

Abstract Submitted  
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**Local and Intermediate Range Structure of Thermoelectric  $\text{Ca}_3\text{Co}_4\text{O}_9$**  TREVOR TYSON, TAO WU, TIAN YU, NJIT, MILINDA ABEYKOON, NSLS, BNL — The detailed local and intermediate range structure of thermoelectric  $\text{Ca}_3\text{Co}_4\text{O}_9$  has been examined. X-ray absorption spectroscopy has been used to explore the structure about the Co, Ca and O sites. Detailed short and intermediate structural studies by x-ray PDF measurements are used to explore the structure over a broad range of temperatures. The connection of structure with observed physical properties is discussed.

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