Abstract Submitted
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Negative thermal expansion in the Prussian Blue analog, $Fe_3[Co(CN)_6]_2.xH_2O$[1] SOURAV ADAK, New Mexico State University, LUKE DAEMEN, Los Alamos Neutron Science Center (LANSCE), Los Alamos National Laboratory, HEINZ NAKOTTE, New Mexico State University, DARRICK WILLIAMS, Center for Integrated Nanotechnology (CINT), Los Alamos National Laboratory — The thermal expansion of the cubic Prussian Blue analog $Fe_3[Co(CN)_6]_2.xH_2O$ has been studied below room temperature using x-ray and neutron powder diffraction. The water of hydration was found to have a large effect on the thermal expansion behavior of the material, which switches between positive and negative expansion with varying water content while the average cubic structure remains unchanged. Possible connections between local disorder and thermal expansion behavior are discussed.

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