Malnad College of Engineering, Hassan

(An Autonomous Institute, Affiliated to V.T.U, Belagavi

Faculty Biodata

GENERALINFORMATION AND ACADEMIC BACKGROUND

PART-A

1.	Name	**Dr. HEMARAJU B C**
2.	Qualification	**M Sc, Ph. D**
3.	Date of joining the service at MCE	**20/08/2019**
4.	Department	**PHYSICS**
5.	Current Designation & Experience in MCE	**Assistant Professor & 6.5 years**
6.	**Teaching Experience:** U.G. (in Years) :	**12 years**
Research Experience (in Years)		
7.	**a) Total Number of years** **b) Years spent in M. Phil. / Ph.D.** **c) Years of Guiding Ph.D. / M. Phil.** **d) Total No. of papers Published in** i. International Journals ii. National Journals iii. Conference Proceedings **e) Total No. of Conferences/Seminar/Workshop Attended** i. International ii. National iii. State Level	**13 years** **4 years** **27** **27** **4** **35** **12** **10** **16**
8.	**Awards /Prizes/ Honor's / Recognitions**	1st prize in crystal growth conducted by DST, SERC school on nonlinear optics and materials
9.	**Fields of Specialization under the Subject / Discipline**	**Nonlinear optical crystal growth and characterization, photonic materials, nanomaterials and natural fiber-reinforced polymer composites for advanced optical and engineering applications.**
10.	**Orientation/Refresher Course/Summer School / Winter School/Workshops attended:**	**07**

.PART-B

1. List of Publications:

Sl. No.	Title	Name of the Journal, Vol. No., Year
1.	Manju, V. V., R. Sanjana, Vinayakprasanna N. Hegde, S. Divakara, B. C. Hemaraju, Janya Lumbini, N. Raghu, and R. Somashekar. "Structural, Morphological, Optical, and Electromechanical Analysis of Green-Synthesized Ti-Doped ZnO Nanoparticles for Optoelectronic Applications	." Micro and Nanostructures (2025): 208537
2.	B. C. Hemaraju, Vinayakprasanna N. Hegde, V. V. Manju, Chandra, K. B. Deeksha, R. Preetham, and TG Yashas Gowda. "Influence of glutamic acid on the structural, optical, thermal, mechanical, dielectric, electrical, and NLO properties of potassium hydrogen phthalate crystals."	Journal of Materials Science: Materials in Electronics 36, no. 31 (2025): 1994
3.	Chandranna, Sahana Nagarakere, Vinayakprasanna N. Hegde, N. C. Sandhya, B. C. Hemaraju, and Pradeep TM. "Green synthesised ZnO/CuO nanocomposites for energy storage, environmental remediation and optoelectronic applications."	ChemPhysMater (2025)
4.	Dhanushchandraguru, H. M., B. C. Hemaraju, DC Vinay Kumar, B. S. Chethan, P. Akhileshwari, R. Preetham, and M. P. Sadashiva. "Comprehensive structural, electronic, and in-silico characterization of 1-phenyl-5-(m-tolyl)-1H-tetrazole as apotentialsteroidogenic factor-1 (SF-1) inhibitor candidate."	Journal of Molecular Structure (2025): 143859
5.	Dhanushchandraguru, H. M., B. C. Hemaraju, Chandra, DC Vinay Kumar, Vinayakprasanna N. Hegde, V. V. Manju, K. B. Deeksha, and TG Yashas Gowda. "Growth, and characterization of the nonlinear optical crystal 2', 3'-Di-O-acetyl-5'-deoxy-5-fluoro-N4-(pentyloxycarbonyl) cytidine: structural, optical, thermal, electrical, and molecular docking studies."	Journal of Materials Science: Materials in Electronics 36, no. 22 (2025): 1417.
6.	B. N Sharath, TG Yashas Gowda, B C Hemaraju, and P. Madhu. "Gamma radiation-induced degradation of mechanical properties in Carbon/Kevlar hybrid epoxy composites for aerospace applications."	Journal of Polymer Research 31, no. 12 (2024): 1-19.
7.	H C Priya, N Upendra, Yashas gowda T G, B C Hemaraju and Prashanth Kalappa synergistic effects of sisal/glass fiber hybridization and eggshell powder filler on the performance of eco-friendly polymer composites,	Polymer composites. 2024
8.	Vinayakprasanna N Hegde, V V Manju, T M Pradeep and B C Hemaraju, "Study on Structural, Morphological, Elastic and Electrical Properties of ZnO nanoparticles for Electronic Device Applications."	Journal of Science: Advanced Materials and Devices (2024): 100733
9.	Manju, V. V., Vinayakprasanna N. Hegde, T. M. Pradeep, B. C. Hemaraju, and R. Somashekar. "Synthesis and characterization of Ga2O3 nanoparticles for electronic device applications."	Inorganic Chemistry Communications (2024): 112562.
10.	Shankara S R, K M Eshwarappa, Vinayakprasanna N Hegde, Manju V V, Deeksha K B and B C Hemaraju, "Crystal Growth and Characterization of Glycine Chlorzoxazone Nonlinear Optical Crystal for Energy Storage Capacitor	Chemical Physics Impact, 8 (2024) 100556

	Applications".	
11.	Vinayakprasanna N Hegde, V V Manju, B C Hemaraju, Frequency and temperature dependent dielectric properties of CuO nanoparticles	Chemical Physics Impact 8 (2024) 100474.
12.	Exploring the influence of safranin dye on optical, thermal and dielectric properties of TGA crystal for SSDL applications	Journal of Materials Science: Materials in Electronics, (2023) 34:29
13.	Effect of sodium thiosulphate doping on growth, optical, thermal mechanical, dielectric, electrical and nonlinear optical properties of potassium hydrogen phthalate crystal	Chemical Data Collections, 30 (2020) 100572
14.	Growth and impedance analysis of pure TGAc and dye doped TGAc crystals-enhanced dielectric permittivity for energy-storage devices	SN Applied Sciences, (2020) 2:1493.
15.	Crystal structure, Hirshfeld surfaces, Topology, Energy frameworks and Dielectric studies of 1-(2-chlorophenyl)-3,3-bis(methylthio)prop-2-en-1-one	Zeitschrift für Kristallographie-Crystalline Materials, 235 (3), (2020) 85-93.
16.	Inclusion of an anionic dye in the molecular structure of potassium dihydrogen phosphate crystal for SSDL applications	Indian journal of Physics, 93(8) (2019) 991–1000
17.	Influence of gamma radiation on optical properties of Halloysite nanotubes incorporated polycarbonate nanocomposites,	Radiation Effects and Defects in Solids, (2018) 1-15.
18.	The effect of Co-60 gamma irradiation on chemical, ac and dc electrical properties of ammonium dihydrogen orthophosphate nonlinear optical (NLO) crystal	Indian Journal of Advances in Chemical Sciences, S1 (2016) 60-63.
19.	Studies on the optical, thermal, electrical and dielectric properties of 5-chloro-2(3H)benzoxazolone picrate: a new nonlinear optical crystal	Journal of Optics, 45 (4), (2016) 331-336.
20.	Synthesis, Growth and Characterization of a New Organic Nonlinear Optical Crystal: 3-[(1-(2-phenylhydrazinylidene)ethyl]-2H-chromen-2-one	Journal of Optics 45 (1), (2016) 73-80.
21.	Synthesis, growth and characterization of a new promising organic nonlinear optical crystal: 4-Nitrophenyl hydrazone.	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 151 (2015) 854-860.
22.	Growth, optical, thermal and dielectric studies of new organic nonlinear optical crystal (R)-2-cyano-N-(1-phenylethyl)acetamide	Optik: international journal for light and electron optics 126 (2015) 3049–3052.
23.	Growth and characterization of pure and doped organic nonlinear optical single crystal: l-Alanine alaninium nitrate (LAAN)	Optik-International Journal for Light and Electron Optics, 124 (2013) 5898-5905.
24.	Investigation on Dose Rate Effect of 60Co Gamma Radiation on 200 GHz SiGe HBTs	AIP Conference Proceedings, 2265, 030478 (2020)
25.	An investigation of 80 MeV nitrogen ion irradiation on silicon NPN transistors	AIP Conference Proceedings, 1832, 120004 (2017)
26.	Growth and characterization of new organic nonlinear optical crystal (R)-2-cyano-N-(1-phenylethyl) acetamide,	AIP Conference Proceedings, 1591,1720-1722, (2014)
27.	Dielectric investigation of single crystals of pure TGAc and crystal violet doped TGAc for energy storage capacitor applications,	International conference on advances in materials, ceramics & engineering sciences (AMCES-2020)

2. **Responsibilities in the Department and Institute / University: (**DAC,DPC, BOS, BOE etc., Institutional Governance responsibilities like, Dean, Chief warden, Warden, HOD's, School/Centre Chairperson, IQAC Coordinator etc.)

Sl. No	Responsibilities
1.	Department course coordinator
2.	Member-Antiragging Committee
3.	Member-BOS of Physics
4.	Research Coordinator and Research Advisory Committee member
5.	NAAC department coordinator/member
6.	CDC member

3. **Details of Teaching Related Activities**

Sl. No.	Academic Year	(B. E/M.Tech)	Course Title
1	**2025-26**	**B. E**	**1. Physics for Computer Science Stream** **2. Physics laboratory**
2	**2024-25**	**B. E**	**1. Physics for Computer Science Stream** **2. Physics for Electrical and Electronics Stream**
3	**2023-24**	**B. E**	**1. Physics for Electrical and Electronics Stream** **2. Physics for Mechanical Engineering Stream**
4	**2022-23**	**B. E**	**1. Physics for Computer Science Stream** **2. Physics for Electrical and Electronics Stream**
5	**2018-19 to 2021-22**	**B. E**	**1. Engineering Physics** **2. Physics laboratory**

Professional Development Activities		
1	Membership in profession related committees at state and national level a) At International :	Member- Indian Crystallographic Association-LM 540
2	Participation in subject associations, conferences, seminars without paper presentation	
3	Participation in short term training courses less than one week duration in educational technology, curriculum development, professional development, Examination reforms, Institutional governance	
4	Membership/participation in State/Central Bodies/Committees on Education, Research and National Development	
5	Publication of articles in newspapers, magazines, or other publications (not covered in category 3); radio talks; television programmes	
6	Invited Expert Talks	02

PART-C

RESEARCH, PUBLICATIONS AND ACADEMIC CONTRIBUTIONS

Patents Published

1. A NANOSTRUCTURED UNIDIRECTIONALLY CONDUCTING POLYMER, Indian patent Application No.202241064809 A, Publication Date : 25/11/2022.
2. HIGH- PERFORMANCE BIODEGRADABLE POLYMER COMPOSITES FOR STRUCTURAL APPLICATIONS Indian patent Application No.202441063699 A, Publication Date : 06/09/2024

Book Chapter's Published

1. Sharath, B. N., TG Yashas Gowda, P. Madhu, K. S. Madhu, and **B. C. Hemaraju**. "Introduction to lightweight composites." In *Lightweight Composites*, pp. 3-36. Elsevier, 2026.

Refereed Journal Papers

1. Manju, V. V., R. Sanjana, Vinayakprasanna N. Hegde, S. Divakara, **B. C. Hemaraju**, Janya Lumbini, N. Raghu, and R. Somashekar. "Structural, Morphological, Optical, and Electromechanical Analysis of Green-Synthesized Ti-Doped ZnO Nanoparticles for Optoelectronic Applications." Micro and Nanostructures (2025): 208537.**Q2**
2. **B. C. Hemaraju**, Vinayakprasanna N. Hegde, V. V. Manju, Chandra, K. B. Deeksha, R. Preetham, and TG Yashas Gowda. "Influence of glutamic acid on the structural, optical, thermal, mechanical, dielectric, electrical, and NLO properties of potassium hydrogen phthalate crystals." Journal of Materials Science: Materials in Electronics 36, no. 31 (2025): 1994. **Q2**
3. Chandranna, Sahana Nagarakere, Vinayakprasanna N. Hegde, N. C. Sandhya, **B. C. Hemaraju**, and Pradeep TM. "Green synthesised ZnO/CuO nanocomposites for energy storage, environmental remediation and optoelectronic applications." ChemPhysMater (2025). **Q1**
4. Dhanushchandraguru, H. M., **B. C. Hemaraju**, DC Vinay Kumar, B. S. Chethan, P. Akhileshwari, R. Preetham, and M. P. Sadashiva. "Comprehensive structural, electronic, and in-silico characterization of 1-phenyl-5-(m-tolyl)-1H-tetrazole as apotentialsteroidogenic factor-1 (SF-1) inhibitor candidate." Journal of Molecular Structure (2025): 143859. **Q2**
5. Dhanushchandraguru, H. M., **B. C. Hemaraju**, Chandra, DC Vinay Kumar, Vinayakprasanna N. Hegde, V. V. Manju, K. B. Deeksha, and TG Yashas Gowda. "Growth, and characterization of the nonlinear optical crystal 2', 3'-Di-O-acetyl-5'-deoxy-5-fluoro-N4-(pentyloxycarbonyl) cytidine: structural, optical, thermal, electrical, and molecular docking studies." Journal of Materials Science: Materials in Electronics 36, no. 22 (2025): 1417.**Q2**
6. B. N Sharath, TG Yashas Gowda, **B C Hemaraju**, and P. Madhu. "Gamma radiation-induced degradation of mechanical properties in Carbon/Kevlar hybrid epoxy composites for aerospace applications." Journal of Polymer Research 31, no. 12 (2024): 1-19. **Q2**
7. H C Priya, N Upendra, Yashas gowda T G, **B C Hemaraju** and Prashanth Kalappa synergistic effects of sisal/glass fiber hybridization and eggshell powder filler on the performance of eco-friendly polymer composites, Polymer composites. 2024 **Q1**
8. Vinayakprasanna N Hegde, V V Manju, T M Pradeep and **B C Hemaraju**, "Study on

Structural, Morphological, Elastic and Electrical Properties of ZnO nanoparticles for Electronic Device Applications." Journal of Science: Advanced Materials and Devices (2024): 100733. **Q1**

9. Manju, V. V., Vinayakprasanna N. Hegde, T. M. Pradeep, **B. C. Hemaraju**, and R. Somashekar. "Synthesis and characterization of Ga2O3 nanoparticles for electronic device applications." Inorganic Chemistry Communications (2024): 112562. **Q1**
10. Shankara S R, K M Eshwarappa**,** Vinayakprasanna N Hegde, Manju V V, Deeksha K B and **B C Hemaraju**, "Crystal Growth and Characterization of Glycine Chlorzoxazone Nonlinear Optical Crystal for Energy Storage Capacitor Applications". Chemical Physics Impact, 8 (2024) 100556 **Q2**
11. Vinayakprasanna N Hegde, V V Manju, **B C Hemaraju**, Frequency and temperature dependent dielectric properties of CuO nanoparticles, Chemical Physics Impact 8 (2024) 100474. **Q2**
12. G. Chaithra P. R. Deepthi, Wajeeha Sultana, Malathi Challa, Anu Sukhdev, P. Mohan Kumar, **B. C. Hemaraju**, and J. Shanthi, Exploring the influence of safranin dye on optical, Thermal and dielectric properties of TGA crystal for SSDL applications, Journal of Materials Science: Materials in Electronics, (2023) 34:29 **Q2**
13. **B C Hemaraju** and A. P. Gnana Prakash, Effect of sodium thiosulphate doping on growth, optical, thermal mechanical, dielectric, electrical and nonlinear optical properties of potassium hydrogen phthalate crystal, Chemical Data Collections, 30 (2020) 100572 **Q3**
14. P R Deepthi, A Sukhdev, P M Kumar, J Shanthi, and **B C Hemaraju,** Growth and impedance analysis of pure TGAc and dye doped TGAc crystals-enhanced dielectric permittivity for energy-storage devices, SN Applied Sciences, (2020) 2:1493. **Q2**
15. S Madan Kumar, **B C Hemaraju,** S M Anil, Manjunatha N K, S Thammannagowda M, N K Lokanath, Mohammed Al-Ghorbani, Nabil Al-Zaqri and Ali Alsalme, Crystal structure, Hirshfeld surfaces, Topology, Energy frameworks and Dielectric studies of 1-(2-chlorophenyl)-3,3-bis(methylthio)prop-2-en-1-one, Zeitschrift für Kristallographie-Crystalline Materials, 235 (3), (2020) 85-93.**Q1**
16. P R Deepthi, A Sukhdev, P M Kumar, J Shanthi, B N Pavithra and **B C Hemaraju** Inclusion of an anionic dye in the molecular structure of potassium dihydrogen phosphate crystal for SSDL applications, Indian journal of Physics, 93(8) (2019) 991–1000. **Q3**
17. G. Santhosh, B. Madhukar, G. Nayaka, **B C Hemaraju**, B. Siddaramaiah, Influence of gamma radiation on optical properties of Halloysite nanotubes incorporated polycarbonate nanocomposites, Radiation Effects and Defects in Solids, (2018) 1-15. **Q1**
18. **B C Hemaraju** and A P Gnana Prakash, The effect of Co-60 gamma irradiation on chemical, ac and dc electrical properties of ammonium dihydrogen orthophosphate nonlinear optical (NLO) crystal, Indian Journal of Advances in Chemical Sciences, S1 (2016) 60-63.**Q4**
19. **B C Hemaraju** and A P Gnana Prakash, Studies on the optical, thermal, electrical and dielectric properties of 5-chloro-2(3H)benzoxazolone picrate: a new nonlinear optical crystal, Journal of Optics, 45 (4), (2016) 331-336. **Q1**
20. **B C Hemaraju**, M A Ahlam, N Pushpa, K M Mahadevan and A P Gnana Prakash Synthesis, Growth and Characterization of a New Organic Nonlinear Optical Crystal: 3-[(1-(2-phenylhydrazinylidene)ethyl]-2H-chromen-2-one, Journal of Optics 45 (1), (2016) 73-80. **Q1**
21. **B C Hemaraju**, M Ahlam, N Pushpa, K M Mahadevan, and AP Gnana Prakash, Synthesis, growth and characterization of a new promising organic nonlinear optical crystal: 4-Nitrophenyl hydrazone. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 151 (2015) 854-860. **Q2**

22. **B C Hemaraju** and A P Gnana Prakash, Growth, optical, thermal and dielectric studies of new organic nonlinear optical crystal (R)-2-cyano-N-(1-phenylethyl)acetamide Optik: international journal for light and electron optics 126 (2015) 3049–3052. **Q2**
23. M A Ahlam, **B C Hemaraju** and A P Gnana Prakash, Growth and characterization of pure and doped organic nonlinear optical single crystal: l-Alanine alaninium nitrate (LAAN), Optik-International Journal for Light and Electron Optics, 124 (2013) 5898-5905. **Q2**

Conference Proceedings

1. P R Deepthi, A Sukhdev, P M Kumar and **B C Hemaraju**, Dielectric investigation of single crystals of pure TGAc and crystal violet doped TGAc for energy storage capacitor applications, AIP Conference Proceedings 2399, 020023 (2023): https://doi.org/10.1063/5.0132031.**Q4**
2. Vinayakprasanna Hegde, **B C Hemaraju**, T M Pradeep and V V Manju, An Investigation on Dose Rate Effect of ^{60}Co Gamma Radiation on 200 GHz SiGe HBTs, AIP Conference Proceedings, 2265, 030478 (2020); https://doi.org/10.1063/5.0016893. **Q4**
3. T M Pradeep, N H Vinayakprasanna, **B C Hemaraju**, K C Praveen, Arshiya Anjum, N Pushpa, K G Bhushan, and A P Gnana Prakash, An investigation of 80 MeV nitrogen ion irradiation on silicon NPN transistors, AIP Conference Proceedings, 1832, 120004 (2017); doi: http://dx.doi.org/10.1063/1.4980689. **Q4**
4. **B C Hemaraju**, B S Madhukar, D G Bhadregowda and A P Gnana Prakash, Growth and characterization of new organic nonlinear optical crystal (R)-2-cyano-N-(1-phenylethyl) acetamide, AIP Conference Proceedings, 1591,1720-1722, (2014). https://doi.org/10.1063/1.4873089. **Q4**

Papers presented in conference

1. **Hemaraju B C**, Vinayakprasanna N Hegde, Manju V V, Yashas Gowda T G and Deeksha K B "A Review on Irradiation Effects on Natural and Synthetic Fiber-Reinforced Polymer Composites: Mechanisms, Property Modifications, and Applications", International Conference – CONFLUENCE 2025 on "Advancing Sustainability through Multidisciplinary Research and Innovation, GM University, Davanagere, 6th to 8th November 2025.
2. **B C Hemaraju** and A P Gnana Prakash, "Crystal Growth and Characterization of Novel Nonlinear Optical Crystal-Glycine Chloroxazone" Second international conference on advanced materials and technology (ICMAT-20), Sri Jayachamarajendra College of Engineering, Mysuru, 16th-18th January 2020.
3. **B C Hemaraju** and A P Gnana Prakash, Studies on the growth and characterization novel nonlinear optical crystal:2', 3'-Di-O-acetyl-5'-deoxy-5-fluoro-N^4- (pentyloxycarbonyl) cytidine, Two days national conference on Advanced materials for health, energy and environment (AMHEE-2018).
4. **B C Hemaraju** and A P Gnana Prakash, The effect of Co-60 gamma irradiation on chemical, ac and dc electrical properties of ammonium dihydrogen orthophosphate nonlinear optical (NLO) crystal, International conference on advanced materials and technology (ICMAT-16).
5. **B C Hemaraju** and A P Gnana Prakash, Studies on the optical and dielectric properties of 5-chloro-2(3H)benzoxazolone picrate: A nonlinear optical crystal, 25th national seminar on crystal growth and epitaxy, Anna University Chennai (2015).
6. **B C Hemaraju**, N Pushpa and A P Gnana Prakash, Synthesis growth and optical properties of 5-chloro-2(3H)benzoxazolone picrate crystal for nonlinear optical (NLO) applications, Proceedings of national seminar on material science and engineering (2014) 51-53.

7. **B C Hemaraju**, B S Madhukar, Siddaramaiah and A P Gnana Prakash, Growth and characterization of 5-chloro-2(3H)benzoxazolone picrate: Crystal for nonlinear optical applications, Proceedings of two days national conference on Recent Trends in Chemical Research (NCRTCR), (2014) 60-61

Conference oral presentations

1. S.R. Shankara, Vinayakprasanna N Hegde, Manju V V, Eshwarappa K.M Deeksha K B[e] and **Hemaraju B C** Crystal Growth and Characterization of Glycine Chloroxazone Nonlinear Optical Crystal for energy storage capacitor applications, "International conference on Sustainable Materials for Biological and Energy Applications (SMBEA – 2024)" Periyar University Centre for Postgraduate and Research Studies, 1-2 February, 2024.
2. **B C Hemaraju,** B S Madhukar and A P Gnana Prakash Crystal Growth and Characterization of Glycine Chloroxazone Nonlinear Optical Crystal Second international conference on advanced materials and technology (ICMAT-20), Sri Jayachamarajendra College of Engineering, Mysuru, 16th-18th January 2020.
3. **B C Hemaraju** and A P Gnana Prakash, Studies on the growth optical, thermal and electrical properties of novel nonlinear optical crystal:2', 3'-Di-O-acetyl-5'-deoxy-5-fluoro-N^4-(pentyloxycarbonyl) cytidine, Social Science Congress "peoples health and quality of life in India" University of Mysore, Mysuru 19th-23rd December
4. **B C Hemaraju** and A P Gnana Prakash, "Studies on the growth, structural, optical, thermal and electrical properties of novel nonlinear optical crystal: 2', 3'-Di-O-acetyl-5'-deoxy-5-fluoro-N4-(pentyloxycarbonyl) cytidine (DODFN)" "International Conference on Functional Material and Nanotechnology (ICFMN- 2K22)", Department of Physics, Nehru Institute of Technology, Coimbatore in collaboration with Indian Association for Crystal Growth, 20-21st July, 2022.

CONFERENCES/WORKSHOP/SEMINARS/WEBINARS ATTENDED

1. "International virtual conference on recent trends in energy materials (INCRTEM-2020)", Department of Physics, Alagappa University, Karaikudi 9th-11th September 2020.
2. Webinar on "Laser and Nano-Optics", National Institute of Technology, Tiruchirapalli 25th August 2020.
3. Two days online national workshop on "Importance of functionalizing materials and its applications", Vidyavardhaka College of Engineering, Mysuru, 12th and 13th August 2020.
4. Webinar on "High temperature superconductivity and research opportunities", Vidyavardhaka College of Engineering, Mysuru, 7th August 2020.
5. Webinar on "Electrical characterization of materials and devices" TEKTRONIX and starcom information technology limited, Bengaluru, 6th August 2020.
6. National webinar on "Metallic corrosion and graphene based anti-corrosion coating materials", Vidyavardhaka College of Engineering, Mysuru, 17th July 2020.
7. Webinar on "Computational methods to determine structural and elasto-mechanical properties of fibers" Vidyavardhaka College of Engineering, Mysuru, 6th July 2020.
8. Webinar on "Recent developments in material science and radiation technology", Vidyavardhaka College of Engineering, Mysuru, 8-10 July 2020.

9. Webinar on “Annular Solar Eclipse on June 21: Astronomical Facts & Importance” Vidyavardhaka College of Engineering, Mysuru, 8th June 2020.
10. TEQIP-3 sponsored webinar on “Characterization Techniques for nanomaterials” National Institute of Engineering, Mysuru 26th June 2020.
11. Webinar on “Species Recovery and Conservation of Endangered Species in India” St. Joseph’s College (Autonomous), Bengaluru, 5th June 2020.
12. Webinar on “Water Conservation and Wise Usage of water” APS College of Arts & Science, Bengaluru, 26th May 2020.
13. Second international conference on advanced materials and technology (ICMAT-20), Sri Jayachamarajendra College of Engineering, Mysuru, 16th-18th January 2020.
14. Participated in “Regional research symposium on PBL”, KLE technological university, Hubballi, 22-23rd November 2019.
15. Regional research symposium on PBL “Students reflections and process analysis”, KLE technological university, Hubballi 23rd November 2019.
16. Regional research symposium on PBL “PBL and assessment”, KLE technological university, Hubballi 21st November 2019.
17. Regional research symposium on PBL “Introduction to PBL”, KLE technological university, Hubballi 21st November 2019.
18. “Feel teacher- Developing Counseling Mentoring” learning and development intervention, organized by Malnad College of Engineering, and conducted by College for leadership and HRD, Mangaluru, on 2nd November 2019, at MCE Hassan.
19. International conference on advanced materials and technology (ICMAT-16), Sri Jayachamarajendra College of Engineering Mysuru, 26th-28th May 2016.
20. A three-day lecture workshop in “Quantum Mechanics-Basics to Advanced” organized by Regional Institute of Education (NCERT) Mysore & Chaithanya Charitable Trust Bangalore, held at RIE Mysuru, during 28-30, January 2016.
21. Participated as volunteer in 103rd Indian Science congress held at University of Mysore on January 3-7, 2016
22. Seminar on “Benefits of Nuclear and Material Sciences in day to day life” (BNMS-2015), organized by Indian Nuclear society, Mysore & University of Mysore held at Rani bahadur auditorium, Mysore August 21-22, 2015.
23. Twenty fifth national seminar on “Crystal Growth and Epitaxy” held at Crystal Growth centre, Anna University, Chennai February 6-7, 2015.
24. UGC sponsored two-day National Seminar on “Materials Science and Engineering (NSMSE-2014)” JSS College of Arts, Commerce and Science Ooty road Mysore, March 21-22, 2014.
25. Technical Seminar on “Radioactivity Natural and Manmade” Indian Nuclear Society, Mysore and VidyaVikas institute of Technology Mysore, 15th March 2014.
26. "DST SERC School on Nonlinear Optics and Materials” SSN college of Engineering, Kalavakkam Tamilnadu February 2-21, 2014
27. One day workshop on “Computational Materials Science” Department of Studies in Physics, University of Mysore, Mysore, January 24th 2014.
28. National conference on “Recent trends in Chemical Research” (NCRTCR-2014) Sri Jayachamarajendra College of Engineering, Mysore January 3-4, 2014.

29. "58th DAE- Solid State Physics Symposium" Thapar University Patiala, December 17-21, 2013.
30. One day workshop on "Astronomy and Astrophysics" Department of Studies in Physics, University of Mysore, Mysore, 16th November 2013.
31. One day state level seminar on "Nanoscience and Technology" Department of Physics, JSS college for women Saraswathipuram, Mysore. 25th March 2013
32. Twenty fourth national seminar on "Crystal Growth" (XXIV-NSCG), Crystal Growth Centre. Anna University, Chennai, December 20-22, 2012
33. Workshop on "Theoretical Physics Lectures" Department of Studies in Physics, University of Mysore, Mysore, November 8-10, 2012.
34. Two-day Science Academies lecture workshop on some topics in "Biophysics" Department of Studies in Physics, University of Mysore, Mysore, September 16-17, 2010.
35. Three days workshop on "Diffraction and Scattering" Department of studies in Physics, University of Mysore, Mysore, February 26-28, 2010

Research articles review in Various International journals:

1. Advances in Materials & Processing Technologies
2. Journal of Science: Advanced Materials and Devices
3. ChemistrySelect

Programmes Organized

1. Conducted a "Quiz on Science Explore" as a part of National Science day celebration held at NIE institute of Engineering, Mysuru 28th February 2019

Faculty Development Programme (FDP) Attended

1. One Week National Level Online Faculty Development Programme (FDP) on Advanced Research Methodology in Physical Sciences, Rajapalyam Rajus' College Rajapalyam 03rd -09th October 2023.
2. International faculty development programme on (FDP 2.0) recent research in materials physics & nano devices, Rajapalyam Rajus' College Rajapalyam from 21st-25th November 2022.
3. International online faculty development programme (FDP) on current scenario in advanced materials research and nanotechnology, department of physics & IQAC 14th -18th November 2022.
4. One week faculty development programme on "Advances in synthesis of nanomaterials and their applications in the field of science and engineering", Department of Chemistry, AIT, Chikkamagalur, 19th -23rd October 2020.
5. one week Faculty Development Program (Online) on "Recent Trends in Materials Science (RTMS -2020)" organized by Physics Division, Department of Basic Science and Humanities, GMR Institute of Technology, Rajam during 12th - 16th October, 2020
6. One week faculty development programme on "Recent trends in advanced materials and applications" Department of Physics, NIE, Mysuru, 19th -23rd October 2020.
7. AICTE sponsored online FDP on Universal human values on the theme inculcating Universal human in technical education 21st-25th September 2020.
8. Five Day Online International Faculty Development Program on Smart and Nano Materials Department of Physics, Easwari Engineering College, Chennai, Tamil Nadu, India, 14th-18th September 2020.
9. One-day online faculty development programme on "Metal air batteries: Electrocatalysts, challenges and opportunities, Department of Chemistry-Basic Science and Humanities, New Horizon College of Engineering, Bengaluru, 17th July 2020.

10. Five-day online faculty development programme on post covid 19 challenges in Science and Technology, Faculty of engineering and technology, Jain University, Bengaluru, 15th to 19th June 2020.

11. SWAYAM/NPTL "A Brief Course on Super conductivity" Jan-Feb 2020

Annual Reports:

1 N. H. Vinayakprasanna, K. C. Praveen, T. M. Pradeep, **B. C. Hemaraju**, A. Anjum, N. Pushpa, John D. Cressler, A. Tripathi, K. Asokan, K. G. Bhushan and A. P. Gnana Prakash, "100 MeV Phosphorous Ion Induced Degradation in Electrical Characteristics of Advanced 200 GHz SiGe HBTs: An In-Situ Reliability Study", IUAC Annual Report, Page no. 127-128, 2015-2016.

2 N. H. Vinayakprasanna, K. C. Praveen, T. M. Pradeep, **B. C. Hemaraju**, Arshiya Anjum, N. Pushpa, John D. Cressler, Ambuj Tripathi, K. Asokan, K.G. Bhushan and A. P. Gnana Prakash, "80 MeV Nitrogen Ion Irradiation Effects on DC Electrical Characteristics of 200 GHz SiGe HBTs", IUAC Annual Report, Page no. 158-159, 2015-2016.

3 T. M. Pradeep, N. H. Vinayakaprasanna, K. C. Praveen, **B.C. Hemaraju**, Arshiya Anjum , N. Pushpa, K. Asokan, Ambuj Tripathi, K.G. Bhushan and A. P. Gnana Prakash, "80 MeV Nitrogen ion irradiation effects on the I-V characteristics of NPN rf Power Transistors", IUAC Annual Report, Page no. 156-157, 2015-2016.

4 Arshiya Anjum, N. H. Vinayakprasanna, K. C. Praveen, T. M. Pradeep, **B. C. Hemaraju**, N. Pushpa, AmbujTri pathi, K. Asokan, J. B. M. Krishna and A. P. Gnana Prakash, "Swift heavy ion induced radiation effects at Si/SiO2 interface of MOS devices", IUAC Annual Report, Page no. 157-158, 2015-2016.

5 T. M. Pradeep, N. H. Vinayakaprasanna, K. C. Praveen, **B.C. Hemaraju**, A. Anjum, N. Pushpa, K. Asokan, A. Tripathi, K. G. Bhushan and A. P. Gnana Prakash, "An in-situ Investigation of 100 MeV Phosphorous ion irradiation on the Electrical Characteristics of NPN rf Power Transistors", IUAC Annual Report, Page no. 126-127, 2015-2016.

MEMBERSHIPS

- Indian Crystallographic Association-LM 540

AWARDS AND PRIZES

- 1st prize in crystal growth conducted by DST, SERC school on nonlinear optics and materials
- Best paper presentation award in the DST-SERB Sponsored "International conference on Sustainable Materials for Biological and Energy Applications (SMBEA – 2024)" Periyar University Centre for Post Graduate and Research Studies, Dharmapuri - 635 205, Tamilnadu

Professional Contributions and Responsibilities

1. **Assistant Professor (August 2019 - Present)**
   - Joined the institution in August 2019 as an Assistant Professor.
   - Engaged in various academic and administrative duties within the department and institution.
2. **Research and Publications**
   - Published 17 research papers in reputable journals
   - Successfully published one patent.
3. **NAAC Accreditation**

- Served as the NAAC Criteria 6 Coordinator, overseeing quality assurance and institutional processes.
- Worked as a sub-criteria member in NAAC Criteria 5 and 7.

4. **NBA Accreditation**
   - Actively contributed to the NBA accreditation process, ensuring compliance with accreditation standards and continuous improvement.
5. **First-Year Coordination**
   - Coordinated first-year activities, including the first-year induction program and the conduction of Continuous Internal Evaluation (CIE) for first-year students, for the last 3 years.
   - Handled CIE's of backlog students and supplementary students and to prepare for the SEE exam.
6. **Committee Memberships**
   - **Anti-Ragging Committee:** Member, contributing to the prevention of ragging incidents and promoting a safe campus environment.
   - **Social Media Committee:** Member, involved in managing and enhancing the institution's social media presence.
   - **Stage Committee:** Member, assisting in the organization and management of stage-related activities during college programs.
   - **Food Committee:** Member, participating in the planning and coordination of food services during various college events.

7. **Board Memberships**

- **Board of Studies (BoS):** Member, contributing to curriculum development and academic planning.
- **Board of Examiners (BoE):** Member, involved in the assessment and evaluation processes.