Balachandra G. Hegde, M.Sc., Ph.D., (Physics).

(Recipient of the best paper award (ARP) from Vision Group on Science and Technology Dept. of IT, BT &ST, Govt. of Karnataka for the year 2016-17, Research Associate, 2002 to 2007 and Research Scientist, 2007-2012 at University of Southern California, Los Angeles, CA, USA. Recipient of Indo-Japan DBT-JSPS exchange visitor grant to visit Saaga University, Japan during February- March 2024.)

Current position: **Professor and Chairman.**
Department of Physics,
Rani Channamma University,
Belagavi- 591156, Karnataka
Mobile: 0827 733 6421,
bghegde@rcub.ac.in
https://orcid.org/my-orcid?orcid=0000-0003-0478-5223
https://scholar.google.com/citations?user=NUn5EHIAAAAJ&hl=en

Date of Birth : 10-08-1965

Research Experience: 23 years (10 years in University of Southern California, Los Angeles, California, USA)

Research Area: Experimental Condensed Matter Physics, Study of Magnetic nanoparticles, manganites, multiferroics. Design and development of instrumentation to measure magnetic properties, low temperature experiments. Expertise in CW and Pulse EPR Spectroscopy. Employing Biophysical techniques such as pulse electron paramagnetic resonance spectroscopy, electron microscopy and circular dichroism to determine the structure of membrane binding proteins and antimicrobial peptides.

Teaching experience: 35 years (UG-12 years, PG:22 years)

Research Projects Completed/Ongoing:

Sl. No	Title of the Project	Funding Agency	Amount	Year of Sanction/ Duration
1	Monodisperse Manganite Nano Particle Synthesis and Characterization by Contactless Conductivity and Susceptibility Measurements	Vision Group on Science and Technology (KFIST L1), Government of Karnataka	Rs: 20 Lakhs	2014-15 2 years
2	Investigations into structural organization and curvature-dependent membrane binding of alpha-synuclein	DBT North East Twinning program in Collaboration with IIT Guwahati	Rs: 25 Lakhs	2017-18 3 years
3	Optoelectronic applications of dye sensitized ZnO nano structures.	Vision Group on Science and Technology (KFIST L1), Government of Karnataka	Rs. 40 Lakhs	2016-17 2 years
4	Magnetic Ordering and Colossal Magneto Resistance (CMR) Studies in Monodisperse Nano Particles of Certain Manganites.	RCUB Teacher Research programme	Rs. 0.775 Lakhs	2017-18 1 year

5	Development of Method to Detect Spin Fluctuations in 2-D quantum materials	PM USHA MERU Soft component RCUB	Rs. 1 Lakhs	2025-25 1 Year (Ongoing)

EDUCATION:

1994 – 2002 **Ph.D.** in Condensed Matter Physics
BANGALORE UNIVERSITY, Bangalore, India
Collaboration INDIAN INSTITUTE OF SCIENCE, Bangalore, India,
***Ph.D., Thesis*:** Electron Spin Resonance Study of Radiation Damage Pathways and Phase Transitions in Certain Inorganic Perchlorates.

1987 – 1989 **Master of Science (Solid State Physics)**
KARNATAKA UNIVERSITY, Dharwad, India,

1983 – 1986 **Bachelor of Science (Physics Major)**
KARNATAKA SCIENCE COLLEGE, Dharwad, India,

EXPERIENCE:

Teaching: (34 years)

Sept 2016 –Current **Professor**
Department of Studies in Physics,
Rani Channamma University, Belagavi, Karnataka India

Aug 2013 –Aug 2016 **Associate Professor**
Post Graduate Department of Physics,
Rani Channamma University, Belagavi, Karnataka India

Aug 2012 – Aug 2013 **Associate Professor**
PES Institute of Technology
Bangalore, India

2002 - 2012 **Lecturer/Research Scientist**
Department of Biochemistry and Molecular Biology,
UNIVERSITY OF SOUTHERN CALIFORNIA, Los Angeles, California, USA,

- Subject: "Physical Methods in Biochemistry and Molecular Biology" for Masters and Ph. D., students.

1990 – 2002 **Senior Scale Lecturer/Reader**
Department of Physics.
SRI BHAGWAN MAHAVEER JAIN COLLEGE, Bangalore

- Teaching Bachelor of Science (B.Sc.) Physics course. Topics covered in this period includes, Heat and Thermodynamics, Sound and Waves, Optics,

Electricity and Magnetism, Modern Physics – Atomic and Molecular Physics, Relativity and Quantum Mechanics, Solid State Physics, and Electronics.
- Responsible for setting up undergraduate Physics laboratory of a newly started department.

Research: (23 years)

08/2013-present *Professor/Associate Professor* Department of Studies in Physics,
Rani Channamma University, Belagavi, Karnataka India.

07/2007-02/2012 **Research Scientist**
Department of Biochemistry and Molecular Biology
Zilkha Neurogenetic Institute
UNIVERSITY OF SOUTHERN CALIFORNIA, Los Angeles, CA, USA
Research area: *Employing Biophysical techniques such as pulse electron paramagnetic resonance spectroscopy, electron microscopy and circular dichroism to determine the structure of amyloid fibrils, oligomers and membrane tubulating proteins. In addition, teaching graduate students in the discipline of Physical Methods in Molecular Biology.*

06/2002-06/2007 **Research Associate**
Department of Biochemistry and Molecular Biology,
Zilkha Neurogenetic Institute
UNIVERSITY OF SOUTHERN CALIFORNIA, Los Angeles, CA, USA
Research area: E*mploying Electron Paramagnetic Resonance techniques to elucidate the structure of membrane-bound proteins and amyloid beta fibrils. Expertise in Pulse EPR techniques, Site-Directed Mutagenesis, PCR, DNA purification, Recombinant protein expression, purification and spin labeling for EPR analysis. Electron microscopy, AFM, chromatography, reverse phase and ion exchange chromatography.*

Research Guidance: *5 students completed the Ph.D., and 4 students pursuing their Ph.D.,*

PUBLICATION IN PEER-REVIEWED JOURNALS

1. Investigation of Electrochemical Properties of Nano-Structured $NdFeO_3$ Orthoferrite, N Chougala, AS Patil, BG Hegde, VD Patake, T Manjunatha, S Kulkarni, *Journal of Electronic Materials, https://doi.org/10.1007/s11664-025-12385-6*
2. Structural, Raman, magnetic and dielectric properties of strontium doped nickel zinc low dimensional ferrites, Hanamanta Badiger, Santosh Kathavi and B.G. Hegde, Journal of Materials Science: Materials in Electronics 36 (25), (2025)1576 https://doi.org/10.1016/j.jssc.2025.125380
3. Electron Paramagnetic Resonance and Magnetization Insights into Size-Induced Charge Order 'Melting' in Nanoparticles of Sm0.42Ca0.58MnO3, Pratheek, Narmada Hegde, Balachandra G

Hegde, SV Bhat. *Applied Magnetic Resonance, (2025)**56**, 631-647, https://doi.org/10.1007/s00723-024-01746-9*

4. Neutron transfer in 7Li+205Tl system. VV Parkar, V Jha, SK Pandit, A Parmar, A Shrivastava, K Mahata, K Ramachandran, R Palit, Bhushan Kanagalekar, **BG Hegde**, *The European Physical Journal A, 60, **11**, (2024), 220.*
5. Investigation of structural, thermal, magnetic, and dielectric properties of Yb+3 doped nickel cobalt ferrite nanomaterial for electro-magnetic applications. Smita Patil, Sunil Meti, Mallikarjun Anandalli, Hanamanta Badiger, Rajashekhar F Bhajantri, L Pratheek, Mohammad Muhiuddin, Mohammad Rizwanur Rahman, **Balachandra G. Hegde**. *Journal of Materials Science: Materials in Electronics, 35, **25, (2024) 1676.***
6. Investigation of magneto-electric properties of Co0.65Zn0.35Fe2O4–Ba0.7Sr0.3TiO3 multiferroic composites, H Badiger, S Latthe, S Matteppanavar, N Kalarikkal, **BG Hegde** *Journal of Materials Science: Materials in Electronics* 35 **21**, (2024)1463
7. Design and Development of a First Order Reversal Curve Measurement Enabled Variable Temperature Vibrating Sample Magnetometer, Pratheek, Hanamanta Badiger, Nutan Kumari Sah, Rajeev S Joshi, Subray V Bhat, **Balachandra G Hegde, *Physica Scripta,* 99** (2024) 085932.
8. Structural, cation distribution, magnetic and electrical properties of Co0.5Zn0.5−xNdxFe2O4 nano-ferrite, Hanamanta Badiger, Shidaling Matteppanavar, Pratheek, **BG Hegde, *Indian Journal of Physics,* 98,** (2024) 2363-2374.
9. Magnetic, Electric, and Antimicrobial Properties of Chromium-Doped Cobalt Zinc Ferrite Nanoplates, Hanamanta Badiger, **BG Hegde,** Suresh Kumbar, Suneel Dodamani, Santosh Y Khatavi, Shidaling Matteppanavar, ***Chemistry Select,* 9,** (2024) e202303370.
10. Electrical and magnetic behavior of low dimensional nano ferrites, Hanamanta, Shidaling Matteppanavar, **B. G. Hegde, *AIP Conference Proceedings,* 2995** (2024) 020019.
11. Non arrhenius magnetotransport and spin accumulation in CuAlTe2, BN Pallavi, AK Swetha, Rajashree Jaldar, Rajeev S Joshi, C Vishnuvardhan Reddy, **B. G. Hegde, *AIP Conference Proceedings,* 2995** (2024) 020147.
12. Fusion of ^{7}Liwith ^{205}Tl at near-barrier energies, VV Parkar, Ruchi Rathod, V Jha, SK Pandit, A Shrivastava, K Mahata, K Ramachandran, R Palit, Md SR Laskar, BJ Roy, Bhushan Kanagalekar, **BG Hegde, *Physical Review C,* 109,** (2024) 014610.
13. Nonlinear optical coefficients of Samarium–activated lithium zinc borate glasses in femtosecond and nanosecond regimes, Kavitha Hanamar, G Jagannath, SB Kolavekar, NH Ayachit, Harika Patnala, Dalal Abdullah Aloraini, Aljawhara H Almuqrin, MI Sayyed, AG Pramod, K Keshavamurthy, S Venugopal Rao, **BG Hegde, *Optics & Laser Technology,* 168,** (2024) 109859.
14. A study on solubility of bismuth cations in nickel cobalt ferrite nanoparticles and their influence on dielectric and magnetic properties, Smita Patil, Sunil Meti, Pratibha S Kanavi, Rajashekhar F Bhajantri, Mallikarjun Anandalli, Rajib Mondal, Sudip Karmakar, Mohammad Muhiuddin, Mohammad Rizwanur Rahman, B Chethan Kumar, **Balachandra G Hegde, *Materials Science and Engineering: B*, 296,** (2023) 116570.
15. Magnetic and electrical investigations of low dimensional Co0. 5Zn0. 5− xCuxFe2O4 nano ferrites, Hanamanta, Shidaling Matteppanavar, **BG Hegde, *Journal of Alloys and Compounds*. 954** (2023) 170031.
16. Unravelling the conductivity behaviour of thermally stable Li2O–Bi2O3–B2O3–P2O5 glasses embedded with V2O5, A Madhu, NS Abd EL-Gawaad, Suhad Ali Osman Abdallah, Sunanda

T Dadami, **BG Hegde**, T Uthayakumar, Karthik Kumar, N Srinatha, ***Ceramics International, 49,*** (2023) 28781-28793.

17. Physical, Structural, and Photoluminescence Characteristics of Sm2O3 Doped Lithium Zinc Borate Glasses Bearing Large Concentrations of Modifier, Kavita Hanamar, **BG Hegde**, SB Kolavekar, NH Ayachit, AG Pramod, K Keshavamurthy, Mallikarjun H Anandalli, RF Bhajantri, ***Journal of Inorganic and Organometallic Polymers and Materials.* 33,** (2023) 1612-1620.
18. Multifunctional role of engineered tin oxide nanoparticles with the variation of calcination temperatures, Hanumantagouda Basavanagoudra, Vijayakumar D. Jangannanavar, Mallikarjun K. Patil, Arun K. Shettar, Hanamanta, **Balachandra G. Hegde**, Sanjeev R. Inamdar, Kotresh M. Goudar, ***Materials Today Communications,* 35,** (2023) 105546
19. Structural, electrical and magnetic properties of low dimensional Pr-doped Co-Zn ferrite nanoparticles, Hanamanta Badiger, Matteppanavar, S. & **Hegde, B.G.** ***Journal of Super conductivity and Novel Magnetism*. 36** (2023) 675–684.
20. Effect of the samarium on the mechanical and radiation shielding capabilities of lead-free zinc-borate-lithium glasses, Kavita Hanamar, GB Hiremath, **BG Hegde**, NH Ayachit, NM Badiger, ***Optik*, 273,** (2023) 170397.
21. Structural, electrical and magnetic properties of Pr doped Co0. 5Zn0. 5Fe2O4 nanoparticles, Hanamnata, Shidaling Matteppanavar, J Manjanna and **BG Hegde,** ***Materials Today: Proceedings,* 82,** (2023) 390-394.
22. Role of neutron transfer in the reaction mechanism of ^{9}Be+^{169}Tm, ^{181}Ta, ^{187}Re and ^{197}Au systems, VV Parkar, V Jha, A Parmar, Bhushan A Kanagalekar and **BG Hegde, Nucl. Phys. A 1029,** (2023) 122570.
23. Growth of manganite nanoparticles with narrow size distribution using reverse micelle method, Pratheek, SV Bhat and **BG Hegde**, ***IOP Conference Series: Materials Science and Engineering* 1221 (1),** (2022) 012041.
24. Na-montmorillonite to Fe(II)-Mt using ferrous citrate/ascorbate obtained by dissolving iron powder, S. Chikkamath, J. Manjanna, N. Momin, B.G. Hegde, G.P. Nayaka, Aishwarya, ***Applied Clay Science* 106396 (1**), (2022) 1-12.
25. Acoustic-Phonon Mediated Cyclotron Resonance Power Absorption in Zinc Oxide Free-Standing Nanostructure, ShrutiBhat, JS Bhat, **BG Hegde**, ***Indian Journal of Pure & Applied Physics*** *(IJPAP),* 60, 2 (2022) 157-162
26. Na-montmorillonite to Fe(II)-Mt using ferrous citrate/ascorbate obtained by dissolving iron powder. S. Chikkamath, J. Manjanna,, N. Momin, **B.G. Hegde**, G.P. Nayaka, Aishwarya S. Kar,, B. S. Tomar. *Applied Clay Science,* **217** (2022), 106396,
27. Cyclotron-Phonon resonance power absorption in free standing nanostructure of transparent conducting oxides. ShrutiBhat, J S Bhat and **B G Hegde**, ***Physics B. Physics of Condense Matter***, 612 (2021) 1286.
28. Optical properties of samarium doped lithium zinc borate glasses.Kavita Hanamar, B. G. Hegde, Kishor Upadhyaya, and N. H. Ayachit, ***AIP Conference Proceedings* 2269**, 030051(2020); https://doi.org/10.1063/5.0019568

29. Melo A A, **Hegde B G**, Shah C, Larsson E, Isas M J, Kunz S, Lundmark R, Langen R, Daumke O. Structural insights into the activation mechanism of dynamin-like Eps15-homology domain proteins. ***Proc Natl Acad Sci U S A.*** (2017) **114(22)**:5629-5634.

30. **B G Hegde**, Electron Paramagnetic Resonance: Biological Applications, ***Resonance*** (2015) 20 (11) 1017-1032.

31. Mark Ambroso, **Hegde BG**, Ralf Langen. Endophilin A1 induces different membrane shapes using a conformational switch that is regulated by phosphorylation. ***Proc. Natl. Acad. Sci U S A.*** (2014) **111(19):**6982-7.

32. **Hegde BG**, Shah C, Morén B, Lundmark R, Daumke O and Langen R. Structural Insights into Membrane Interaction and Caveolar Targeting of Dynamin-like EHD2. ***Structure*** (2014), **22(3):**409-20

33. J Varkey, N Mizuno, **BG Hegde**, N Cheng, AC Steven, R Langen. α-synuclein oligomers with broken helical conformation form lipoprotein nanoparticles. ***J of Biol Chem***. **288 (24)**, 17620-30 (2013).

34. Mizuno N, Varkey J, Kegulian NC, **Hegde BG**, Langen R and StevenAC. Remodeling of lipid vesicles into cylindrical micelles by α-synuclein in an extended α-helical conformation. ***J Biol Chem***.**287(35):** 29301-11 (2012).

35. Yiyu Li, S Bedrood, **BG Hegde**, R Langen, I S Haworth. EPR-based computational modeling of the fibril structure of human islet amyloid plolypeptide (hIAPP). **Abstracts Of Papers Of The American Chemical Society**, Volume 243 (2012)

36. Krishnamani V, **Hegde BG**, Langen R, Lanyi JK. Secondary and Tertiary Structure of Bacteriorhodopsin in the SDS Denatured State. ***Biochemistry***. **51(6):**1051-60 (2012).

37. Bedrood S, Li Y, Isas JM, **Hegde BG,** Baxa U, Haworth IS, Langen R. Fibril Structure of Human Islet Amyloid Polypeptide. ***J Biol Chem***. **287(8):**5235-41 (2012).

38. Hatmal MM, Li Y, **Hegde BG**, Hegde PB, Jao CC, Langen R, Haworth IS. Computer Modeling of Nitroxide Spin Labels on Proteins. ***Biopolymers***. 97(1):35-44 (2012).

39. O Daumke, S Gao, K Fälber, C Shah, R Lundmark, H McMahon, **BG Hegde**, R Langen, A von der Malsburg, G Kochs, O Haller. Structure, oligomerization and mechanism of dynamin superfamily proteins. **Acta Crystallographica,** A67, C63 (2011)

40. Rao JN, Jao CC, **Hegde BG**, Langen R, Ulmer TS. A combinatorial NMR and EPR approach for evaluating the structural ensemble of partially folded proteins. ***J Am Chem Soc***. **132** 8657-68 (2010).

41. Jao CC, **Hegde BG**, Gallop JL, Hegde PB, McMahon HT, Haworth IS and Langen R. Roles of amphipathic helices and BAR domain of endophilin in membrane curvature generation. ***J Biol Chem***. **285**, 20164-70 (2010).

42. Lakshminarayanan R , Il Yoon, **Hegde BG,** Daming Fan , Chang Du , Oldak JM. Analysis of secondary structure and self-assembly of amelogenin by variable temperature circular dichroism and isothermal titration calorimetry. ***Proteins: Structure, Function, and Bioinformatics.*** **76**, 560-9 (2009).

43. Jao CC, **Hegde BG**, Chen J, Haworth IS, Langen R. Structure of membrane-bound α-synuclein from site-directed spin labeling and computational refinement. ***Proc Natl Acad Sci U S A***. **105**, 19666-71(2008).

44. Henne WM, Kent HM, Ford MGJ, **Hegde BG,** Daumke O, Butler PJG, Mittal R, Langen R, Evans PR, and McMahon HT. Structure and Analysis of FCHo2 F-BAR Domain: A Dimerising and Membrane Recruitment Module that Effects Membrane Curvature. ***Structure* 15,** 1-4 (2007).

45. **Hegde BG,** Isas JM, Zampighi G, Haigler HT, and Langen R. A novel calcium-independent peripheral membrane-bound form of annexin B12. ***Biochemistry 45*,** 934-942 (2006).

46. Raghavan SC, Chastain P, Lee JS, **Hegde BG**, Houston S, Langen R, Hsieh CL, Haworth IS, Lieber MR. Evidence for a Triplex DNA Conformation at the bcl-2 Major Breakpoint Region of the t(14;18) Translocation. ***J Biol. Chem***. **280,** 22749-60 (2005).

47. Raghavan SC, Houston S, **Hegde BG**, Langen R, Haworth IS, Lieber MR. Stability and Strand Asymmetry in the Non-B DNA Structure at the bcl-2 Major Breakpoint ***J Biol. Chem. 279*,** 46213-25 (2004).

48. **Hegde BG**, Isas JM, Haigler HT, Langer R. Different conformations induced by pH-dependent membrane binding of annexin 12, ***Biophysical Journal*** 86 (1), 373A-373A (2004).

49. **Hegde BG,** Anand A. and Bhat SV. ESR Evidence for Mirror Symmetry Conservation during Radiation damage of X - Irradiated Single Crystals of $KClO_4$. ***Applied Magnetic Resonance 19***,111 (2000).

50. **Hegde BG,** Rastogi A, Damle R, Chandramani R, and Bhat SV. An Electron Spin Resonance (ESR) study of ClO_3 radicals in NH_4ClO_4 single crystals. ***Journal of Physics: Condensed Matter* 9**, 3219 (1997).

CONFERENCE PRESENTATIONS: INTERNATIONAL AND NATIONAL

1. Structure of Membrane-Bound α-Synuclein: Combining Modeling with Continuous Wave and Pulsed EPR, 50th Rocky Mountain Conference on Analytical Chemistry, Breckenridge, Colorado USA. July 27–31, 2008.

2. Membrane Curvature Sensors and Inducers Studied by Site-Directed Spin Labeling, 50th Rocky Mountain Conference on Analytical Chemistry, Breckenridge, Colorado USA,July 27–31, 2008.

3. Structure of Membrane-Bound α-Synuclein: Combining Modeling with Continuous Wave and Pulsed EPR, Joint Meeting of the Biophysical Society and the International Biophysics Congress in Long Beach, California, February 2-6, 2008.

4. Protein misfolding and Protein-Membrane Interaction studied by Site-Directed Spin Labeling Hegde BG, Jao C, Isas JM and Langen R. Joint Conference of 12th *In Vivo* EPR Spectroscopy and Imaging 9th International EPR Spin Trapping/Spin Labeling. Chicago, IL 2007

5. Different Conformations Induced by pH Dependent Membrane Binding of Annexin 12 **Hegde BG,** Isas JM. Zampighi G. Haigler HT. and Langen R., ***Biophysical Society 48th Annual Meeting,*** Baltimore, ML, 2004.

6. ESR Evidence for Rotational Symmetry Conservation During Radiation Damage of Single Crystals of $LiClO_4 \cdot 3H_2O$. **Hegde BG,** Rastogi A, Damle R, Chandramani R, and Bhat SV. T S R P- 98, Part-II, Preprint Volume, 285 (1998). (Trombay Symposium on Radiation and Photochemistry, Mumbai, India).

7. ESR Evidence For Mirror Symmetry Conservation During Radiation Damage of $KClO_4$ Single Crystals. **Hegde BG**, Anand A, Chandramani R and Bhat SV. Solid State Physics (India), 40C, 433 (1997). (DAE Solid State Physics Symposium).

8. ESR Study of Radicals Produced Using Electron Beam Irradiation. Damle R, **Hegde BG** and Bhat SV. International Conference on R & D Using Electron Accelerators, Mangalore University, India, Abstract, 22 (1995).

9. ClO_3 study of X-irradiated single crystals of NH_4ClO_4, First meeting of National Magnetic Resonance Society, IISc, Bangalore 1995

10. Temperature Dependence of ClO_3 EPR in Single Crystals of NH_4ClO_4. **Hegde BG,** Rastogi A, Damle R. Chandramani R, and Bhat SV: DAE Solid State Physics Symposium (India), 36C, 508 (1993).

11. EPR studies of ClO_3 radicals in single crystals of NH_4ClO_4, DAE Solid State Physics Symposium Tirupati, BARC/Tirupati University 1992

WORKSHOPS AND SUMMER SCHOOLS:

1. Bruker Elexsys E-580 Pulse EPR Training Course,
   Bruker Biospin EPR Division, Manning Road, Billerica, MA, 01821, April 09 – 12, 2007.

2. Bruker EMX EPR Maintenance and Service Training Course,
   Bruker Biospin EPR Division, Manning Road, Billerica, MA, 01821, August 18 – 23, 2002.

3. Summer visiting teacher-fellow of Indian Academy of Sciences
   Worked with Prof. Balaram at Molecular Biophysics Unit, Indian Institute of Science, Bangalore – 560012 India, April 22 – June 21, 2002.

4. Refresher course in experimental Physics,
   Department of Physics, Goa University, Taleigao Plateau, Taleigao, Goa - 403206 India, Oct 12 – 29, 2001.

5. Workshop conducted by Physics Teachers forum, Bangalore University. St Joseph's College, Bangalore. Dec 1997.

INSTRUMENTATION SKILLS (Operation and Maintenance):

1. Bruker X-band Elexsys E-580 Pulse EPR spectrometer
2. Bruker X-band ER200D EPR spectrometer,
3. Bruker X-band EMX EPR spectrometer,
4. Oxford Instruments ESR900 continuous-flow cryostat equipped with ITC4 temperature controller (temperature down to 3.8 K).
5. Enraf Nonius Sealed tube X-ray machine equipped with Precession and Weisenburgh Camera.
6. Digital Instruments Multimode Scanning Probe Microscope (AFM).
7. JEOL 1400JEM Electron Microscope.
8. JASCO CD, UV/VIS and Spectrofluorometer.
9. AKTA HPLC/FPLC

RECOGNITION:

1. Best poster presentation by Postdoctoral Fellow (second place)
   15th annual retreat, University of Southern California, 1501 San Pablo Street, Los Angeles CA, USA 90089. October 24 – 25, 2004.
2. *Recipient of the best paper award (ARP) from Vision Group on Science and Technology Dept. of IT, BT &ST, Govt. of Karnataka for the year 2016-17.*
3. *Recipient of Indo-Japan DBT-JSPS exchange visitor grant to visit Saaga University, Japan during February- March 2024.*

SCIENTIFIC ORGANIZATIONS:

American Biophysical Society (member)
Indian Physics Association (Life member)

ADMINISTRATIVE EXPERIENCE

1. Chairman, Department of Physics,
2. Nodal Officer, PM-USHA, Department of Education, Govt of India.
3. Dean School of Basic Sciences, RCUB
4. Member, Academic Council, RCUB.
5. Syndicate Member, RCUB.
6. Chairman, Board of Studies in Physics (PG), RCUB.
7. Chairman, Board of Studies in Physics (UG), RCUB.
8. Chairman, Board of Studies in Electronics (UG), RCUB.
9. Member, Board of Studies in Physics (PG), Karnatak University Dharwad.

10. Member, Board of Studies in Physics (PG and UG), RLS College, Belagavi.
11. Member, State Physics Syllabus Committee, NEP 2020.
12. Member, Task Force on Research at Universities, Karnataka State Higher Education Council, Govt. of Karnataka.
13. Member, AAA committee, Shivaji University, Kolhapur, Maharashtra.
14. Nodal office, PM USHA MERU grant and responsible for preparing DPR and approval of Rs. 100 Crores fund to the University