

Abstract Submitted
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Exploration of the ferroelectric properties of a new Titanium-based compound REMI FEDERICCI, ESPCI - UPMC - CNRS, FLORIN POPA, LUC BROHAN, Institut des matriaux Jean Rouxel (IMN) - Universit de Nantes - CNRS - 2 rue de la Houssinire, B.P 32229 44322 Nantes Cedex 03, France, BENOIT BAPTISTE, KEEVIN BENEUT, POALA GIURA, Institut de Minralogie, de Physique des Matriaux et de Cosmochimie (IMPMC), Sorbonne UniversitsUPMC Univ. Paris 06, UMR CNRS 7590, MNHN, IRD UMR, FABIO FINOCCHI, INSP - UPMC - CNRS, ABHAY SHUKLA, Institut de Minralogie, de Physique des Matriaux et de Cosmochimie (IMPMC), Sorbonne UniversitsUPMC Univ. Paris 06, UMR CNRS 7590, MNHN, IRD UMR, BRIGITTE LERIDON, ESPCI - UPMC - CNRS — Even though ferroelectric materials are well known and widely used in many applied fields, the families of compounds exhibiting ferroelectricity are just a few. Among them, BaTiO₃ and its substitution-related compounds play a major role and have been widely investigated. We present here an experimental study on a new titanium-based perovskite structure. The synthesis and structural characterization (through XRD and Raman spectroscopy) of this material will be exposed, in excellent agreement with DFT calculations. We will demonstrate possible ferroelectricity at room temperature and discuss the probable microscopic mechanisms at play in this material.

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