

	Name	Dr Bhagaban Kisan
	Designation	Associate Professor
	School	School of Physical Science
	Room No	231
	Qualification	M.Tech (IIT kharagpur) Ph.D (IIT Guwahati)
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2. Specialization or Areas of interest: Experimental condensed Matter Physics, Nanomagnetism, Spintronics, Magnetic thin film, Dielectric, Low-temperature Physics.

3. Experience;

Position	Affiliating University/ or Organization/Place of work with	Years/duration
Assistant Professor	Ravenshaw University	June 2014 to Feb 2015
Assistant Professor -II	Utkal University	Feb 2015 to Jan 2024
Associate Professor	Jawaharlal Nehru University	Jan 2024 till date

4. Awards & Honours:

Qualified NET- 2008 & JRF- 2010

Qualified GATE- 2007

5. International Collaboration/Consultancy: NIL

6. Best Peer Reviewed Publications:

1. Sasmita Otta, Laxman Kand, Rajat Kumar Das, Viswa Ranjan Mohanta, Binod Kumar Roul, Bibuti Bhusan Dash, Bhagaban Kisan, Piezoelectric, structural, vibration and optical properties of lead-free based $0.5\text{Ba}(\text{Ti}_{0.8}\text{Zr}_{0.2})\text{O}_3$ - $0.5(\text{Ba}_{0.7}\text{Ca}_{0.3})\text{TiO}_3$ ceramic sample, Materialstoday Communications 35 (2023) 106191.
2. R.R. Samal, H.S. Navani, S. Saha, B. Kisan, U. Subudhi, Evidence of microplastics release from polythene and paper cups exposed to hot and cold: A case study on the compromised kinetics of catalase, J. Hazardous Materials, 454 (2023) 131496.
3. Bhagaban Kisan, Jagadish Kumar, Perumal Alagarsamy, Room temperature ferromagnetism in Zn-doped NiO nanoparticles: An experimental and DFT+U approach, J. alloys and Compounds, 868 (2021) 159176.
4. Bhagaban Kisan, Jagadish Kumar, Aneeta Manjari Padhan, Perumal Alagarsamy, Dobbidi Pamu, Size and strain induced phase formation and ferromagnetism in reduced TiO_2 powders, J. Physics and Chemistry of Solids, 154 (2021) 110058.
5. Bhagaban Kisan, Jagadish Kumar, Saravanan Padmanapan, and Perumal

- Alagarsamy, Defect induced ferromagnetism in NiO nanocrystals: Insight from experimental and DFT+ U study, *Physica B: Condensed Matter*, 593 (2020) 412319.
6. Bhagaban Kisan, Jagadish Kumar, and Perumal Alagarsamy, Experimental and first-principles study of defect-induced electronic and magnetic properties of ZnO nanocrystals, *Journal of Physics and Chemistry of solids*, 146 (2020) 109580.

7. Recent Peer Reviewed Journals/Books:

7. Rout George Kerry, Kshitij RB Singh, Subhasis Mahari, Atala Bihari Jena, Bijayananda Panigrahi, Kahnu Charan Pradhan, Satyanarayan Pal, Bhagaban Kisan, Jagneshwar Dandapat, Jay Singh, Shyam S. Pandey, Ravindra Pratap Singh, Sanatan Majhi, Bioactive potential of morin loaded mesoporous silica nanoparticles: A noble and efficient antioxidant, antidiabetic and biocompatible abilities in in-silico, in-vitro, and in-vivo models, *Open Nano* 10 (2023) 100126.
8. Rout George Kerry, Priyanka Mohapatra, Atala Bihari Jena, Bijayananda Panigrahi, Kahnu Charan Pradhan, Bibhu Ranjan Khatua, Subhasis Mahari, Satyanarayan Pal, Venkateswarlu Perikala, Bhagaban Kisan, Moses D. Lugos, Anil Kumar Mondru, Sanjeeb K. Sahoo, Dindyal Mandal, Sanatan Majhi & Jayanta Kumar Patra, Biosynthesis of Rutin Trihydrate Loaded Silica Nanoparticles and Investigation of Its Antioxidant, Antidiabetic and Cytotoxic Potentials, *J. Inorganic and Organometallic Polymers and Materials*, 32 (2022) 2065-2081.
9. S.K. Manna, B. Kisan, P.K. Panda, T.K. Nath, Effect of dopants on magnetic and magnetoimpedance properties of rapidly solidified FeCoBM (M = Al, Cu and Si) ribbons, *J. Magn. Magn. Materials*, 544 (2022) 168647.
10. Aneeta Manjari Padhan, Bhagaban Kisan, Perumal Alagarsamy, and Structural, vibrational and magnetic properties of NiO-(Mg, Ti) powders: The effect of reduction reaction, *Journal of Magnetism and Magnetic Materials*, 494 (2020) 165784.
11. Patta Ravi kumar, Bhagaban Kisan, and Alagarsamy Perumal, Thickness dependent ferromagnetism in thermally decomposed NiO thin films, *Journal of Magnetism and Magnetic Materials*, 418 (2016) 86-91.
12. P. Ravikumar, B. Kisan and A. Perumal, Enhanced room temperature ferromagnetism in antiferromagnetic NiO nanoparticles, *AIP Advances* 5 (2015) 087116.
13. B. Kisan, P. Saravanan, S. Layek, H. C. Verma, D. Hesp, V. Dhanak, S. Krishnamurthy and A. Perumal, Effect of annealing on the magnetic properties of ball milled NiO powders, *Journal of Magnetism and Magnetic Materials* 384 (2015) 296-301.
14. B. Kisan and A. Perumal, Room temperature ferromagnetism in finite sized ZnO nanoparticles, *Physica B: Condensed Matter*, 448 (2014) 115-119.
15. S. K. Thatikonda, P. Gogoi, B. Kisan, A. Perumal, P. Sharma, and D. Pamu Magnetic properties of Co doped MgTiO₃ ceramic, *Physica B: Condensed Matter*, 448 (2014) 330-332.
16. Patta Ravi kumar, Bhagaban Kisan, and Alagarsamy Perumal, Thickness dependent ferromagnetism in thermally decomposed NiO thin films, *Journal of Magnetism and Magnetic Materials*, 418 (2016) 86-91.
17. Bhagaban Kisan, P. Ravikumar, Arnab Das, A. Srinivasan and A. perumal, Structural, Vibrational, Optical and magnetic properties of NiO nanoparticles, *Science jet Letter*. 4, 160 (2015).

18. A Perumal, Bhagaban Kisan, P Ravikumar, A Das, A Srinivasan, Vibrational, optical and magnetic properties of NiO nanoparticles, *J. of Nanoscience Lett.* 4 (2015).
19. B. Kisan, P.C. Shyni, S. Layek, H. C. Verma D. Hesp, V. Dhanak, S. Krishnamurthy and A. Perumal Finite size effects in magnetic and optical properties of antiferromagnetic NiO nanoparticles, *IEEE transactions on magnetic*, 50 (2013) 1-4.
20. A. K Singh, B. Kisan, D. Mishra and A. Perumal, Thickness dependent magnetic properties of amorphous FeTaC films, *Journal of Applied Physics*, 111 (2012) 093915.

a. Book Chapters- 03

1. R. K. Bhuyan, B. Kisan, S K. Parida, S. Patra and S. Kumar, Synthesis of Nano-composites Mg₂TiO₄ powders via Mechanical Alloying method and characterization, *Magnesium Alloys*, IntechOpen Publisher 2020.
2. B. Kisan, Ranjan K. Bhuyan and Ranjan K. Mohapatra, Nanocrystalline NiO powder: Synthesis, characterization and emerging applications, Nano-biosorbents for Decontamination of Water, Air and Soil Pollution, Chapter 23, Elsevier, 2020.
3. R. K. Bhuyan, B. Kisan, S. K. Parida, K.K. Naik, S. K. Tripathy and D. K. Pattanayak, The Role of CeO₂ Nano-particle Additives on Microstructure and Microwave Dielectric properties of Mg₂TiO₄ Ceramics, Chemical modification of solid Surfaces by the Use of Additive, Bentham Book, Chapter 9, 192-208 (2021).

8. Conferences (Poster presentation)

- [1] Invited Talk on Size and Defect Induced Magnetic Properties in NiO Powders, National Seminar on Advances in Condensed Matter Physics, Govt Autos college Anugul Odisha.
- [2] Finite-size effects in magnetic and optical properties of antiferromagnetic NiO nanoparticles Bhagaban kisan, P. C. Shyni, Samar Layek, H. C. Verma, David Hesp, Vinod Dhanak, Satheesh Krishnamurthy and A. Perumal Accepted for presentation in 3rd International Symposium on Advanced Magnetic Materials and Applications (ISAMMA 2013), 21-25 July 2013, Taichung, Taiwan.
- [3] Room temperature ferromagnetism in finite-sized ZnO nanoparticles
Bhagaban Kisan and A. Perumal
International conference on magnetic materials and application (MagMA)-2014, IIT Guwahati, 5-7 Dec 2013.
- [4] Room temperature ferromagnetism in finite-sized ZnO and NiO nanoparticles prepared by Combution method
Bhagaban kisan, J. Christey and A. Perumal
International conference on magnetic materials and application (MagMA)-2014, IIT Guwahati, 5-7 Dec 2013.
- [5] Role of nanostructure on the magnetic properties
A.Perumal, Akhilesh Kr. Singh, P.C. Shyni, K. Bhagaban, Anabil Gayen,
National seminar on Nanoscience and Nanotechnology, 16 - 17, September 2012, Physics department, MC College, Barpeta, Assam.

- [6] Magnetic properties of soft magnetic thin films in recording media for futuristic hard disk drive applications, A.Perumal, A. K. Singh, B. Kisan, International conference on nanomaterials and applications (ICNMA-2012), 28 - 29, Feb 2012, Department of Physics, Mother Teresa Women's University, Kodaikanal-624 101.
- [7] Thickness dependent ferromagnetism in thermally decomposed NiO thin films, Bhagaban Kisan and A. Perumal. Workshop on Frontiers in Condensed Matter Physics (CONDMAT-2016) Feb 22 – 27, 2016, IOP Bhubaneswar.
- [8] Indo-Japan Workshop on Magnetism at Nanoscale (IJWMN-2015) Jan 09 – 12, 2015, NISER, Bhubaneswar.
- [9] IEEE MATLAB Workshop 2013 June 22-23, IIT Guwahati.
- [10] IEEE Workshop on Compressive sensing and Technical writing April 6-7, 2013. IIT Guwahati.

9. Other information if any:

- a. Refresher Course on Experimental Physics 2017, Indian Academic of Science, Bangalore.
- b. Orientation Program, 2018, UGC, HRDC Utkal University Vani Vihar, Bhubaneswar.
- c. Refresher Course in Research Methodology for Basic Science 2019, UGC, HRDC Utkal University Vani Vihar, Bhubaneswar.
- d. Attendee of Quality Improvement program (QIP) in “Advanced Materials for Structural Applications”, 2020, Department of Metallurgy Engineering and Material Science, IIT Indore.
- e. Refresher Course in “Environmental Science”, 2021, UGC, HRDC, Utkal University Bhubaneswar.