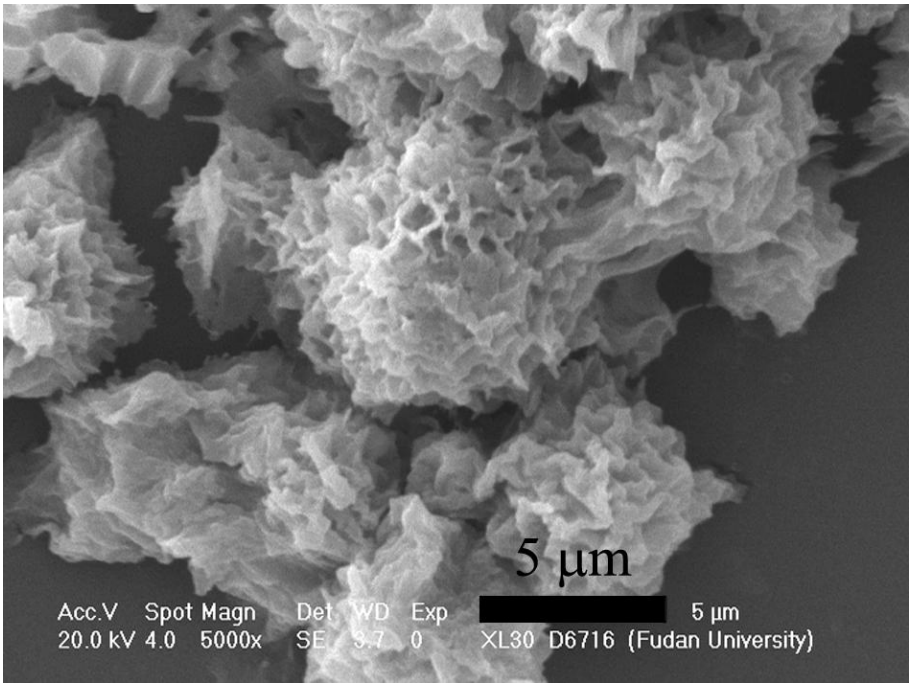

Figure S5. SEM image of layered vanadium oxide hydrate phase. (The synthesis conditions were identical with those of hierarchical $Cu_4V_{2.15}O_{9.38}$ in this case except no urea was used.)

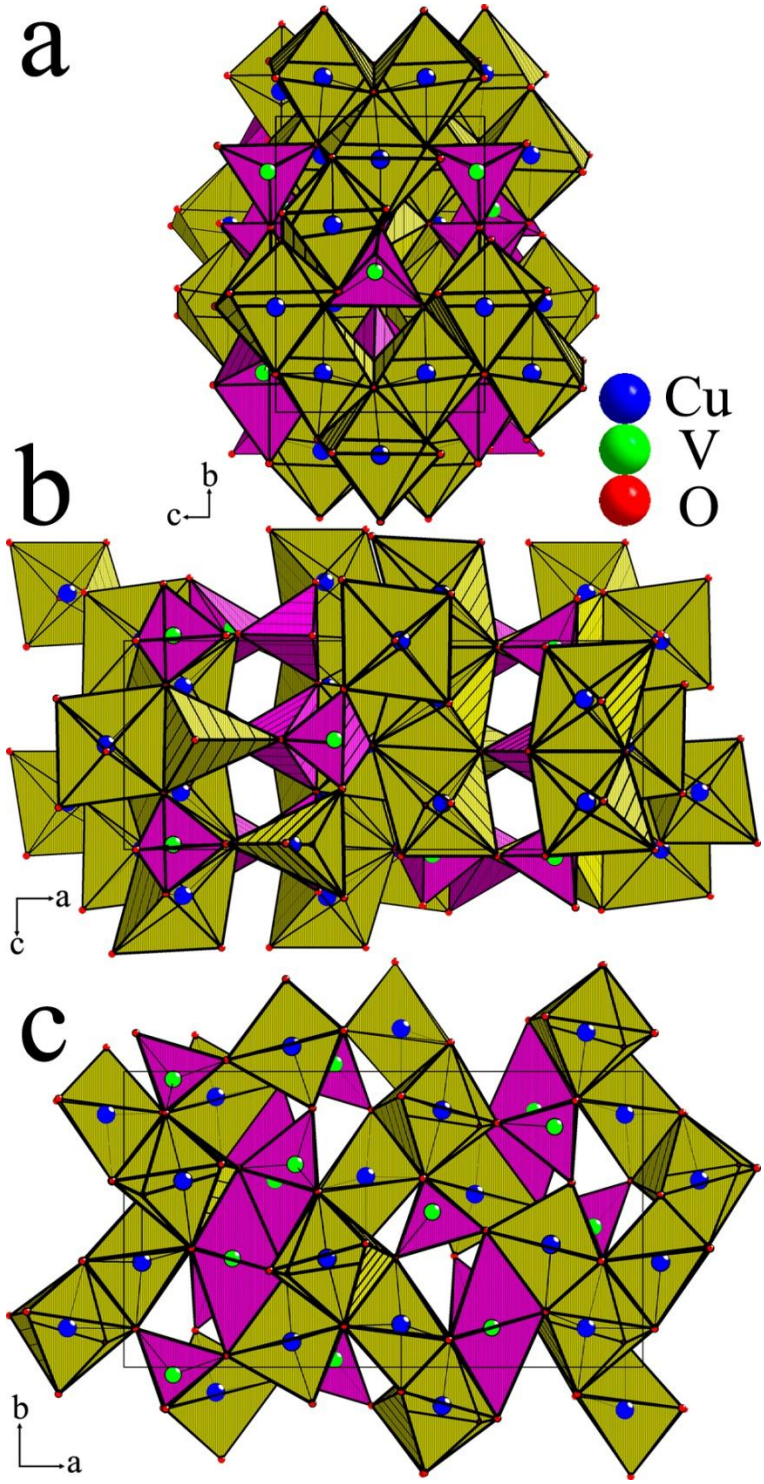

Figure S6. Structure model of $Cu_4V_{2.15}O_{9.38}$ from a) [100], b) [010], and c) [001] direction. The $Cu_4V_{2.15}O_{9.38}$ are built up of $[VO_4]$ tetrahedral, $[VO_5]$ trigonal bipyramids, $[CuO_6]$ octahedral, and $[CuO_5]$ trigonal bipyramids.