

Publications resulting from this Ph.D. Thesis work:

1. “Room temperature crystal structure and high temperature structural and magnetic phase transitions in $\text{Sr}(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3$ ceramic”

Sushil Kumar and A. K. Singh, **J. Appl. Phys.** **125**, 174102, (2019).

2. “Room temperature crystal structure and low temperature scaling behaviour of $0.7\text{BiFeO}_3\text{-}0.3\text{Sr}(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3$ ceramic”

Sushil Kumar and A. K. Singh, **AIP Conf. proc.** (Accepted) 2019.

3. “Investigation of New Magnetoelastic and Magnetic Transitions Accompanied with Magnetoelectric Coupling in $0.1\text{BiFeO}_3\text{-}0.9\text{Sr}(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3$ Multiferroic”

Sushil Kumar, and A. K. Singh, **J. Phys: Condens. Matter.** (under processing) 2019.

4. “Investigation of the morphotropic phase boundaries in $(1-x)\text{BiFeO}_3\text{-}x\text{Sr}(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3$ solid solution along with Magnetic [M-H and M(T)] and dielectric studies as a function of composition ‘x’

Sushil Kumar and A. K. Singh (To be communicated).

5. “First order isostructural magnetic phase transition with a magnetodielectric anomaly and step like variation of unit cell volume of multiferroic $0.90\text{BiFeO}_3\text{-}0.10\text{Sr}(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3$ ” Sushil Kumar, C. Upadhyay, A. K. Singh and D. pandey (To be communicated).

6. “Observation of negative volume thermal expansion (NVTE) accompanied with magnetoelastic effect in $0.5\text{BiFeO}_3\text{-}0.5\text{Sr}(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3$ ceramic” Sushil Kumar and A. K. Singh **AIP Conf. proc.** (under processing) 2019.

International/ National Conferences/ Symposium/Workshops attended:

- 1. IUCr MaThCryst and CIMS Workshop on Symmetry Relationships between Crystal Structures with Application to Structural Phase Transition**, October 27-31, **2014**, organized by School of Materials Science and Technology, Indian Institute of Technology (Banaras Hindu University), Varanasi, India. (Attended)
- 2. International Conference on Multifunctional Materials for Future Applications (ICFMA-15)**, October 27-29, **2015**, organized by Department of Chemistry, Indian Institute of Technology (Banaras Hindu University), Varanasi, India. (Attended)
- 3. International Conference on Advances in Basic Sciences (ICABS-19)**, February 7-9, **2019**, organized by GDC Memorial College, Bahal, District Bhiwani (Haryana), India. (Poster presentation)
- 4. International Conference on Functional Materials and Simulation Techniques (ICFMST-19)**, June 7-8, **2019**, organized by university Institute of Sciences (Block-4), Chandigarh University, Gharuan, Punjab, India. (Poster presentation).