

BIODATA



1. Name (in Block Letters) : **Dr. SANJAYKUMAR HIRAMAN SHAMKUWAR**
2. Father's/Husband's Name : Hiranman Baliram Shamkuwar
3. Department : Physics
4. Current Designation & Grade Pay : Professor (AL-14), Rs. 1,44,200- 2,18,200
5. Date of Joining : 29/10/2005
6. Date of last Promotion : 31/12/2022
7. Address : 201, Sanskar Anand Residency, Nandanwan Colony, Near Daterao Layout, MIDC Road, Amravati

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8. Academic qualification:

Name of Exam	Name of Board/University	Year of Passing	Percentage of Marks	Division	Subject
S.S.C.	Nagpur Board	Summer 1994	78.71	Distinction	Eng, Mar, Hin, So.Sc., Sci, Maths
H.S.S.C.	Nagpur Board	Summer 1996	55.83	II	Eng, Mar, Phy., Che., Bio., Math.
B.Sc.	Nagpur University	Summer 1999	52.51	II	Physics, Maths, Electronics
M.Sc	Nagpur University	Summer 2001	59.70	II	Physics
B.Ed.	RTM Nagpur University	Summer 2003	70.40	I	(Physics, Maths Methods)
SET	University of Pune	Feb-2005	-----	-----	Physics
NET	UGC-CSIR	June-2005	-----	-----	Physics
Ph.D.	RTM Nagpur University	October 2016	---	Awarded	Physics

9. Teaching/Research Experience

Level	Name of the University/ College/ Institution	Duration
UG	Arts, Commerce & Science College, KiranNagar,	17 Yrs. 10 Months
Research	Research Supervisor, Physics, SGBAU/ Research	4 Years

10. Academic Staff College Orientation / Refresher Course attended during the year:

S.No.	Name of the Course/ Summer School	Place	Duration	Sponsoring Agency
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1	Refresher Course in ICT (Physics)	ASC, SGB Amravati University, Amravati	03/03/2010 to 20/03/2010	UGC
2	10 th Orientation Course	ASC, SGB Amravati University, Amravati	13/06/2011 to 09/07/2011	UGC
3	Refresher Course in Environmental Studies	H. R. D. C. RTM Nagpur University, Nagpur	11/11/2016 to 01/12/2016	UGC
4	Short Term Course in Environment Conservation	H. R. D. C. SGB Amravati University, Amravati.	09/10/2018 to 14/10/2018	UGC
5	Short Term Course in Gender Sensitization	H. R. D. C. SGB Amravati University, Amravati.	10/12/2018 to 15/12/2018	UGC

RESEARCH, PUBLICATIONS AND ACADEMIC CONTRIBUTIONS

BOOKS

1. Analytical Characterization of Ferroelectric Al doped KNbO₃ Single Crystal Page Nos. 66-69, Recent advances in Functional Materials for Device Applications Editor: Dr. M.S. Michael Publisher: Vishnu Prints Media, Chennai, ISBN 978-93-85374-34-0.
2. Growth of KNbO₃ Crystals and Their Appearance, Novel Applications in Polymers and Waste Management, edited by B. J. Dewangan, M. N. Yenkie, Apple Academic Press, USA., ISBN 9781771884754 - CAT# N11776.
3. A Text Book of Physics, B.Sc. III, Sem VI, Dyanpath Publications, Amravati, ISBN: 978-93-87278-30-1

PAPER PRESENTED IN CONFERENCES

1. Analytical and Dielectric Studies of the Ferroelectric Ba₅Ti₂O₇Cl₄, National Conference on Thermophysical Properties, at Amrita Vishwa Vidyapeetham, Amritapuri Campus, 22 - 22 September 2007.
2. Growth and Comparison of Some Physical Properties of KNbO₃, Single Crystals with Different Dopants, National Conference on Advances in Material Research, at Shankarlal Khandelwal College, Akola, 26th & 27th February 2010.
3. Dielectric Studies of KNbO₃ Single Crystal with different dopants, IInd National Conference On Advanced Materials- Processing, Characterization and Applications, at PSN College of Engineering & Technology, Melathediyoor, Tirunelveli, 25-27 August 2010.
4. Negative Impacts of SEZ (Special Economic Zones), State Level Seminar on Human Rights, at Adarsha Science, J. B. Arts and Birla Commerce Mahavidyalaya, Dhamangaon Rly, 11th December 2011.
5. Synthesis and Thermal Characterization of Doped KNbO₃, National Conference on Recent Trends in Material Science Research, at National Institute of Technology, Srinagar, Kashmir, 3-5 September 2012.
6. Characterization and Dielectric Properties of Al-doped KNbO₃ Single Crystal, National Conference on Material Science 2014, at Bhartiya Mahavidyalaya, Amravati, 10-11 January 2014.

7. Growth and Characterization of Ferroelectric Al doped KNbO₃ Single Crystal, National Conference on Modern Trends in Material Science, at North Bengal University, Siliguri (West Bengal), 5-6 February 2015.
8. Need and Importance of Education for Women Empowerment in Indian Context, National Conference on Bharatati Striyanchi Sthiti Dasha Va Disha, Jagat Arts, Commerce and Indiraben Hariharbhai Patel Science College, Goregaon, Dist:- Gondia, 19th September 2015.
9. Dielectric and Thermal Analyses of TiO₂ Doped KNbO₃ Single Crystals, 8th National Conference on Thermophysical Properties, at Thermophysical Society of India and Malviya National Institute of Technology, Jaipur (Rajasthan), 14-16 December 2015.
10. Effect of doping concentration on dielectric properties of Al doped KNbO₃ Single Crystals., National Seminar on Nanoscience and Nanoengineering, at Department of Chemistry, Arts, Commerce & Science College, Kiran Nagar, Amravati. 29th September 2016.
11. Dielectric and Domain Studies on Fe Doped KNbO₃ Single Crystal, 2nd International Conference on Condensed Matter & Applied Physics, at Govt. Engineering College, Bikaner (Rajasthan), 24-25 November 2017.
12. Constitutional Social Responsibilities of Government, Interdisciplinary national Conference on "We, the people of India" at New Arts, Commerce and Science College, Wardha, 28- 29 December 2017.
13. Surface & Domain Analysis in TiO₂ Doped KNbO₃ Single Crystal, International Conference on Recent Trends in Science and Technology. At S.S.S.K.R. Innani Mahavidyalaya, Karanja Lad. (Washim), 22-23 march 2018.
14. Women Empowerment and Legal Aspects: A Perspective, International Conference on Women Empowerment and Leadership, at Dhote Bandhu Science College, Gondia, 26-27 November 2018.
15. Frequency Dependent Dielectric Studies on ferroelectric Al Doped KNbO₃, National Conference on Emerging Trends in Science, at Vidyabharati Mahavidyalaya, Amravati, 1-2 February 2019.
16. Properties of Ferroelectric Fe Doped KNbO₃ Single Crystal, 4th International Conference on Science, Agriculture and Technology for Society, at East West Institute of Technology, Bengaluru, 13 to 15 May 2019.
17. Synthesis and Dielectric Studies of Lead Titanate Prepared by Wet Chemical Method, National Conference on Innovative Research in Science and Technology, at Shri Shivaji Science College, Amravati, 17-18 December 2019.
18. Synthesis & Dielectric Studies of La – Doped Lead Titanate Prepared by Wet Chemical Method, International Conference on Advances in Physical, Chemical and Mathematical Sciences, at RTM Nagpur University, Nagpur, 13-16 February 2020.
19. Structural Analyses of La-Doped PbTiO₃ Prepared by Wet Chemical Method, International E- Conference on Recent Trends in Material Science and Nanotechnology, at Arts, Commerce & Science College, Maregaon, 7-9 February 2021.
20. Effect of Sintering temperature on Structural and Dielectric Properties of Lead Titanate, 2nd International Conference on Recent advances in Material Science and Nanotechnology,

CONFERENCE PROCEEDINGS

1. Growth & Comparison of some physical properties of KNbO_3 single crystals with different dopants, Conference Proceedings NCAMR – 2010, Shankarlal Khandelwal College, Akola, Pg. No. 77-78.
2. Dielectric Studies of KNbO_3 single crystals with different dopants, Conference Proceedings II NCAM – 2010 PSN College of engineering and Technology, Tirunelveli, Tamil Nadu, Pg. No. 230-231, ISBN:- 93-80697-09-0, 2010.
3. Synthesis and Dielectric Properties of Aluminium doped KNbO_3 single crystals, Conference Proceedings TICAS – 2013, Kalasalingam University, Krishanankoil, Tamil Nadu, Pg. No. 93-94, ISBN:- 978-81-921319-0-0.
4. “Synthesis and Dielectric Properties of Ferroelectric Al-doped KNbO_3 Single Crystals”, National Conference on Novel Synthesis of Advanced Materials and Their Applications at Arts, Commerce and Science College, Maregaon, Page No. 34-37, 16th February 2015, ISBN No. 978-81-930894-1-5.
5. Need and Importance of Education for Women Empowerment in Indian Context, National Conference on Bharatati Striyanchi Sthiti Dasha Va Disha At Jagat College, Goregaon, Dist-Gondia (M.S.), Page No. 258-260, 19th Sept. 2015, ISBN No. 978-93-82962-93-9.
6. Field dependent Dielectric and Hysteresis loop studies of Fe doped KNbO_3 Single Crystal, 1st national Conference on Advanced Nanomaterials held at Nirmalagiri College, Kannur, Kerala, Page No. 50-52, 1-2 October 2015, ISBN No. 978-81-931227-0-9.
7. Structural and Dielectric investigation of Ferroelectric Fe Doped KNbO_3 Single Crystal, Proceedings of 4th National Seminar on Technologically important Crystalline and Amorphous Solids, Pg. No. 67- 70, 2nd & 3rd March 2018, ISBN No: 978-81-909237-3-5.

RESEARCH PAPERS IN JOURNALS

1. Analytical and Dielectric Studies of the Ferroelectric $\text{Ba}_5\text{Ti}_2\text{O}_7\text{Cl}_4$, AIP Conference Proceedings 1004, 196, Pg. No. 196-201, ISBN:- 978-0-7354-0523-3, 2008, **I. F. 0.4**.
2. Dielectric Properties of Chromium Doped $\text{Ba}_5\text{Ti}_2\text{O}_7\text{Cl}_4$, Vol. 1372, No. 1, AIP Conference Proceedings 1372,112, Pg. No. 112-115, 2011, ISBN:- 978-0-7354-0932-3, **I. F. 0.4**.
3. Characterization and Dielectric Properties of Al-doped KNbO_3 Single Crystal, International Journal of Basic and Applied Research, Pg. No. 226-228, ISSN No: 2249-3352.
4. Growth and Characterization of Fe-doped KNbO_3 Single Crystals, Journal of Pure Applied and Industrial Physics, Vol. 5(4), 117-123, ISSN 2319-8133, April 2015, **I. F. 2.07**
5. Analytical Studies on Aluminium Doped KNbO_3 Single Crystal, Journal of Pure Applied and Industrial Physics, Vol. 5(6), 185-191, ISSN 2319-8133, June 2015, **I. F. 2.07**
6. Analytical and Hysteresis Loop Studies of Ferroelectric Al- Doped KNbO_3 Single Crystal, Research Journal of Physical Sciences, Vol. 4(3), 1-4, E-ISSN 2320-4796, April 2016.
7. Dielectric and Thermal Analyses of TiO_2 doped KNbO_3 single crystals., Advanced Science Letters, Vol.22, Page No.3837-3839, ISSN: 1936-7317, **I. F. 1.2**

8. Dielectric and Domain studies on Fe Doped KNbO₃ Single Crystal, American Institute of Physics, 1953, Pg. No. 070014-1 to 070014-4, 2017, ISBN No: 978-0-7354-1648-2, **I. F. 0.4.**
9. Effect of impurities of Ferroelectric Al -Doped KNbO₃ single crystal, An International E – Journal on Emerging Trends in Science, Technology and Management, Vol. 2, Issue 3, Pg. No. 59-62, ISSN: 2454 - 1958, May 2017.
10. Constitutional Social Responsibilities of Government, Interdisciplinary Multilingual Referred Journal, Special issue, ISSN No: 2394-5303, December 2017, **I. F. 4.00**
11. Surface & Domain Analysis in TiO₂ Doped KNbO₃ Single Crystal, Aayushi International Interdisciplinary Research Journal, Pg. No. 138-141, ISSN No: 2349-638X, **I. F. 4.574**
12. Study The Formation of Domain Wall in KNbO₃ Ferroelectric Single Crystal, Journal of Emerging Technologies and Innovative Research, Pg. No. 779-781, ISSN No: 2349-5162, 2018., **I. F. 5.87**
13. Women Empowerment and Legal Aspects: A Perspective, International Journal of Research and Analytical Reviews, Vol 5 Issue 4, Pg. No. 183-188, E-ISSN 2348-1269, 2018, **I. F. 5.75.**
14. Frequency Dependent Dielectric Studies on Ferroelectric Al doped KNbO₃ Single Crystal, Research Journey International Journal, Pg. No. 35-39, ISSN No: 2348-7143, **I. F. 6.261**
15. Nucleation of Ferroelectric Domains under the influence of Electric field in Al doped KNbO₃ Single Crystal, American Institute of Physics Proceedings 2104, ISBN: 978-0-7354-1836-3. 2018, **I. F. 0.4**
16. Properties of Ferroelectric Fe Doped KNbO₃ Single Crystal, Global Journal of Multidisciplinary Studies, Vol. 8, Issue 7, Pg. No. 25-27, ISSN No: 2348-0459, June 2019, **I. F. 1.323.**
17. Structural Analysis of Lead Titanate Prepared by Wet Chemical Method, International Journal of Scientific Research in Science and Technology, Vol. 8, Issue 1, Pg. No. 307-314, ISSN No: 2395-6011, 2021, **I. F. 8.14**
18. Dielectric Studies of Lead Titanate Prepared by Wet Chemical Method, IOSR- Journal of Applied Physics, Vol. 13, Issue 5, Pg. No. 14-18, ISSN No: 2278-4861, 2021.
19. A critical field study of ferroelectric domain in Al-doped KNbO₃ single crystal, Ceramics International 48 (Elsevier), Vol. 48, (7), Pg. No. 9172-9179, ISSN No: 0272-8842, 2021, **I. F. 5.2**
20. Analytical study of the ferroelectric properties of Fe-doped KNbO₃ single crystal, Journal of Physics and Chemistry of Solids 167, (Elsevier), Vol. 167, Pg. No. 110712-110718, ISSN No: 0022-3697, 2022, **I. F. 4.38.**
21. Effect of sintering temperature on structural and dielectric properties of Lead Titanate, International Journal of Scientific Research in Science and Technology, Vol. 9, Issue 13, Pg. No. 203-208, ISSN No: 2395-6011, 2022, **I. F. 8.14.**
22. Synthesis and Structural Properties of Lanthanum Doped Lead Titanate Prepared by Wet Chemical Method. IOSR Journal of Applied Physics, Vol. 14, Issue 5, Pg. No. 13-18, ISSN No: 2278-4861, 2022.

23. Effect of Lanthanum Doping on Magnetic Susceptibility of Lead Titanate, Journal of Emerging Technologies and Innovative Research (JETIR), Pg. No. 66-76, ISSN No: 2349-5162, 2023, I. F. 7.95.

Research Project: Applied for a project of 80 Lakhs to The Science and Engineering Research Board, DST, HRD, Ministry. No reply received till date.





Research Guidance:

Sr. No.	Number Enrolled	Thesis Submitted	Degree awarded
1.	M. Sc. Curriculum Projects	19	19

CONTRIBUTION IN CO-CURRICULAR, EXTENSION, PROFESSIONAL DEVELOPMENT RELATED ACTIVITIES.

- (i) Extension, Co-curricular & field-based Activities: Remedial classes, delivered guest lectures at different institutions. Student educational tours etc.
- (ii) Role in College Activities: Member of different committees and various college activities.
- (iii) Membership of Academic/Social Organizations: 1. Member of Sword Samajik Sanstha, Gondia (M.S.), 2. Member of Physical Society of India. 3. Member of Amravati University Physics Teachers Association. 4. Member of Educator Foundation, Gondia.
- (iv) Role in university activities : Valuation of university examination papers. Categorization of Copy Cases, member of syllabus committee.

Innovations/ Contributions in Teaching

-  Design of Curriculum :
-  Teaching Methods : Interactive teaching methods, PowerPoint presentations etc.
-  Laboratory Experiments : Manually prepared electronic kits. Manuals for practical.
-  Preparation of resource materials : Notes on curriculum.

SPECIAL CONTRIBUTION

- 1. Head of the Department of Physics, at Shrimati Narsamma Arts, Commerce & Science College, Kiran Nagar, Amravati
- 2. BoS (Physics) member at SGB Amravati University, Amravati.
- 3. Editor of 1 book on the syllabus of B.Sc. III SEM VI of SGB Amravati University, Amravati.
- 4. Recognized Supervisor for Ph.D. at SGB Amravati University, Amravati.
