

B I O - D A T A

N A M E : DR. KIRAN KUMAR VERMA

F A T H E R ' S N A M E : PROF. PRABHAT KUMAR VERMA

D A T E O F B I R T H : 23 - 09 - 1963

UNIVERSITY ADDRESS:

RESIDENTIAL ADDRESS:

Dr. K. K. Verma
PROFESSOR
Department of Physics & Electronics
DR. R. M. L. Avadh University
Faizabad- 224001
Uttar Pradesh
INDIA
Phone : +91-5278-245160 (R.)
Mobile: +91-8004977977

Qr.TypeIV, No.3
Teachers Colony,
Near Hawii Patti Faizabad -224001
Uttar Pradesh , INDIA

E-mail : kkverma23@gmail.com

PH.D : BANARAS HINDU UNIVERSITY, VARANASI-225001(U.P)

Department	Physics
Topic	Investigation on films of Yttrium, Bismuth and Thallium bearing cuprate high temperature superconductors: Formation, structural, Micro-structural and superconducting characteristics.
Work done	Preparation of Y:123 HTSC film by thermal flash evaporation technique. Preparation of Bi-Sr-Ca-Cu-O, (Bi,Pb)-Sr-Ca-Cu-O and (Bi,Pb)-Sr-Ca-Cu-O:Ag HTSC films by spray pyrolysis technique Preparation of Tl-Ca-Ba-Cu-O HTSC film by thermal and e-beam evaporation and spray pyrolysis technique Studies on rf-SQUID effect in Tl:HTSC film prepared by spray pyrolysis technique.
Achievements	SRF(CSIR) PHYSICS, BANARAS HINDU UNIVERSITY, 1991-1993 RA(DST), PHYSICS, BANARAS HINDU UNIVERSITY, 1993-1994 RA(CSIR), PHYSICS, BANARAS HINDU UNIVERSITY, selected in 1994

TEACHING EXPERIENCE

Position	Department	University	Period
Lecturer(Electronics) (Permanent)	Physics & Electronics	Dr. R. M. L. Avadh University, Faizabad	From 24.12.1994
Reader (Permanent)	Physics & Electronics	Dr. R. M. L. Avadh University, Faizabad	From 24.12.2003
Associate Professor (Permanent)	Physics & Electronics	Dr. R. M. L. Avadh University, Faizabad	From 24.12.2006
Professor (Permanent)	Physics & Electronics	Dr. R. M. L. Avadh University, Faizabad	From June 2010

RESEARCH EXPERIENCE

- Actively involved in the preparation and characterization of HTSC thin film by thermal , e-beam evaporation and spray pyrolysis technique
- Investigation on the preparation, characterization and gas sensing properties of semi-conducting(ZnO) films.
- Preparation and characterization of MWCNT filled polymer nanocomposite.
- Fabrication and analysis of electrical behaviour of Pt,W and Carbon nanowires By Focused Ion Beam Induced Deposition Technique
- Design and Analysis of High Performance CMOS Temperature Sensor Using VCO
- Design and Analysis of Low Power CMOS ECG Amplifier
- Experience in handling sophisticated instruments like X-ray diffractometer (PANanalytical X'pert pro), scanning electron microscope (pemtron south korea),UV-Spectrophotometer (Spectro analytical).

RECENT RESEARCH INTEREST

- Humidity sensor
- Microstrip Antenna Simulation
- Polymer Nanocomposite
- VLSI designing
- Electronic Circuit Simulation

ACADEMIC PROJECTS

Granted from Council of science & Technology, Uttar Pradesh	1. on the topic related to preparation and characterization of TI: HTSC thin film by spray pyrolysis technique(Completed). 2. On the topic related to preparation and characterization of carbon nanotube/exfoliated graphite filled nanocomposite for device application(granted in 2011,completed)
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LIST OF RESEARCH PUBLICATIONS

1. Preparation of high Tc superconducting thin film of Y-Ba-Cu-O by flash evaporation technique.**Solid State Communication, 72, 469, (1989).**
2. Preparation of TI-Ca-Ba-Cu-O high temperature superconducting thin films by flash evaporation.**Japanese Journal of Applied Physics, 29, L880 (1990).**
3. Preparation of Y-Ba-Cu-O and Bi-Sr-Ca-Cu-O superconducting films by conventional techniques.**Bulletin of Material Science 14(2), 493 (1991).**
4. Preparation of high Tc superconducting thin films of TI-Ca-Ba-Cu-O by chemical spray pyrolysis technique. , **Superconducting Science & technology 5, 163-167 (1992).**
5. Preparation of high temperature superconducting thin film of TI-Ca-Ba-Cu-O by electron beam flash evaporation .**Condensed Matter and Material Communication** (Published 1993) .
6. On the occurrence of superlattice in C₆₀ fullerence .
Condensed Matter and Material Communication 1 (11) 5,1993.

7. Studies of RF-SQUID effect in TI-Ca-Ba-Cu-O thin film prepared by spray pyrolysis technique.
Superconducting Science & technology 7, 402-406 (1994).
8. The effect of annealing temperature on the structure, micro structure and critical temperature of TI : HTSC thin film prepared by chemical spray pyrolysis technique.
Bulletin of Material Science 28 (2), 151-154 (2005).
9. Preparation of TI : HTSC film by chemical spray pyrolysis technique using Ultrasonic Nebuliser.**Acta Ciencia Indica , Vol. XXX P- No. 3 / 277-280 (2004).**
10. Preparation and characterization of monolayer TI : HTSC film by spray pyrolysis technique, **Acta Ciencia Indica , Vol. XXX IV P- No. 1, 001, 121-126 (2008).**
11. Optimization of annealing condition for the preparation of (Bi,Pb)-Sr-Ca-Cu-O HTSC films by spray Pyrolysis technique. **Indian Journal of Pure & Applied Physics, Vol.48, pp.410-414(2010)**
12. Simulation study of the effect of dielectric constant and feed location on the rectangular microstrip patch antenna parameters, **International journal of systems and technologies, vol.5, issue1, 2013**
13. Structural, optical and ethanol gas-sensing properties of zinc oxide thin film prepared by spray pyrolysis technique using ultrasonic nebulizer, **Indian Journal of Pure and Applied Physics, Vol.51, pp.765-768(2013)**
14. Fabrication of Tungsten nanowire by focused ion beam chemical vapour deposition and their in-situ electrical characteristics **Acta Ciencia Indica , Vol. XXX IX P- No. 1, 041, 41-45(2013)**
15. Fabrication And Analysis of Electrical Behaviour of Carbon Nanowires By Focused Ion Beam Induced Deposition Technique, **Bulletin of Pure and applied science, Vol.32D, Issue-2, 59-65, 2013.**
16. Investigation of thermal and hardness properties of MWCNTs filled PMMA polymer nanocomposites **American Journal of Materials Science and Application, Vol.2(2), pp.31-34, 2014**
17. Study of the effect of substrate dielectric constants and feed locations on the performance of square patch microstrip antenna , **International Journal of Electronics, Electrical and Computational (ijeecs), vol.2, issue-3, 30-36, 2014**
18. Comparative study of the performance of microstrip circular patch antenna with and without slots
International Journal of Electronics, Electrical and Computational (ijeecs), vol.3, issue-2, 25-34, 2014
19. Comparative Performance studies of Arrow shaped and Trisul shaped slotted square patch antenna
International Journal of Engineering Science and Innovative Technology (IJESIT) Vol.3, Issue3, 227-234, 2014
20. Dielectric, electrical and microstructural properties of unfilled and MWCNTs filled polystyrene nanocomposite prepared by *in-sit* polymerization technique using ultrasonic irradiation
Indian Journal of Pure and Applied Physics, Vol.52, No.09, PP614-619 (SEPT, 2014)
21. Thermal and structural properties of Polystyrene (PS)/MWCNTs nanocomposite synthesized by insitu Polymerization Technique Under the Influence of Ultrasonic Irradiation, **Advanced Science Letters 20, 1621-1623 (2014)**
21. Design and analysis of phase frequency detector using D flip- flop for all PLL application, **International Journal of Electronics Engineering Research, Vol.9, No.9 (2017), pp.1389-1395**
22. Novel Design of 10T Full Adder with 180nm CMOS technology, **Vol.9, No.9 (2017), pp.1407-1414**

List of research publications IN SEMINAR/CONFERENCE

National

1. Formation of high T_c superconducting Y-Ba-Cu-O thin films by flash evaporation. DAE symposium on Solid State Physics 17-18 December 1988, Bhopal University Bhopal.
2. Preparation of Y-Ba-Cu-O, Bi-Sr-Ca-Cu-O and Tl-Ca-Ba-Cu-O superconducting films by conventional techniques, XXI National Seminar on Crystallography December 27-29, 1989 BARC, Mumbai.
3. Preparation of high T_c superconducting thin films of Tl-Ca-Ba-Cu-O by Spray pyrolysis technique, Solid State Physics symposium, 1991, BHU.
4. Preparation of high temperature superconducting film of Tl-Ca-Ba-Cu-O by e-beam flash evaporation, DAE symposium, 1992, Tirupati.
5. The effect of annealing temperature on the structure, microstructure and critical transition temperature of Tl:HTSC thin film prepared by chemical spray pyrolysis technique. Seventeenth national symposium on cryogenics, SNSC-99, Nagpur
6. Preparation of high T_c superconducting thin films of Tl-Ca-Ba-Cu-O by Spray pyrolysis technique, National seminar on emerging trends in electronics & computers, 1999, Dr. R.M.L. Avadh University Faizabad U.P.
7. Preparation and Characterisation of ZnO thin film and its application as a gas sensor : A review, National seminar on materials and its applications, 2003, Dr. R.M.L. Avadh University Faizabad U.P.
8. Gas sensitivity of Al doped Zinc Oxide thin film, National Symposium on Advances in Material science 17- 19 March 2005, D.D.U. Gorakhpur University.
9. Ethanol and CO Gas sensitivity of ZnO thin film, National Symposium on Advances in Material science 17- 19 March 2005, D.D.U. Gorakhpur University.
10. Preparation and characterization of (Bi,Pb)-Sr-Ca-Cu-O HTSC films by spray pyrolysis technique, National seminar on materials and its applications, 2003, Dr. R.M.L. Avadh University Faizabad U.P.
11. Preparation of Tl-Ba-Ca-Cu-O HTSC film by spray pyrolysis technique using ultrasonic nebulizer, National seminar on materials and its applications, 2003, Dr. R.M.L. Avadh University Faizabad U.P.
12. Fabrication of Pt Nanowires By Focused Ion Beam Induced Deposition Technique And their Electrical characterization. NATCOM, 2009, Lucknow University
13. Structural, optical and ethanol gas –sensing properties of zinc oxide thin film prepared by spray pyrolysis technique using ultrasonic nebulizer, National conference on recent trends in exotic materials, 26-28 August 2010, Sharda University, Greater Noida, UP
14. Humidity Sensing Application of Zinc oxide (Bulk) Prepared By Sol-Gel Technique, Proceedings of 3rd National Conference on Nanomaterials and Nanotechnology, Vol.1, Issue1, Nov-Dec, 2010, Amity University, Lucknow
15. Design of rectangular patch antenna with U-slot, National conference ETEIC-2012 proceeding, April 6th- 7th Anand Engineering College, Agra
16. Slot Loaded Fork Shaped Antenna for Bluetooth and Dual-band Applications, National conference ETEIC-2012 proceeding, April 6th- 7th 2012, Anand Engineering College, Agra
17. Fabrication of Carbon Nanowires By Focused Ion Beam Induced Deposition Technique And Analysis of Its Electrical Behaviour, National conference on application of high pressure technique and novel materials in the frontier of science (ConNCEMP13) at Allahabad University, 25-26 oct. 2013
18. Synthesis of MWCNTs filled PMMA based polymer nanocomposite and its electrical characteristics. National conference on application of high pressure technique and novel materials in the frontier of science (ConNCEMP13) at Allahabad University, 25-26 oct. 2013

19. Thermal and structural properties of Polystyrene (PS)/MWCNTs nanocomposite synthesized by insitu Polymerization Technique Under the Influence of Ultrasonic Irradiation, Advances in Nanotechnology And Renewable Energy (NCNRE-2014) Jamia Millia Islamia, New Delhi, April 28-29, 2014
20. Design and Analysis of High Performance CMOS Temperature Sensor Using VCO Proceedings of the International Congress on Information and Communication Technology, Volume 439 of the series Advances in Intelligent Systems and Computing , pp 67-76, 2016

International

21. Preparation of Y-Ba-Cu-O and Bi-Sr-Ca-Cu-O superconducting films by conventional techniques, International conference on superconductivity January 10-14, 1990, IISC Bangalore.
22. Study of structural, Electrical and optical properties of Al doped ZnO film fabricated by spray pyrolysis method, International conference on Soft matter 2004 ICSM, Calcutta.
23. Effect of Ti and Al doped Zinc Oxide gas sensor , Electronic and Photonic Materials, device and systems (EPDMS), 4-6 January 2006, Calcutta
24. Fabrication of W Nanowires by Focused Ion Beam Induced Deposition and their Electrical Characterization , International conference on nano science and nanotechnology (ICONN 2010) , 24th - 26th Feb 2010, SRM University
25. Electromagnetically coupled square microstrip antenna for dual-band operation International conference on communication systems and network technologies, Gwalior, 6-8 April. 2013.
26. L-shaped microstrip antenna for wideband, International conference on communication systems and network technologies, Gwalior, 6-8 April. 2013
27. Preparation And Analysis of Dielectric Behaviour of unfilled and MWCNTs filled Polystyrene based Polymer nanocomposite . International conference on nanoscience and nanotechnology (ICNN-2013), 18-20 NOV, 2013, Babasaheb Bhimrao Ambedkar University, Lucknow
28. Thermal and structural properties of Polystyrene (PS)/MWCNTs nanocomposite synthesized by insitu Polymerization Technique Under the Influence of Ultrasonic Irradiation, Advances in Nanotechnology And Renewable Energy (NCNRE-2014) Jamia Millia Islamia, New Delhi, April 28- 29, 2014
29. An Elliptical Patch Antenna for X-Band Radar Application, International Conference on Emerging Trends in Electrical, Electronics & Sustainable Energy Systems, KNIT, SULTANPUR, 11-12 March 2016
30. Design and Analysis of Low Power CMOS ECG Amplifier, International Conference on Emerging Trends in Electrical, Electronics & Sustainable Energy Systems, KNIT, SULTANPUR, 11-12 March 2016

BOOK

1. Microwave and Radar (2010) ISBN No. 978-81-8329-155-2, Shree publishers and distributors, New Delhi

TEACHING METHODS

- Lecture Through Blackboard
- Lecture Through Power Point Presentation
- Practicals

PARTICIPATION IN ORIENTATION/REFRESHER/SORT-TERM COURSE

- Orientation Course at Allahabad University(6-31 November,2000)
- Refresher Course at Aligarh Muslim University(10.04.2001-9.5.2001)
- Refresher Course at Shivaji University(17.11.2003 - 18.12.2003)
- Short-Term Course on “Current trends in Microwave Design and Applications ,IIT,Kharagpur,June 11- June 16,2012
- Workshop on “Computational Electromagnetics and RCS for stealth Applications, Sept,24-28,2012,Defence Laboratory,Jodhpur

AWARDS/RECOGNITIONS RECEIVED AT THE NATIONAL LEVEL

1. SESSION Co-CHAIRMAN-3rd National Conference on Nanomaterials and Nanotechnology, Amity University,Lucknow,Nov-Dec,2010
2. Ph.D Research Supervisor,Career Point University,KOTA

INVITED LECTURE AT THE NATIONAL LEVEL

1. Invited Lecture (DST-inspire) Communication and its techniques BBS College of Engineering Allahabad – 2014

LIFE MEMBERSHIP OF ACADEMIC BODIES

- Vigyan Parishad,Allahabad
- Materials research Society of India,Bangalore
- Semiconductor Society of India,New Delhi
- Life fellow “Antenna Test and Measurement Society”

MEMBER ,EDITORIAL BOARD

- International Journal of scientific and Innovative research,India
- International Journal of Applied Physics,India

PH.D PRODUCED

- Abhilasha Srivastava-Undoped And Doped Zinc Oxide thin film base gas sensors.
- Ajay Sharma-Thallium Based HTSC film by Spray Pyrolysis technique.
- Sudhanshu Srivastava-Pt,C and W nanowires
- Reetika-Simulation Studies of Microstrip Antenna

EDUCATION

Qualification	Year	College/Institute	Division/Class
M.Sc Physics	1984	LN Mithila University, Darbhanga, Bihar	First Class
B.Sc Physics(Honours)	1982	LN Mithila University, Darbhanga Bihar	First Class

I.Sc	1980	LN Mithila University, Darbhanga Bihar	First Division
Matriculation	1978	Bihar School Secondary Examination Board, Patna (Bihar)	First Division

CO-CURRICULAR ACHIEVEMENTS

- Team Manager of University Team for **YOUTH FESTIVAL** held in **DR.RML AVADH UNIVERSITY, FAIZABAD** in which university team won overall team championship in 2003

POSITIONS OF RESPONSIBILITY

- Assistant center superintendent Annual Examination -1999-2000
- Joint Secretary, National Seminar on Emerging Trends in Electronics and Communication, Dr.RML Avadh University, 11-12, March 1999
- Assistant center superintendent Annual Examination – 2000-2001
- Assistant center superintendent Annual Examination – 2001-2002
- Organising Secretary, National Seminar on Materials And Its Applications, Dr.RML Avadh University, 27-28, February 2003
- Member, Departmental Board of Studies ,2005
- Incharge of Integrated Circuit & Communication Laboratories
- Incharge of Departmental Training & Placement
- Superintendent, AND Boys Hostel
- Centre superintendent and Assistant Superintendent of various examinations of University
- Assistant Dean Student Welfare (2005-2007)
- Deputy Coordinator, Evaluation Cell (2010)
- Member UGC and NAAC drafting committee
- Member Centre of Excellence, Dept of Physics & Electronics
- Actively Involved in The Curriculum Development of M.Sc (Electronics) Semester Course in 2011
- Establishment and Development of Integrated Circuit and Communication Laboratory
- Actively Involved In the Introduction of Photo-Identity Card For University Teachers and Employees
- Actively Involved In the Introduction of Health Card for Teachers and Employees
- Member, local organizing committee, National Seminar on Climate Change and its impact on biological communities (CCIB), 12-13 Feb 2011
- Member, Anti ragging committee 2013
- Member, Centre of Excellence Committee, Dept. of Physics & Electronics, Dr.RML Avadh university.
- Organising Secretary, National Seminar on Intellectual Property Rights: Significance And Protection Process, 2013
- Member, Anti ragging committee 2016
- Warden, Ahilya Bai Holker Mahila Hostel 2016
- Member, Executive Council, Dr.RML Avadh University, Faizabad
- ADSW, 2014-2016
- Deputy coordinator, science evaluation, 2016
- Coordinator, B.Ed Evaluation 2016
- Member UGC and NAAC drafting committee
- Instrumental in WiFi connection in the university
- Member, Library committee
- Member, Dr RML Avadh University Planning Committee
- Member, Central Purchase Committee
- Ex-Coordinator, UGC

SEMINAR/WORKSHOP ATTENDED

- International conference on superconductivity at IISC, Bangalore Jan 10-14, 1990.
- **DAE** Symposium on Solid State Physics BHU , Varanasi , 1992
- Workshop on “Computer operation and software application” at Dr.R.M.L.Avadh University Faizabad 9-15 March 1995.
- National Laser Symposium, Center of Advanced Technology, Indore , 5-6 Feb1997.
- National Seminar on “Emerging trends in Electronics and Computers” at Dr.R.M.L.Avadh University Faizabad 11-12 March 1999.
- Seventeenth National symposium on Cryogenics(SNSC-99) Priyadarshini college of Engg. And Arch. Nagpur 19-21 Feb 1999.
- Natinal Seminar on Materials and Its Applications (NASMA), Dr.R.M.L.Avadh University Faizabad,2003
- National Conference on Recent Trends in Exotic Materials,26-28 August,2010,Sharda University,Greater noida
- 3rd National conference onNanomaterials& nanotechnology,Amity University,Lucknow,(21-23,December2010)
- Short Term Course On “Current Trends in Microwave Design and Appications”,IIT,Kharagpur,11-16 June 2012
- National conference On Application of High pressure techniques & Novel Materials in the Frontiers of Science(conNCEMP),Uiv. Of Allahabad,25-26 October2013
- National Seminar on Intellectual Property Rights:Significance and protection process, 13 December 2013,Dr.RML Avadh University,Faizabad(UPCST,Organising Secretary)
- Workshop on Introduction To VLSI Design and Digital Circuit design Using CMOS,21 March 2014,Dr.RML AVADH University,2014
- National seminar on “ Present scenario of higher education in India:Prospects & Challenges,Dr.RML Avadh University,Faizabadx
- International conference on “emerging trends in electrical ,electronics & sustainable energy systems,11-12 march 2016,KNIT,Sultanpur