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List of Publications

1. **Anuvrat Tripathi**, Digvijay Nath Dubey, Harsh Kumar, and Saurabh Tripathi, Stabilizing ferroelectricity in alkaline-earth-metal-based perovskites (ABO_3) *via* A-(Ca^{2+}/Sr^{2+}/Ba^{2+}) and B-site (Ti^{4+}) cationic radius ratio (R_A/R_B) , Journal of Applied Crystallography **55**, 1446-1454 (2022).

2. **Anuvrat Tripathi**, Abhishek Pandey, Jose Antonio Alonso, Rudolph Erasmus, Maria Teresa Fernandez-Diaz, and Saurabh Tripathi, Origin of zero thermal expansion in an average cubic structure in Pb-free relaxor ferroelectrics, Applied Physics Letters **125**, 102901 (2024).

3. **Anuvrat Tripathi** and Saurabh Tripathi, Reinvestigating atomic ordering in $K_{0.5}Na_{0.5}NbO_3$ and its impact on ferroelectric properties, Journal of Physics: Condensed Matter **37**, 115401 (2025).

4. **Anuvrat Tripathi**, Sanjit Ghose, Rudolph Erasmus, and Saurabh Tripathi, Evidence of distinct nonpolar/polar ordering at long/short ranges in relaxor ferroelectrics, Physical Review B **111**, 024104 (2025).

5. Harsh Kumar, **Anuvrat Tripathi**, and Saurabh Tripathi, Unambiguous evidence of isosym metric phase transition in rare earth orthoferrites ($RFeO_3$) driven by interaction of R cation with O anions in first and second coordination shells, Journal of Physics D: Applied Physics **58(8)**, 085303 (2024).

6. **Anuvrat Tripathi**, Sanjit Ghose, Milinda Abeykoon, Rudolph Erasmus, Pinaki Mukherjee, and Saurabh Tripathi, Multiple local symmetries triggering zero/negative thermal expansion in morphotropic relaxor boundary, Physical Review Letters (**Under Review**).

7. **Anuvrat Tripathi**, Sanjit Ghose, Nimish Dixit, Ajay Mishra, and Saurabh Tripathi, Emergence of a ferroelectric order at long ranges from a polar order with monoclinic symmetry at short ranges in a $K_{0.5}Na_{0.5}NbO_3$-based smart solution, Journal of Applied Crystallography (**Communicated**).

Conferences/Schools

1. Poster presentation in 35th AGM of MRSI and The 6th Indian Material Conclave: International Union of Materials Research Society, International Conference in Asia–2024 (IUMRS-ICA 2024), 03-06 December, 2024, UGC-DAE Indore, India.
   Paper Title: Microscopic origin of zero thermal expansion in relaxor ferroelectrics.
   Authors: **Anuvrat Tripathi**, Abhishek Pandey, Jose Antonio Alonso, Rudolph Erasmus, Maria Teresa Fernandez Diaz, Sanjit Ghosh, and Saurabh Tripathi.

2. Attended "Neutron School as Probes of Condensed Matter" organized by UGC-DAE Consortium for Scientific Research, Mumbai Centre Solid State Physics Division, BARC, Mumbai, from 05-10 February 2024.

3. Poster presentation in 26th Congress and General Assembly of the International Union of Crystallography (IUCr 2023), 22-29 August 2023, Melbourne Convention and Exhibition Center, Australia.
   Paper Title: Stabilizing ferroelectricity in alkaline earth metal-based perovskites ABO_3 via A(Ca^{2+}/Sr^{2+}/Ba^{2+}) and B(Ti^{4+}) site cationic radii ratio (R_A/R_B).
   Authors: **Anuvrat Tripathi**, Digvijay Nath Dubey, Harsh Kumar, and Saurabh Tripathi.

4. Gave an invited Talk for Materials Physics Research Institute (MPRI) at the School of Physics, University of the Witwatersrand, 2nd March 2023, Johannesburg, South Africa.
   Paper Title: Stabilizing ferroelectricity in alkaline earth metal-based perovskites ABO_3 via A(Ca^{2+}/Sr^{2+}/Ba^{2+}) and B(Ti^{4+}) site cationic radii ratio (R_A/R_B).
   Authors: **Anuvrat Tripathi**, Digvijay Nath Dubey, Harsh Kumar, and Saurabh Tripathi.

5. Poster presentation in 33rd AGM of MRSI and The 4th Indian Material Conclave: International Union of Materials Research Society, International Conference in Asia–2022 (IUMRS-ICA 2022), 19-23 December, 2022., IIT (Jodhpur), India. Paper Title: Unravelingferroelectricity in perovskite-based smart materials by tuning crystal structure.

   Authors: **Anuvrat Tripathi**, Digvijay Nath Dubey, Harsh Kumar, and Saurabh Tripathi.