

第 201 回フロンティア材料研究所講演会

講師: Prof. Mark Senn, University of Warwick
9月26日(金) 13時～14時半 R3棟1階大会議室

演題: Interplay between Jahn-Teller distortions and
electronic phase transitions in functional oxides.

Abstract: Through the use of detailed in situ crystallographic studies on prototype systems, often prepared via high-pressure synthesis, we have made advances in understanding the structure-property relationship in a range of functional metal oxides. In this talk I will highlight some of our most recent works on the colossal magnetoresistive manganites, high-T_c superconductors, and canonical ferroelectric barium titanate. I will show how a unifying theme of our work is a desire to understand the interplay between local degrees of freedom, such as those associated with the first and second order Jahn-Teller effect, and their interplay with global lattice distortions. Ultimately, it is the control of these global lattice distortions that will allow us to tune the functional property of a material.

連絡先: 東研 東正樹(5315)