

**Title :** Single-Crystal to Single-Crystal Transformation Triggered by Dehydration in a New One-Dimensional Zn(II) Coordination Polymer Toward Anode Material for Lithium-Ion Batteries

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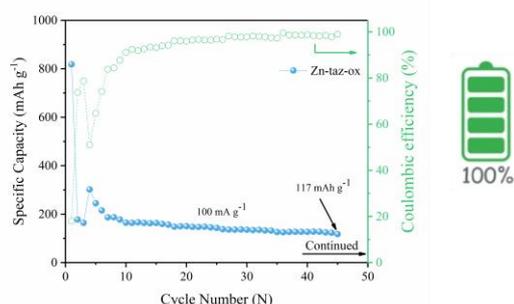
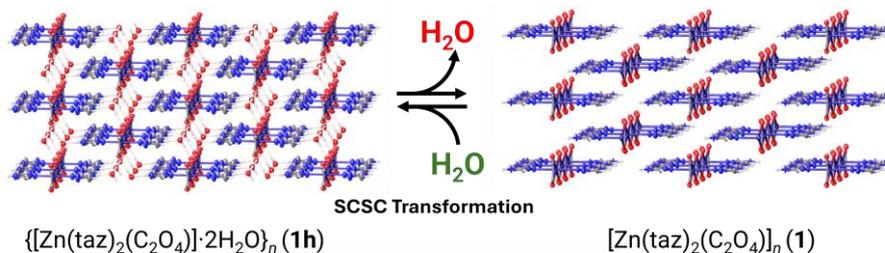
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## ABSTRACT

A new one-dimensional Zn(II) coordination polymer,  $\{[\text{Zn}(\text{taz})_2(\text{ox})]\cdot 2\text{H}_2\text{O}\}_n$ , [taz = 1,2,4-triazole,  $\text{ox}^{2-}$  = oxalate], *cm*/2, (**1h**), was successfully synthesized by solvothermal method. Complex **1h** underwent reversible single-crystal to single-crystal (SCSC) transformation toward a new coordination polymer,  $\{[\text{Zn}(\text{taz})_2(\text{ox})]\}_n$ , *I2/m*, (**1**), upon dehydration/rehydration. The electrochemical performance of **1** has been being investigated for use as anode material in lithium-ion batteries. Specific capacity at 100 mA/g after 45 cycles is found to be 117 mAh/g.



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