

Curriculum Vitae

Full Name	Dr. Sanjay Kumar Upadhyay		
Designation	Assistant Professor		
Department	Physics		
Campus	Srinagar		
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Email	skuphysics@gmail.com sanjayu@hnbgu.ac.in		
Education Qualification	PhD (2016): UGC DAE Consortium for Scientific Research Indore, M.P. Postdoc Fellow: Tata Institute of Fundamental Research (TIFR) Mumbai Postdoc Fellow: Indian Institute of Science (IISc) Bangalore		
Teaching Experience	1.5 Years	Research Experience	13 Years
Areas of Interest/ Specialization			
<ol style="list-style-type: none"> 1. Multiferroic: Exploration of new type-II Multiferroic materials and composite oxides. 2. Ferroelectrics (Electro-caloric, Relaxor, Aging behavior etc.). 3. Magnetic systems (strongly correlated electron system, spin chain, spin glass etc.). 4. Preparation of ceramics with Microwave assisted radiant sintering. 5. Epitaxial ferroelectric/Multiferroic thin films by PLD. 6. Structural Analysis using X-ray diffraction. 7. Li-ion batteries related oxides materials. 			
Honours & Awards			
<ol style="list-style-type: none"> 1. Awarded INSA Visiting Scientist award-2023 by Indian National Science Academy, New Delhi. 2. Awarded DST International Travel Grant (June 2022) to visit Amsterdam (Netherlands). 3. Awarded DST International Travel Grant (September 2017 and September 2013) to visit San Antonio, Texas (USA) and Krakow (Poland) respectively to attend international conference. 4. Nominated by DST, Govt. of India to participate in 70th Meeting of Nobel Laureates & Students at Lindau, Germany (2020). 5. Awarded CSIR International Travel Grant (July 2017) to visit Prague (The Czech Republic) to attend international conference. 6. Awarded Best Thesis Presentation Award at Annual day presentation of UGC-DAE CSR Indore (M.P.), India on 2nd December 2014. 7. Awarded Student Award at 9th Asian meeting on ferroelectricity (AMF-2014) held at Shanghai (China) and organized by Japanese and Chinese academy of science. 8. Awarded CSIR-Senior Research Fellowship conducted by CSIR India (2014). 9. Qualified National Eligibility Test (Lectureship) conducted by CSIR-UGC India (June-2010); All India Rank-69. 10. Qualified Joint Entrance Screening Test (2010); 92.3 percentile (A joint entrance 			

test for leading physics research centers in India).

11. One of the article [**J. App. Phys.**, **113**, **114107(2013)**] certified as fastest downloaded paper (for first 100 downloads) by **editor of Journal of Applied Physics**.
12. Reviewer of **Applied Physics Letter**, **Journal of Sol-Gel Science and Technology**, **Physica Status Solidi B: Basic Solid-State Physics**, **AIP Advances**, journal and **AIP Proceeding**.
13. **Guest editor** (2021-2022) of Journal **Applied Science and Convergence Technology Magnetism** by MDPI, Basel, Switzerland.

Member of Academic Institutions: Nil

Membership of Scientific Organization: Nil

Research Supervision (No. of Ph.D. Degree Awarded/ Registered): Nil

Research Projects/ MoU undertaken

Sr. No.	Funding Agency	Cost	Duration	Remarks
1	SERB DST New Delhi	Around 30 Lakh	02 Year (2023-25)	Principal Investigator
2	UGC DAE CSR Kolkata	Around 12 Lakh	03 Year (2023-26)	Principal Investigator
3	IUAC New Delhi	Around 12 Lakh	03 Year (2023-26)	Co- Principal Investigator

Administrative Experience

- 1) Nodal officer of **IQAC** from department of Physics, HNB Garhwal University (2023-24).
- 2) Member of the **NIRF**, **AISHE** and **IDP** Committees of HNB Garhwal University.
- 3) Member of the **purchase committees** of department of Physics, HNB Garhwal University (2023-24).
- 4) Member of the renew Committees for **Department of Science and Industrial Research (DSIR)** certificate of HNB Garhwal university (2023).
- 5) Member of the organizing committee of the two-day workshop "**Securing research funding: Proposal writing, Intellectual Property Rights (IPR), and other related issue**", held at HNB Garhwal University during (11-12) December 2023.
- 6) Convenor of the one-week workshop entitled "**Workshop on Density Functional Theory: Accurate and Efficient Tool in Computational Material Science**" in collaboration with Dr. Devendra Singh Negi, **IIT Jodhpur** during June (12-17) 2023 (on-line mode).

- 7) **Innovation Ambassador** of HNB Garhwal University under Institution's Innovation Council (IIC) of **MoE's Innovation Cell, New Delhi (2023)**.
- 8) Coordinator of **Career counseling and Alumni talk** in the collaboration with **IIT Jodhpur** on March, 10 (2023) at Department of Physics, HNB Garhwal University Srinagar.
- 9) Member of the organizing committee and coordinator/secretary of various sub-committees: **Science week Festival**, HNB Garhwal University Srinagar, February 28-March 04 (2023).
- 10) Co-organizing secretary of one-day Workshop "**Getting Involved with Physics**" held at HNB Garhwal University Srinagar on December, 9 2022.
- 11) Co-organizing secretary of "**General Physics lecture series**" held online during November (2022)- April (2023).
- 12) Member of organizing committee: "**2nd International conference on Aerosols, Air Quality and Climate change**" (AAC-2022), Dept. of Physics. HNB Garhwal University Srinagar; November (04-06) 2022.
- 13) Member of organizing committee of " " in the collaboration with ARIES Nainital held at HNB Garhwal University during (18-20) December 2022.
- 14) Member of the scrutiny committee of faculties (short term) for **Dr. Ambedkar Centre for excellence** in HNB Garhwal University 2022.
- 15) Member of the admission committee for BSc. Ist Sem (2022-23, 2023-24) and for M.Sc. Ist Sem (2022-23, 2023-24).
- 16) Have been serving as External and Internal examiner for practical examinations conducted by HNB Garhwal University for Undergraduate and Post-graduate courses in Physics.
- 17) External examiner for Rohilkhand University Bareilly, GB Pant University of Agriculture and Technology Pantnagar.
- 18) Election officer during student union election at Srinagar campus on November 2022, October 2023.
- 19) Investigator for the external examination of HNB Garhwal University Srinagar (2022-23), (2023-24).

Scientific Visits Abroad/International Collaboration

1. **San Antonio (USA)** for the research presentation during September (4-8) 2017.
2. **Singapore** for the research presentation during April (23-27) 2018.
3. **Prague (The Czech Republic)** for the research presentation during July (17-21) 2017.
4. **Shanghai (China)** for the research presentation during October (26-30) 2014.
5. **Krakow (Poland)** for the research presentation during September (2-6) 2013.

Conference/Symposium/Workshop Attended during last five years (2017-2022).

International

1. Presented Paper (Poster), 9th **International Conference on Perspectives in Vibrational Spectroscopy, Indore (India)**, December (13-17) 2022.
2. Invited talk, 2nd International conference on Aerosols, Air Quality and Climate change" (**AAC-2022**), HNB Garhwal University Srinagar; November (04-06) 2022.
3. Presented Paper (Poster), **36th International Conference on the Applications of the Mössbauer Effect, (ICAME 2021), Romania**, September (05-10) 2021 (online).

4. Presented Paper (Poster), **Intermag-2018**, Singapore, April (23-27) 2018.
5. Presented Paper (Poster), International conference on strongly correlated electron system (**SCES-2017**), **Prague (The Czech Republic)**, July (17-21) 2017.
6. Presented Paper (Oral), **14th International meeting on ferroelectricity (IMF-14)**, **San Antonio (USA)**, September (4-8) 2017.

National

1. **Attended** One-day Workshop on **Intellectual Property Rights (IPR)**, HNB Garhwal University, 30th September 2022.
2. **Attended** One-day hybrid workshop on **Advanced Magnetic Materials and Applications** organized by **IIT Hyderabad** and **DMRL Hyderabad**, July 29, 2022 (on line).

Conference/Symposium/Workshop Organized during last five years (2017-2022)

1. Co-organizing secretary of one-day Workshop "**Getting Involved with Physics**" held at HNB Garhwal University Srinagar on December, 9 2022.
2. Co-organizing secretary of "**General Physics lecture series**" held online during November (2022)- April (2023).

Research Publications 2017 onwards

Journals

1. Ferroelectric properties of vanadium substituted four-layer Aurivillius compound $\text{Bi}_5\text{Fe}_{1.5}\text{V}_{0.5}\text{Ti}_2\text{O}_{15}$ thin films, Prajapat D, Surampalli A, **Upadhyay SK**, Reddy VR, *Ferroelectrics* 618 (2), 512, 2024 (0.69)
2. Family of Chiral Ferroelectric Compounds with Widely Tuneable Band Gaps, Das R, Swain D, Mahata A, Prajapat D, **Upadhyay SK**, Saikia S, Reddy VR, Angelis F D, Sarma DD, *Chemistry of Materials*, (doi:10.1021/acs.chemmater.3c02424) accepted, 2024 (9.36).
3. Origin of destruction of multiferroicity in $\text{Tb}_2\text{BaNiO}_5$ by Sr doping and its implications, Kumar R., Rajput S., Maitra T., Hoser A., Rayaprol S, **Upadhyay S K**, Iyer KK, K. Maiti, and E.V. Sampathkumaran, *Journal of Alloys and Compounds*, 862, 158514, 2021, (5.316).
4. Magnetic and magnetodielectric behavior of the Haldane spin-chain system, $\text{Ho}_2\text{BaNiO}_5$, **Upadhyay SK**, Sampathkumaran E.V., Rayaprol S., and Hoser A., *Material Research Express (IOP)*, 6, 036107, 2019 (1.941).
5. Neutron diffraction study of a metallic kagome lattice, $\text{Tb}_3\text{Ru}_4\text{Al}_{12}$, Rayaprol S, Hoser A., **Upadhyay SK** and Sampathkumaran EV, *Journal of Magnetism and Magnetic Materials* 477, 83, 2019 (2.993).
6. Anisotropic re-entrant spin-glass features in a metallic kagome lattice, $\text{Tb}_3\text{Ru}_4\text{Al}_{12}$, Sampathkumaran EV, Iyer KK, **Upadhyay SK** and Hoser A, *Solid state communications*, 288, 64, 2019 (1.804).
7. Low temperature Raman, high magnetic field ^{57}Fe Mössbauer and x-ray diffraction study of magneto-dielectric coupling in polycrystalline GdFeO_3 , Panchwane A., **Upadhyay SK**, Lalla N.P., Sathe V and Gupta A and Reddy V.R., *Physical Review B*, 99, 064433 2019. (3.908).
8. Existence of a critical canting angle of magnetic moments to induce multiferroicity in the Haldane spin-chain system, $\text{Tb}_2\text{BaNiO}_5$, Kumar R, Rayaprol

- S, Rajput S, Maitra T, Adroja D.T., Iyer K K, **Upadhyay SK** and Sampathkumaran E.V., *Physical Review B*, **99**, 100406(R), 2019 (3.908).
9. Destruction of multiferroicity in Tb_2BaNiO_5 by Sr-doping and its implication to magnetodielectric coupling, **Upadhyay SK** and Sampathkumaran E.V., *Journal of Physics: Condensed Matter* **31**, 39LT01, 2019 (2.745).
 10. Observation of magnetoelastic and magnetoelectric coupling in Sc doped $BaFe_{12}O_{19}$ due to spin-glass-like phase. Gupta S., **Upadhyay SK**, Sathe V., V. Siruguri V. and E. V. Sampathkumaran, *Journal of Physics: Condensed Matter* **31**, 295701, 2019 (2.745).
 11. Persistence of large magnetodielectric coupling anomalies and multiferroicity for significant dilution of Tb sublattice by Y in Tb_2BaNiO_5 . **Upadhyay SK** and Sampathkumaran EV, *Journal of Applied Physics* **125**, 174106, 2019 (2.877).
 12. Multiferrocity in collinear spin system: The Spinel $Co(Cr_{0.95}Fe_{0.05})_2O_4$ and $Co(Cr_{0.925}Fe_{0.075})_2O_4$ Kumar R, **Upadhyay SK**, Xiao Y, Ji W and Pal D, *Journal of Physics D: Applied Physics* **51**, 385001, 2018 (3.207).
 13. Microwave assisted radiant hybrid sintering of $YMnO_3$ ceramic: Reduction of microcracking and leakage current” Kumar M, Phase DM, Choudhary RJ, **Upadhyay SK** and Reddy VR, *Ceramics International* **44**, 8196, 2018 (5.532).
 14. Multiferroicity in a spin-chain compound, Tb_2BaCoO_5 , with exceptionally large magnetodielectric coupling in polycrystalline form, **Upadhyay SK** and Sampathkumaran EV, *Applied Physics Letter*, **112**, 262902, 2018 (3.971).
 15. Evolution of magnetic and dielectric properties in Sr-substituted high temperature multiferroic $YBaCuFeO_5$ ” Lal S., **Upadhyay SK**, Mukherjee K, Yadav CS, *Europhysics letters* **117**, 67006, 2017 (1.947)
 16. Magnetic behavior of new compounds, Gd_3RuSn_6 and Tb_3RuSn_6 , **Upadhyay SK**, Iyer KK and Sampathkumaran EV, *Journal of Magnetism and Magnetic Materials*, **441**, 180, 2017 (2.993).
 17. Co-existence of ferroelectric and relaxor phase in polycrystalline Sn doped $BaTiO_3$ and tuning their phase fraction with electric field. **Upadhyay SK**, Reddy VR, Gupta SM, Lalla NP and Singh K, *Solid state communications*, 255-256, **42**, 2017 (1.804).
 18. Study of Electro-Caloric Effect in Ca and Sn co-Doped $BaTiO_3$ Ceramic, **Upadhyay SK**, Fatima I and Reddy VR, *Materials Research Express (IOP)* **4**, 046303, 2017 (1.941).
 19. Dielectric and multiferroic behavior in Sm_2BaNiO_5 , a Haldane spin-chain compound, **Upadhyay SK**, Iyer KK and Sampathkumaran EV, *Physica B*, **524**, 123, 2017 (2.88).
 20. Extraordinarily large intrinsic magnetodielectric coupling of Tb member within the Haldane spin-chain family, R_2BaNiO_5 . **Upadhyay SK**, Paulose PL and Sampathkumaran EV, *Physical Review B*, **96**, 014418, 2017 (3.908).

Proceedings

21. Interference effect in second harmonic light emitted from sub-micron size nonlinear particles, Samanta R, **Upadhyay SK** and Mujumdar S, 2022, Workshop on Recent Advances in Photonics (WRAP), 01, doi: 10.1109/WRAP54064.2022.9758152. 2022.
22. Absence of Ferroelectric Features in Eu_2BaNiO_5 : An Anomalous Case Within

This Rare-Earth Family, **Upadhyay SK** and Sampathkumaran EV, *AIP Conf. Proc.* 1942, 130061 (2018).

23. "Magnetic behavior of $\text{Li}_3\text{Co}_2\text{RuO}_6$ " **Upadhyay SK**, Iyer KK and Sampathkumaran EV, *AIP Conf. Proc.* 1832, 130001 (2017).

Total Number of Research Publications: 35

Total Citation (as per the Google Scholar 2024): 554

h-index: 13

i10 index: 18