Reversible Interconversion of δ and β $Ca_xV_2O_5$ and Chemical Lithiation of Individual V_2O_5 Nanowires

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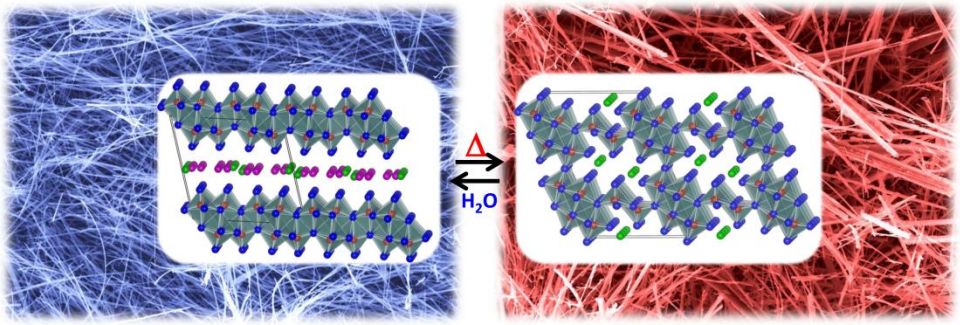
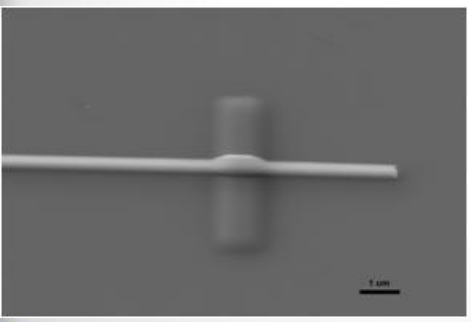
- Unprecedented dehydration/hydration induced phase transformation of δ and β phases of $Ca_xV_2O_5$: provides a means to link phase diagrams of two most important $M_xV_2O_5$ frameworks
- Synthetic route established to both δ and β-phase nanowires of $Ag_xV_2O_5$





- V_2O_5 nanowires have been prepared by hydrothermal treatment and vapor transport
- Individual nanowires isolated by focused ion beam deposition of leads
- Formal vanadium oxidation state tracked as a function of lithiation by X-ray absorption spectroscopy