

## Supporting information

# Molten salt synthesis of micro-sized hexagonally shaped $\text{REMnO}_3$ ( $\text{RE} = \text{Y}, \text{Er}, \text{Tm}, \text{Yb}$ )

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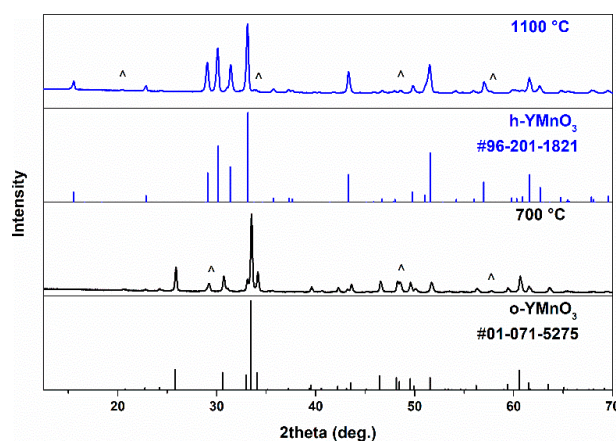


Figure S1. XRD patterns of  $\text{YMnO}_3$  prepared by using oxides as starting material. ^ represents the  $\text{Y}_2\text{O}_3$  phase.

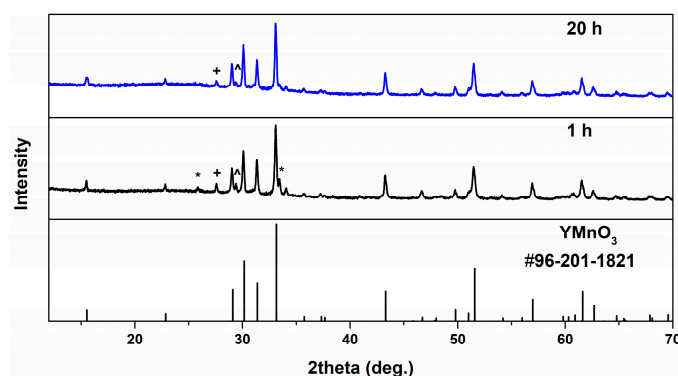


Figure S2. XRD patterns of  $\text{YMnO}_3$  prepared at  $900\text{ }^\circ\text{C}$  with different reaction times. ^ represents the  $\text{Y}_2\text{O}_3$  phase, + -  $\text{MnO}_2$  phase, while \* - o- $\text{YMnO}_3$  phase.