

Supporting information of

**Scan-rate and vacuum pressure dependence of the
nucleation and growth dynamics in a spin-crossover single
crystal: the role of latent heat**

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1) Optical microscopy images of the crystal during the thermally induced spin transition

Figure SI-1 displays representative optical microscopy snapshots of the crystal during the thermally induced spin transition at ambient pressure in both heating and cooling modes (1 °C/min). As revealed by these images, the switching process occurs through a nucleation and growth mechanism. The nucleation sites of the HS (heating mode) and LS (cooling mode) phases are located at distinct places within the crystal: at the top right corner and the bottom edge of the crystal for the HS and LS states, respectively.

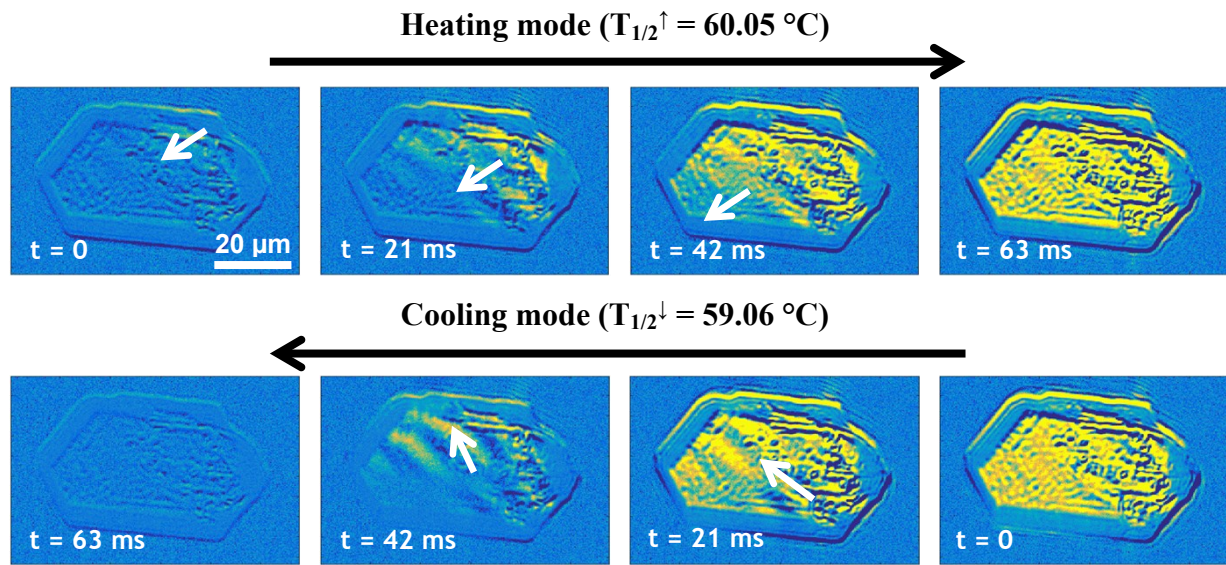


Figure SI-1. Selected optical microscopy snapshots (in bright-field transmission mode at $543 \pm 22 \text{ nm}$) of the thermally induced spin transition at ambient air pressure (1000 mbar) in the heating and cooling modes (1 °C/min). The LS \rightarrow HS and HS \rightarrow LS transitions occur at $T_{1/2}^{\uparrow} = 60.05 \text{ }^{\circ}\text{C}$ and $T_{1/2}^{\downarrow} = 59.06 \text{ }^{\circ}\text{C}$, respectively, the transition process being considered isothermal (see the text of the article). To better display the phase separation phenomenon, images are processed by subtracting the low-temperature image of the crystal (in the LS state) from each of them. Blue and dark yellow (artificial) colors refer to the LS and HS phase, respectively. Arrows indicate roughly the propagation directions of the phase boundaries.