

# Optical Signatures of Hydration-Controlled Hysteretic Spin-crossover in Single Crystals of an Fe(II) Complex

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**Figure S1.** Image of single crystals of  $[\text{Fe}(\text{bppsipr})_2](\text{BF}_4)_2 \cdot \text{H}_2\text{O}$  taken at room temperature (HS), showing well-shaped and individually well-formed crystals.



**HS (Room temperature)**



**LS (Low temperature)**

**Figure S2.** Representative images of the single crystal of  $[\text{Fe}(\text{bppsipr})_2(\text{BF}_4)_2] \cdot \text{H}_2\text{O}$  captured in its high-spin (HS) and low-spin (LS) states, illustrating the visual changes associated with the spin-state switching