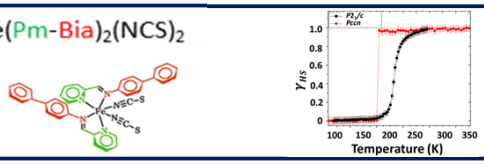
Overall Prospective of $Fe(PM\text{-}Bia)_2(NCS)_2$ Spin Crossover Compound

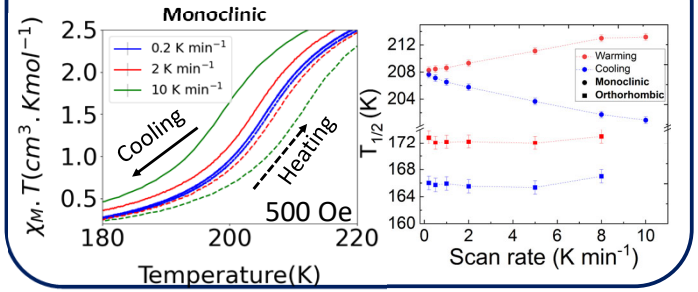
Compound

- **$Fe(PM\text{-}Bia)_2(NCS)_2$ [$Fe(C_{18}H_{14}N_2)_2(NCS)_2$]**
  PM-Bia = (*N*-(*2*'- pyridylmethylene)-4-amino-bi-phenyl)

- Crystallizes in two polymorphs:
  I. Orthorhombic (*Pccn*).
  II. Monoclinic ($P2_1/c$).

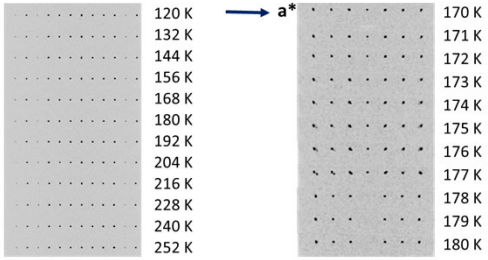


Scan-rate Dependance

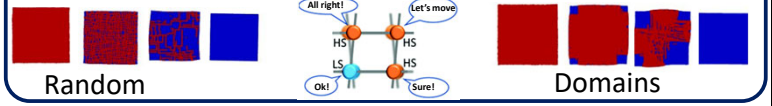


Co-existence of two Spin states

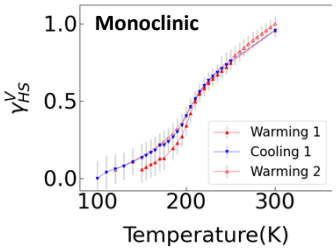
- Gradual transition: Continuous shift of Bragg peaks with *T*.
- Abrupt transition: Splitting of Bragg peaks at $T_{1/2}$.
- Formation of Domains

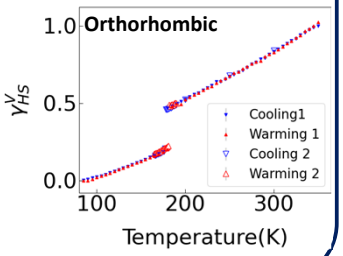


Distribution of HS/LS entities



Radiation Damaged

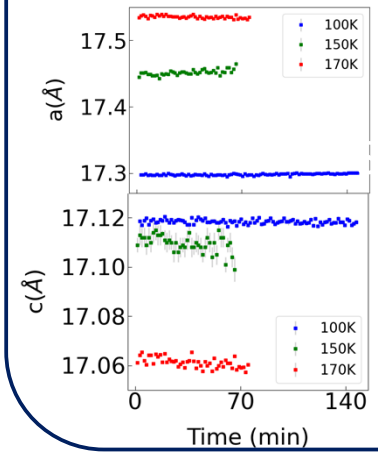


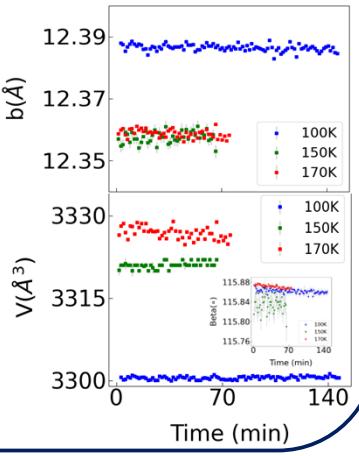


Kinetics Measurements

Thermal Quenching

- Was the quenching fast enough?





Atomic Displacement Parameters

- Gradual transition: Static disorder at $T_{1/2}$ (γ_{HS}=0.5).
- Max. ADPs along U_{22} (1er to Fe-N).
- Abrupt transition: anomaly untraceable.