# *Bio-Data*


**ADDRESS**

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**Date of Birth: 15-05-1972**

## EDUCATION

1. ***Doctor of Philosophy, Ph.D., (Physics):*** **1997-2002,** Mangalore University, India
   **Research Topic**: Studies on Effects of High Energy Radiation on N-Channel MOSFETs and NPN Transistors
   **Research Guide:** Prof. K. Siddappa, Former Vice-Chancellor, Bangalore University
2. ***Master of Philosophy, M.Phil., (Physics):*** **1995-1996,** Gulbarga University, India
   **Research Topic**: Macromolecular Behavior of Polystyrene
   Specialization & Grade: Solid State Physics
3. ***Master of Science, M.Sc., (Physics):*** **1993-1995,** Gulbarga University, India
   Specialization: Solid State Physics

## DETAILS OF APPOINTMENTS HELD

1. 2013 to till date: **Professor,** Department of Studies in Physics, University of Mysore, Manasagangotri, Mysore
2. 2010-2013: **Associate Professor**, Department of Studies in Physics, University of Mysore, Mysore ($14^{th}$ July 2010 to $13^{th}$ July 2013)
3. 2007-2010: **Reader**, Department of Studies in Physics, University of Mysore, Manasagangotri, Mysore ($13^{th}$ July, 2007 to $13^{th}$ July 2010)
4. 2006-2007: **Assistant Professor**, Department of Physics, Srinivas Institute of Technology, Mangalore (August 2006-June 2007)
5. 2004-2006: **Post Doctoral Fellow**, School of Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, GA, USA (August $2^{nd}$ 2004-July $31^{st}$ 2006).
6. 2003-2004: **Post Doctoral Fellow**, Department of Physics, National Dong Hwa University, Hualien, Taiwan, ROC ($1^{st}$ February, 2003 to $31^{st}$ July, 2004).
7. 2002-2003: **Lecturer**, Department of Physics, BMS Institute of Technology, Bangalore.
8. 1999-2002: **Senior Research Fellow (SRF)** – Microtron Accelerator, Department of Physics, Mangalore University, Mangalore.
9. 1997-1999: **Junior Research Fellow (JRF)** – Microtron Accelerator, Department of Physics, Mangalore University, Mangalore.

## AWARDS AND FELLOWSHIPS

- Junior Research Fellowship awarded from DAE-BRNS, Government of India (1997-1999)
- Senior Research Fellowship awarded from DAE-BRNS, Government of India (1999-2001)
- Student Travel Award to attend International Semiconductor Technology Conference (ISTC-2001), Shanghai, China (presented two Research Papers) from Electrochemical Society, USA (2001)
- Post Doctoral Fellowship, National Science Council, Government of Taiwan, ROC (February 2003 to July 2004)
- Post Doctoral Fellowship, Georgia Institute of Technology, Atlanta, USA (August 2004 to July 2006)

## RESEARCH INTERESTS

- Fabrication of Silicon based semiconductor devices like SiGe HBTs, CMOS, Silicon detectors and other novel devices
- Characterization of semiconductor devices using I-V, C-V, DLTS and other electrical techniques
- Reliability studies on semiconductor devices and circuits
- Low temperature and high temperature studies on semiconductor devices
- High energy radiation effects on semiconductor devices and circuits (space/high energy physics applications)
- Growth and characterization of NLO crystals
- Synthesis of nano-particles and its characterization

## HIGHLIGHTS

- Working on IBM SiGe HBTs/BiCMOS devices and circuits reliability/radiation effects issues
- Working with the scientists related to Georgia Institute of Technology, NASA, IBM, Bharath Electronics Limited and other semiconductor groups
- Experience in the field of high energy radiation effects on different semiconductor devices and analyzing the effect of high energy radiation in semiconductors and semiconductor devices
- Completed seven sponsored research projects and three research projects are submitted for funding
- 23 years of research/teaching experience at various levels, about 225 publications at reputed international/national journals & conferences
- Teaching experience for Electrical and Computer Engineering graduate students at Georgia Institute of Technology, USA and Physics Courses at BMSIT, Bangalore, SIT, Mangalore and M. Sc courses at University of Mysore
- Presented research papers at Dubai (UAE), Brazil, USA, The Netherlands, Taiwan and China
- Recognized as a Ph.D. guide from Department of Physics and Department of Electronics, University of Mysore
- Recognized as Radiation Safety Officer (RSO) from AERB, Mumbai to handle Co-60 gamma radiation sources

## TEACHING COURSES

Magnetic Properties of Materials, Mathematical Methods in Physics (Rotation Groups, Special functions), Semiconductor Devices, Dielectrics and Ferroelectrics, Classical & Quantum Statistics, Continuum Mechanics and Fluid Dynamics, Analog and Digital Electronics.

## RESEARCH PROJECTS

1. **Reliability Study of Semiconductor Devices for Extreme Environment Electronics**
   **Funding Agency**: IUAC/UGC, New Delhi (Principal Investigator)
   **Total Grant**: 10.74 Lakhs (Submitted)

2. **Studies on the Effects of High Energy Proton, Electron and Neutron Irradiation on NPN *RF* Power Transistors, SiGe HBTs and N-Channel MOSFETs (2014-2018)**
   **Funding agency**: DAE-BRNS, Mumbai (Principal Investigator)
   **Total Grant**: 30.22 Lakhs

3. **Reliability Study of Silicon-Germanium Heterojunction Bipolar Transistors for Extreme Environment Electronic Applications (2013-2016)**
   **Funding agency**: DST, New Delhi (Principal Investigator)
   **Total Grant**: 50.0 Lakhs

4. **Studies on the Growth and Characterization of Technologically Important Nonlinear Optical (NLO) Single Crystals (2012-2015)**
   **Funding agency**: UGC, New Delhi (Principal Investigator)
   **Total Grant**: 12.5 Lakhs

5. **Synthesis and Characterization of Some Nematic Liquid Crystals (2012-2015)**
   **Funding agency**: UGC, New Delhi (Co- Investigator)
   **Total Grant**: 10.3 Lakhs

6. **Studies on the Effects of Hydrogen Ion on Semiconductor Devices (2013-2016)**
   **Funding Agency**: UGC-DAE Consortium for Scientific Research. Kolkata (Principal Investigator)
   **Total Grant**: 6.55 Lakhs

7. **Studies on the Effects of High Energy Radiation on NPN RF Power Transistors and N-channel MOSFETs** (2010-2013)
   **Funding agency**: DAE/BRNS, Mumbai (Co-Investigator)
   **Total Grant**: 21.05 Lakhs

8. **High-Energy Ion Irradiation Studies on SiGe Heterojunction Bipolar Transistors Using IV/CV/DLTS Techniques (2007-2012)**
   **Funding Agency**: IUAC/UGC, New Delhi (Principal Investigator)
   **Total Grant**: 4.13 Lakhs

**PhD Students**

**Completed**

1. Dr. K. C. Praveen (9/10/2013)- An Investigation of High Dose Gamma and Ion Irradiation Effects on the Electrical Characteristics of Silicon-Germanium Heterojunction Bipolar Transistors (Physics)
2. Dr. Ahlam Motea Abdo Ali (24/1/2014)- Studies on the Growth and Characterization of Technologically Important Nonlinear Optical (NLO) Crystals (Physics)
3. Dr. M. N. Ravishankar (11/8/2014)- Synthesis, Growth and Characterization of Non-Linear Optical (NLO) Based Semi-Organic Single Crystals (Physics)
4. Dr. Y. P. Prabhakara Rao (25/2/2015)- Study of Spectral Response and Radiation Effects on Silicon Photodiodes Fabricated with Different Dielectrics as Anti Reflective Coating (Electronics)
5. Dr. M. N. Bharathi (31/10/2017)- An Investigation of High Dose Proton, Electron and Different High Energy Ion Irradiation Effects on the Electrical Characteristics of Silicon NPN Transistors (Electronics)
6. Dr. M. C. Rajalaxmi (16/11/2018)- Multi-Level Optimization and Efficient Power Comprehensive Schema for Enhancing Lifetime of Large Scale Wireless Sensor Network (Electronics)
7. Dr. Vinayakprasanna Narayana Hegde (23/05/2019)- Reliability Study of Silicon-Germanium Heterojunction Bipolar Transistors for Extreme Environment Electronic Applications (Physics)
8. Dr. B. C. Hemaraju (27/07/2019)- Studies on the Growth and Characterization of Organic and Semi-Organic Single Crystals for Nonlinear Optical Applications (Physics)
9. Mrs. H. M. Gayitri (Submitted on 03/09/2020)- Investigation on Opto-Electrical, Thermal and Morphological Behaviours of Nanostructured Filler Embedded Polymer Nanocomposites (Electronics)
10. Mr. T. M. Pradeep (Submitted on 21/10/2020)- Studies on the Effects of High Energy Radiation on NPN Silicon Transistors and Silicon Solar Cells (Electronics)

**Working**

11. Mrs. R. Manimozhi (Physics)- Synthesis of nanomaterials
12. Ms. Madhura N Talwar (Electronics)- Fabrication of Sensors
13. Mrs. Arshiya Anjum (Physics)- Reliability of MOS devices
14. Mrs. M. Supreetha (Electronics)- EM shielding
15. Ms. Chandrakala (Physics)-Synthesis of nanomaterials
16. Ms. Asha Shirni (Physics)- Synthesis of nanomaterials
17. Mr. H. B. Shiva (Physics)- Synthesis of nanomaterials

**BOOK:**

N. Pushpa and **A. P. Gnana Prakash**, ***Application of Pelletron Accelerator to Study Total Dose Radiation Effects on MOS and Bipolar Devices,*** Lambert Academic Publishing, Germany (ISBN: 978-3-659-92596-2), 2016.

**RESEARCH PUBLICATIONS:**

**Refereed Journal Papers**

1. T. M. Pradeep, Vinayakaprasanna N. Hegde, N. Pushpa, K.G. Bhushan, Mukesh and **A. P. Gnana Prakash**, "An Investigation of 10 MeV Electron Irradiation on Silicon NPN Transistors", AIP Conf. Proc, Vol. 2265, pp 030482-1-4, 2020.
2. Vinayakprasanna N. Hegde, B. C. Hemaraju, T. M. Pradeep, V. V. Manju, J. D. Cressler, and **A. P. Gnana Prakash**, "An Investigation on Dose Rate Effect of $^{60}$Co Gamma Radiation on 200 GHz SiGe HBTs", AIP Conf. Proc, Vol. 2265, pp 030478-1-4, 2020.
3. K. R. Jyothi, K. R. Bhagya, H. Nagabhushana, **A. P. Gnana Prakash**, Vinayakprasanna N. Hegde, and N.M. Nagabhushana, "Green Synthesis and Thermoluminescence Study on $LiAlSiO_4:Ce^{3+}$ Nanophosphors for DosimetryApplications", AIP Conf. Proc, Vol. 2265, pp 030111-1-4, 2020.
4. R. Manimozhi, M. Mathankumar and **A. P. Gnana Prakash**, "Synthesis of g-$C_3N_4$ /ZnO Heterostructure Photocatalyst for Enhanced Visible Degradation of Organic Dye", Optik- International Journal of Light Electron Optics, In Press. **(Impact factor-2.187)**.
5. K. V. Aneesh Kumar, M. Raghavendra, Vinayakprasanna N. Hegde, **A. P. Gnana Prakash** and H. B. Ravi Kumar, "Gamma Irradiation Induced Microstructural Modification and Electrical Conductivity of Bakelite resistive Plate Material", Journal of Radioanalytical and Nuclear Chemistry, In Press. (**Impact factor- 1.328)**.
6. B. C. Hemaraju and **A. P. Gnana Prakash**, "Growth, Optical, Thermal, Mechanical, Dielectric, Electrical and Nonlinear Optical Properties of Pure and Sodium Thiosulphate Doped Potassium Hydrogen Phthalate Crystal", Chemical Data Collections, Vol. 30, pp 100572-1-12, November 2020 (**Impact factor- 1.0)**.
7. H. M. Gayitri, Murad.AL-Gunaid, Siddaramaiah and **A. P. Gnana Prakash**, "Investigation of Triplex $CaAl_2ZnO_5$ Nanocrystals on Electrical Permittivity, Optical and Structural Characteristics of PVA Nanocomposite Films", Polymer Bulletin, Vol. 77(9), pp 5005-5026, August 2020. (**Impact factor- 1.85)**.
8. K. R. Jyothi, K. R. Bhagya, H. Nagabhushana, M. V. Murugendrappa, **A. P. Gnana Prakash,** Vinayakprasanna N. Hegde and N. M. Nagabhushana, "Synthesis and Characterization of Advanced Functional Dysprosium Doped $Sr_2MgSi_2O_7$ Nanopowders for White LED Application", Physica B: Physics of Condensed Matter, Vol. 590, pp 412195-1-7, August 2020. (**Impact factor- 1.902).**
9. H. M. Gayitri, Murad.AL-Gunaid, Siddaramaiah and **A. P. Gnana Prakash**, "Optical, Structural and Thermal Properties of Hybrid PVA/CaAl2ZrO6 Nanocomposite Films", Indian Journal of Engineering & Materials Sciences, Vol. 27, pp 320-322, April 2020. (**Impact Factor-0.521**)
10. K. R. Jyothi, K. R. Bhagya, H. Nagabhushana, M. V. Murugendrappa, **A. P. Gnana Prakash,** Vinayakprasanna N. Hegde and N. M. Nagabhushana, "Facile Green Synthesis, Characterization and Transport Properties of $LiAlSiO_4:Ce^{3+}$ Nanocomposites", Ceramics International, Vol. 46, No. 7, pp 9706-9713, January 2020 **(Impact factor- 3.45).**
11. Arshiya Anjum, T. M. Pradeep, N. H. Vinayakprasanna, N. Pushpa, Ambuj Tripathi and **A. P. Gnana Prakash**, "Analysis of 80 MeV Carbon and 80 MeV Nitrogen ion irradiation effects on N-channel MOSFETs", IEEE Transactions on Device and

Materials Reliability, Vol. 19, No.4, pp 696-703, December 2019**. (Impact factor-1.512).**

12. T. M. Pradeep, Vinayakprasanna N. Hegde, N. Pushpa, K. G. Bhushan, Ambuj Tripathi, K. Asokan and **A. P. Gnana Prakash**, "Swift Heavy Ions Induced Degradation on the Electrical Characteristics of Silicon NPN Power Transistors", Radiation Effects and Defects in Solids, Vol.174, Nos. 9-10, pp 859-872, November 2019 **(Impact factor-0.513)**.
13. B. V. Suresh Kumar, H. B. Ravikumar, **A. P. Gnana Prakash**, H. N. Girish, I. Tadashi and P. Madhusudan, "Room Temperature X-Ray and Positron Annihilation Lifetime Spectroscopic Studies of Cavansite Crystals", Japanese Journal of Applied Physics, Vol. 58, pp 1109041-1109044, October 2019 (**Impact factor- 1.47)**.
14. Vinayakprasanna N. Hegde, K. C. Praveen, T. M. Pradeep, N. Pushpa, John D. Cressler, Ambuj Tripathi, K. Asokan and **A. P. Gnana Prakash**, "High Energy Swift Heavy Ion Irradiation and Annealing Effects on DC Electrical Characteristics of 200 GHz SiGe HBTs", Nuclear Engineering and Technology, Vol. 51, pp 1428-1435, July 2019 (**Impact factor- 1.55)**.
15. Vinayakprasanna N. Hegde, K. C. Praveen, T. M. Pradeep, N. Pushpa, John D Cressler, Ambuj Tripathi, K. Asokan and **A. P. Gnana Prakash**, "A Comparison of Electron, Proton and Gamma Irradiation Effects on the I-V Characteristics of 200 GHz SiGe HBTs", IEEE Transaction on Device and Materials Reliability, Vol. 18, No.4, pp 592-598, December 2018. (**Impact factor- 1.512)**.
16. S. Ningaraju, K. Jagadish, S. SrikantaSwamy, **A. P. Gnana Prakash** and H. B. Ravikumar, "Synthesis of Graphite Oxide Nanoparticles and Conductivity Studies of PSF/GO Polymer Nanocomposites", Materials Science & Engineering B, Vol. 246, pp 62-75, June 2019 (**Impact factor- 3.3)**.
17. H. M. Gayitri, Murad.AL-Gunaid, B. S. Madhukar, Siddaramaiah and **A. P. Gnana Prakash**, "Structural and Opto-Electrical Exploration of Modulated PVA Films with Hybrid $CaNiAl_2O_5$ Nanofillers", Polymer-Plastics Technology and Engineering, Vol. 58, No.10, pp 1110-1124, June 2019 (**Impact factor- 1.5)**.
18. R. Manimozhi, D. Ranjith Kumar and **A. P. Gnana Prakash**, "Enhanced Solar Light Driven Photocatalytic Degradation of Organic Dye Using Solution Combustion Synthesized $CeO_2$-ZnO Nanocomposites", Journal of Electronic Materials, Vol.47, No.11, pp 6716-6721, November 2018 (**Impact factor- 1.57)**.
19. T. M. Pradeep, Vinayakprasanna N. Hegde, N. Pushpa, K. G. Bhushan and **A. P. Gnana Prakash**, "Comparisons of 5 MeV Proton and 1 MeV Electron Irradiation on Silicon NPN RF Power Transistors", Indian Journal of Pure and Applied Physics, Vol.56, pp 646-649, August 2018 **(Impact factor- 0.882)**.
20. **A. P. Gnana Prakash**, M. N. Bharathi, Vinayakprasanna N. Hegde, T. M. Pradeep, N. Pushpa and Ambuj Tripathi, "The Effects of High Energy Ion Irradiations on the I-V Characteristics of Silicon NPN Transistors", Radiation Effects and Defects in Solids, Vol.173, Nos. 7-8, pp 683-693, July 2018 **(Impact factor-0.513)**.
21. S. Ningaraju, **A. P. Gnana Prakash** and H. B. Ravikumar, "Studies on Free Volume Controlled Electrical Properties of PVA/NiO and PVA/$TiO_2$ Polymer Nanocomposites", Solid State Ionics, Vol.320, pp 132-147, July 2018 **(Impact factor-2.354)**.
22. S. Ningaraju, Vinayakaprasanna N. Hegde, **A. P. Gnana Prakash** and H. B. Ravikumar, "Free Volume Dependence on Electrical Properties of Poly(Styrene Co-Acrylonitrile)/Nickel Oxide Polymer Nanocomposites", Chemical Physics

Letters, Vol.698, pp 24-35, April 2018 **(Impact factor-1. 815)**.

23. **A. P. Gnana Prakash**, T. M. Pradeep, Vinayakprasanna N. Hegde, N. Pushpa, P. K. Bajpai, S. P. Patel, Tarkeshwar Trivedi and K.G. Bhushan, "A Comparison of 5 MeV Proton and Co-60 Gamma Irradiation on Silicon NPN rf Power Transistors and N-Channel Depletion MOSFETs", Radiation Effects and Defects in Solids, Vol.172, Nos. 11-12, pp 952-963, January 2018 **(Impact factor-0.513)**.
24. **A. P. Gnana Prakash**, Vinayakprasanna N. Hegde, T. M. Pradeep, N. Pushpa, P. K. Bajpai, S. P. Patel, Tarkeshwar Trivedi and J. D. Cressler, "5 MeV Proton Irradiation Effects on 200 GHz Silicon-Germanium Heterojunction Bipolar Transistors", Radiation Effects and Defects in Solids, Vol.172, Nos. 11-12, pp 922-930, January 2018 **(Impact factor-0.513)**.
25. M. C. Rajalakshmi and **A. P. Gnana Prakash**, "Identification and Rectification of Unstabilized Routes and Energy Optimization in WSN's", International Journal of Computer Networks and Wireless Communications, Vol.7, No. 6, pp 38-41, November-December 2017. ISSN: 2250-3501.
26. M. C. Rajalakshmi and **A. P. Gnana Prakash**, "MeMLO: Mobility-Enabled Multi-level Optimization Sensor Network", International Journal of Wireless Personal Communications, Vol.97, No. 4, pp 5675-5689, September 2017. **(Impact factor-0.951)**.
27. B. V. Deepthi, **A. P. Gnana Prakash** and M. Y. Sreenivasa, "Effect of γ-Irradiation on Fumonisin Producing Fusarium Associated with Animal and Poultry Feed Mixtures", 3 Biotech, Vol. 7:57, pp 1-8, April 2017. **(Impact factor-0.992)**.
28. M. N. Bharathi, N. H. Vinayakprasanna, Arshiya Anjum, T. M. Pradeep, N. Pushpa, K. C. Praveen, K. G. Bhushan and **A. P. Gnana Prakash**, "Comparison of 1 MeV Electron, Co-60 Gamma and 1MeV Proton Irradiation Effects on Silicon NPN Transistors", Radiation Effects and Defects in Solids, Vol.172, No.3-4, pp 235-249, May 2017. **(Impact factor-0.513)**.
29. Chourasia Priya Dayashankar, B. S. Madhukumar, **A. P. Gnana Prakash**, P. C. Deepika and Siddaramaih, "Investigation on Citric Acid-based Nano Hydroxyapatite Composite for Dental Bone Graft", Indian Journal of Advances in Chemical Science, Vol. 5(2), pp 108-111, February 2017 **(Impact factor-2.63)**.
30. M. C. Rajalakshmi and **A. P. Gnana Prakash**, "MeMLO: Mobility Enhanced Multi-Level Optimization Sensor Network", International Journal of Electrical and Computer Engineering, Vol. 7, No. 1, pp 374-382, February 2017.
31. M. C. Rajalakshmi and **A. P. Gnana Prakash**, "MOMEE: Manifold Optimized Modeling of Energy Efficiency in Wireless Sensor Network", International Journal of Advanced Computer Science and Applications, Vol. 8, No. 1, pp 323-330, January 2017.
32. N. H. Vinayakprasanna, K. C. Praveen, John D. Cressler and **A. P. Gnana Prakash**, "Recovery of Electrical Characteristics of 80 MeV Carbon Ion Irradiated SiGe HBTs by Mixed Mode Electrical Stress", AIP Conf. Proc. 1832, 120005-1-3, 2017**. (Impact factor-0.5)**.
33. 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 Conf. Proc. 1832, 120004-1-3, 2017. **(Impact factor-0.5)**.
34. P. Rajeshwari, **A. P. Gnana Prakash** and K. A. Raveesha, "Effect of Co-60 Gamma Radiation on Microbial Contamination of Hemidesmus Indicus Roots: An Important

Herbal Drug Material", Indian Phytopathology, Vol. 69, No. 4S, 2016.

35. B. C. Hemaraju and **A. P. Gnana Prakash**, "Studies on the Optical, Thermal, Electrical and Dielectric Properties of 5Chloro-2(3H) benzoxazolone Picrate: A New Nonlinear Optical Crystal", Journal of Optics, Vol. 45, No.5, pp 331-336, December 2016. **(Impact factor-2.059)**.
36. 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 Science, Vol S1, pp 60-63, July 2016 **(Impact factor-2.63)**.
37. Arshiya Anjum, N. H. Vinayakprasanna, T. M. Pradeep, N. Pushpa, J. B. M. Krishna and **A. P. Gnana Prakash**, "A Comparison of 4 MeV Proton and Co-60 Gamma Irradiation Induced Degradation in the Electrical Characteristics of N-Channel MOSFETs", Nucl. Instr. Meth. Phys. Res. B, Vol. 379, pp 265–271, June 2016 **(Impact factor-1.124)**.
38. B. C. Hemaraju, M. A. Ahlam, N. Pushpa, K. M. Mahadevan and **A. P. Gnana Prakash**, "Synthesis, Growth and Characterization of a New Promising Organic Nonlinear Optical Crystal: 3-[(1-(2-phenylhydrazinylidene) ethyl]-2H-chromen-2-one", Journal of Optics, Vol. 45, No.1, pp 73-80, March 2016 **(Impact factor-2.059)**.
39. M. N. Bharathi, N. Pushpa, N. H. Vinayakprasanna and **A. P. Gnana Prakash**, "A Comparison of Lower LET and Higher LET Heavy Ion Irradiation Effects on Silicon NPN rf Power Transistors", Nucl. Instr. Meth. Phys. Res. A., Vol. 822, pp 34-42, June 2016 **(Impact factor-1.216).**
40. N. H. Vinayakprasanna, K. C. Praveen, J. D. Cressler and **A. P. Gnana Prakash**, "The Effect of Hot Carrier and Swift Heavy Ion Irradiation on Electrical Characteristics of Advanced 200 GHz SiGe HBTs", AIP Conf. Proc. 1731, 120012-1–120012-3, 2016 **(Impact factor-0.5)**.
41. M. N. Bharathi, N. Pushpa, N. H. Vinayakprasanna, and **A. P. Gnana Prakash**, "80 MeV $C^{6+}$Ion Irradiation Effects on the DC Electrical Characteristics of Silicon NPN Power Transistors", AIP Conf. Proc. 1731, 120013-1–120013-3, 2016 **(Impact factor-0.5)**.
42. 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-Int.J. Light Electron Opt., Vol. 126, pp 3049-3052, 2015. **(Impact factor-2.187)**.
43. T. M. Pradeep, N. H. Vinayakaprasanna, Arshiya Anjum, M. N. Bharathi, N. Pushpa and **A. P. Gnana Prakash**, " High Total Dose Co-60 Gamma Irradiation and Annealing Studies on NPN rf Power Transistors", ISST Journal of Applied Physics, Vol. 6, No. 2, pp 16-21, December 2015.
44. N. Pushpa, K. C. Praveen, **A. P. Gnana Prakash**, P. S. Naik, S. K. Gupta and D. Revannasiddaiah, "Swift Heavy Ion Irradiation and Annealing Studies on the I-V Characteristics of N-channel Depletion MOSFETs", Indian Journal of Physics, Vol.89(9), pp 943-950, September 2015 **(Impact factor-1.377)**.
45. B. C. Hemaraju, M. A. Ahlam, N. Pushpa, K. M. Mahadevan and **A. P. Gnana Prakash**, "Synthesis, Growth and Characterization of a New Promising Organic Nonlinear Optical Crystal: 4–nitrophenyl hydrazone", Spectrochimica Acta Part A, Vol.151, pp 854-860, December 2015 **(Impact factor-2.353)**.

46. **A. P. Gnana Prakash** and N. Pushpa , "Application of Pelletron Accelerator to Study High Total Dose Radiation Effects on Semiconductor Devices", Solid State Phenomena, Vol. 239, pp 37-71, 2015 (**Review Paper**).
47. N. H. Vinayakprasanna, K. C. Praveen, N. Pushpa, John D. Cressler and **A. P. Gnana Prakash**, "A Comparison of 100 MeV Oxygen Ion and Co-60 Gamma Irradiation Effects on Advanced 200 GHz SiGe heterojunction bipolar transistors", Indian Journal of Physics, Vol.89(8), pp 789-796, August 2015. **(Impact factor-1.377)**.
48. N. H. Vinayakprasanna, K. C. Praveen, N. Pushpa, Ambuj Tripathi, John D. Cressler and **A. P. Gnana Prakash**, "80 MeV Carbon Ion Irradiation Effects on Advanced 200 GHz SiGe Heterojunction Bipolar Transistors" Advanced Material Letters, Vol. 6(2), pp 120-126, February 2015. (**Impact factor-1.90)**.
49. **A. P. Gnana Prakash**, K. C. Praveen, N. Pushpa and John D. Cressler, "The Reliability Studies of Nano-Engineered SiGe HBTs Using Pelletron Accelerator", AIP Conf. Proc. 1661, 050008-1–050008-6, 2015 **(Impact factor-0.5)**.
50. N. Pushpa and **A. P. Gnana Prakash** , "Damage Correlations in Semiconductor Devices Exposed to Gamma and High Energy Swift Heavy Ions", AIP Conf. Proc. 1661, 050007-1–050007-6, 2015 **(Impact factor-0.5)**.
51. M. C. Rajalakshmi and **A. P. Gnana Prakash**, "Energy Optimization for Large Scale Wireless Sensor Network Using Real-Time Dynamics", International Journal of Computer Applications, Vol.108, pp 40-46, December 2014. **(Impact factor-3.12).**
52. Y. P. Prabhakara Rao, K. C. Praveen, Y. Rejeena Rani and **A. P. Gnana Prakash**, "Novel Methods to Reduce Leakage Current in Si PIN Photodiodes Designed and Fabricated with Different Dielectrics", Indian Journal of Pure & Applied Physics, Vol. 52, pp 637-644, September 2014 **(Impact factor-0.766)**.
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94. M. N. Ravishankar, R. Chandramani, N. Vijayan and **A. P. Gnana Prakash**, "Growth of semi organic NLO crystals by aqueous solution method", Proc. 14th National Seminar on Crystal Growth (NSCG XIV), pp 169-174, VIT University, Vellore, 10-12 March, 2010.
95. **A. P. Gnana Prakash** and K. C. Praveen, "The Application of Si-Ge HBTs for Radiation Environments", 15th International Workshop on Physics of Semiconductor Devices (15th IWPSD), Jamia Millia Islamia University, New Delhi, 15-19 December, 2009.
96. **A. P. Gnana Prakash**, K. C. Praveen, N. Pushpa and John D Cressler, "High Energy Radiation Effects on Silicon-Germanium HBTs", Proc. 18th National Symposium on Radiation Physics (NSRP-18), pp 83-85, M.L. Sukhadia University, Udaipur, 19-21 November, 2009.
97. N. Pushpa, K.C. Praveen, Y. P. Prabhakar Rao, Ambuj Tripati, **A. P. Gnana Prakash** and D. Revannasiddaiah, "Comparison of 50 MeV $Li^{3+}$ and 100 MeV $F^{8+}$ ion Irradiation on Silicon NPN RF Power Transistors", Proc. 18th National Symposium on Radiation Physics (NSRP-18), pp 86-88, M.L. Sukhadia University,

Udaipur, 19-21 November, 2009.

98. K.C.Praveen, N.Pushpa, G. Govinda Raj, Somya Gupta, Navakanta Bhat, John D Cressler and **A. P. Gnana Prakash**, "The Radiation-Hard Silicon-Germanium Heterojunction Bipolar Transistors for Space Missions", International Conference on Low-Cost Planetary Missions (LCPM-8), Goa, 31st August - 4th September, 2009.
99. N. Pushpa, **A. P. Gnana Prakash**, K. C. Praveen, Y. P. Prabhakara Rao, Ambuj Tripati, D. Kanjilal, D. K. Avsthi and D. Revannasiddaiah, "The Effect of 100 MeV $F^{8+}$ and 48 MeV $Li^{3+}$ Ion Irradiation on Oxide Material of N-Channel MOSFETs", Workshop on Oxide Materials, Aligarh Muslim University, 12-13 May, 2009.
100. N. Pushpa, **A. P. Gnana Prakash**, K. C. Praveen, Y. P. Prabhakara Rao, Ambuj Tripati, D. Kanjilal, D. K. Avsthi and D. Revannasiddaiah, "$Li^{3+}$ Ion Damage on Spacer Oxide of Silicon NPN Transistors", Workshop on Oxide Materials, Aligarh Muslim University, 12-13 May, 2009.
101. **A. P. Gnana Prakash**, K. C. Praveen, N. Pushpa, D. Revannasiddaiah, and John D. Cressler, "The Effects of High Energy Hydrogen Ion Irradiation on Emitter-Base and Shallow Trench Isolation Oxide of Advanced SiGe HBTs", International Conference on Multifunctinal Oxide Materials, Himachal Pradesh University, Shimla, 16-18 April, 2009.
102. N. Pushpa, K. C. Praveen, D. Kanjilal, Ambuj Tripati, **A. P. Gnana Prakash** and D. Revannasiddaiah, "The Effects of 50 MeV $Li^{3+}$ Ion Irradaition on Emitter-Base Spacer Oxide of Silicon *RF* Power Transistors", International Conference on Multifunctinal Oxide Materials, Himachal Pradesh University, Shimla, 16-18 April, 2009.
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104. **A. P. Gnana Prakash**, N. Pushpa, K. C. Praveen**,** and John D. Cressler, "Application of SiGe Heterojunction Bipolar Transistor Technology for Extreme Environment Electronics" National Conference on Semiconductor Materials and Technology, Gurukula Kangri Vishwavidyalaya, Haridwar, 16-18 October, 2008.
105. **A. P. Gnana Prakash** and J. D. Cressler, "Studies on Effects of High Energy Radiation on SiGe Heterojunction Bipolarjunction Transistors", 52nd DAE Solid State Physics Symposium, University of Mysore, pp 923-924, 27-31 December, 2007.
106. **A. P. Gnana Prakash** and J. D. Cressler, "63 MeV Hydrogen Ion Irradiation Studies on SiGe Heterojunction Bipolar Transistors", Workshop on Materials Science with Swift Heavy Ions, IUAC, New Delhi, 17-18 September, 2007.
107. L. Najafizadeh, B. Jun, J.D. Cressler, **A. P. Gnana Prakash**, P.W. Marshall, and C.J. Marshall, "A comparison of the effects of X-ray and Proton irradiation on the performance of SiGe precision voltage references", IEEE Nuclear and Space Radiation Effects Conference, USA, Dec 2007.
108. A K. Sutton, **A. P. Gnana Prakash**, J. D. Cressler, J. Metcalfe, A. A. Grillo, A. Jones,F. Martinez-McKinney, P. Mekhedjian, H.F.–W. Sadrozinski, A. Seiden, E. Spencer, M. Wilder, R. Hackenburg, J. Kierstead, S. Rescia, "The Impact of Source Dependence and Technology Scaling on the Radiation Tolerance of SiGe HBTs Exposed to Extreme Dose and Fluence", Proceedings of IEEE Radiation and its Effects on Components and Systems, France, September 2007.

109. **A. P. Gnana Prakash**, R.M. Diestelhorst, G. Espinel, A.K. Sutton, B. Jun, P.W. Marshall, C.J. Marshall, and J.D. Cressler, "The Effects of 63 MeV Proton Irradiation on SiGe HBTs Operating at Liquid Nitrogen Temperature", Proc. IEEE Seventh International Workshop on Low Temperature Electronics, The Netherlands, pp 93-99, 2006.
110. B. Jun, **A. P. Gnana Prakash**, A. Sutton, M. Bellini, R. Krithivasan and J.D. Cressler, "Radiation effects on SiGe Devices", Radiation Effects on Emerging Electronic Materials and Devices, MURI Review Meeting, Vanderbilt University, USA, June 2006.
111. Jonathan P. Comeau, Laleh Najazadeh, Joel M. Andrews, **A. P. Gnana Prakash** and John D. Cressler, "An Exploration of Substrate Coupling at K-Band Between a SiGe HBT Power Amplifier and a SiGe HBT Voltage-Controlled-Oscillator", IEEE Microwave Circuit Conference, USA, 2006.
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113. J. P. Comeau, R. Krithivasan, A.K. Sutton, R.M. Diestelhorst, G. Espinel, **A. P. Gnana Prakash**, B. Jun, J.D. Cressler, M. Varadharajaperumal, G. Niu, J.A. Pellish, R.A. Read, P.W. Marshall, and G. Vizkelethy, "An Investigation of Transistor Layout-Based SEU Hardening of SiGe HBTs", IEEE Radiation Effects on Components and Systems, Greece, June 2006.
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115. J. Metcalfe, D.E. Dorfan, A. A. Grillo, A. Jones, F. Martinez-McKinney, P. Mekhedjian, M. Mendoza, M. Rogers, H.F.-W. Sadrozinski, A. Seiden, E. Spencer, M. Wilder; J.D. Cressler, **A. P. Gnana Prakash**, A. Sutton, R. Hackenburg, J. Kierstead, S. Rescia, "Evaluation of the Radiation Tolerance of IBM SiGe Heterojunction Bipolar Transistors Under Gamma Source Irradiation", 8th RD50-Workshop on Radiation hard semiconductor devices for very high luminosity colliders, Prague, 25-28 June, 2006.
116. J. Metcalfe, D.E. Dorfan, A. A. Grillo, A. Jones, M. Rogers, H.F.-W. Sadrozinski, A. Seiden, E. Spencer, M. Wilder; J.D. Cressler, **A. P. Gnana Prakash**, A. Sutton, R. Hackenburg, J. Kierstead, S. Rescia, "Evaluation of the Radiation Tolerance of SiGe Heterojunction Bipolar Transistors Under 24 GeV Proton Exposure", IEEE Nuclear Science Symposium Conference Record, USA, pp 974-977, 2005.
117. B.M. Haugerud, S.Venkataraman, A.K. Sutton, **A. P. Gnana Prakash**, John D. Cressler, G. Niu, P.W. Marshall and A.J. Joseph, "The Impact of Substrate Bias on Proton Damage in 130 nm CMOS Technology", Proc. IEEE Radiation Effects Data Workshop, pp 117-121, 2005.
118. **A. P. Gnana Prakash** and John D. Cressler, "An Investigation of Electron and Oxygen Ion Damage in Si npn RF Power Transistors", IEEE Nuclear and Space Radiation Effects Conference, USA, 2005.
119. **A. P. Gnana Prakash**, Ting-Chun Wang and S.C.Ke, "EPR Study of Photo Catalytic Activity of Titanium Dioxide Nanoparticles and Photo Induced Reduction of

Nitrobenzene in $TiO_2$ Suspensions", Workshop on Visible Light Photocatalysis, National Dong Hwa University, Hulaien, Taiwan, July 3-5, 2004.

120. **A. P. Gnana Prakash**, Ganesh and K. Siddappa, "Studies on effects of 8 MeV electron irradiation on subthreshold characteristics, transconductance and mobility of N-channel MOSFETs", Workshop on Low energy particle accelerators and their applications, Institute of Physics, Bhubaneswar, India, 2002.
121. **A. P. Gnana Prakash**, K.C. Prashanth, Ganesh, Y.N. Nagesha, D. Umakanth, and K. Siddappa, "Impact of radiation induced trapped charge on n-channel depletion MOSFETs", The ECS International Semiconductor Technology Conference (ISTC), China, 2001.
122. **A. P. Gnana Prakash**, K.C. Prashanth, Ganesh, Y.N. Nagesha, D. Umakanth, and K. Siddappa, "Optimization of high power phase control thyristor characteristics by 8 MeV Electron irradiation", The ECS International Semiconductor Technology Conference (ISTC), China, 2001.
123. **A. P. Gnana Prakash**, K C Prashanth, Ganesh, Y N Nagesha, D Umakanth, and K Siddappa, "Effect of 8 MeV Electron and 30 MeV $LI^{+3}$ ion irradiation on n-Channel MOSFETs", Symposium on Emerging Trends in Radiation Sources and their Applications', Kuvempu University, India, 2001.
124. **A. P. Gnana Prakash** and K .Siddappa, "MeV ion irradiation effects of N-channel depletion MOSFETs", NSC sponsored workshop on Pelletron accelerator, 22-24$^{th}$ April 2001.
125. **A. P. Gnana Prakash** and K. Siddappa, "High energy ionizing radiation effects on MOS and bipolar devices", BRNS sponsored workshop on Microtron users 24-25 October, 2001.
126. D. Umakanth, R. V. Kelekar, Ganesh, P. Harisha, N. B. Nagesh, C. U. Prashanth, **A. P. Gnana Prakash**, V. B. Joshi and K. Siddappa, "Estimation of photoneutrons from tantalum target using CR-39 detectors" Proceedings of National Symposium of Radiation Physics, pp 482-485, Gurunanak Dev University, 2001.
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128. D. Umakanth, Ganesh, Y. N. Nagesh, K. C. Prashanth, **A. P. Gnana Prakash** and K. Siddappa, "Angular Distribution of Fission Fragments in Phtotfission of $^{232}$Th", International Symposium on Nuclear Physics, 43(B), 143, 2000.
129. Y. N. Nagesha, Ganesh, K. C. Prashanth, D. Umakanth, **A. P. Gnana Prakash**, K. Siddappa and Challapalli Srinivas, "Chemical and TL Dosimetry Techniques For Radiation Biophysics And Radiotherapy", Conference of Indian Association of Biomedical Scientists, Mangalore, 1998.
130. Ganesh, K. C. Prashanth, Y. N. Nagesha, **A. P. Gnana Prakash**, D. Umakanth, Manjunatha Pattabi, K. Siddappa, Saji Salkalachen and Amitov Roy, "Tailoring of Power Diode Characteristics Using 8/12 MeV Microtron", NSED, Shimoga, 1997.

**Annual Reports**

1. N. Pushpa, K. C. Praveen, **A. P. Gnana Prakash**, Ambuj Tripati, Y. P. Prabhakara Rao and D. Revannasiddaiah, "The Effect of 100 MeV Fluorine Ion Irradiation on Interface and Oxide Trapped Charge of MOS Devices", IUAC Annual Report, Page no. 252-253, 2008-2009.

2. N. Pushpa, K. C. Praveen, **A. P. Gnana Prakash**, Ambuj Tripati, Y. P. Prabhakara Rao and D. Revannasiddaiah, "The Effect of 50 MeV $Li^{3+}$ ion irradiation on generation-recombination centers in $SiO_2$", IUAC Annual Report, Page no. 253-254, 2008-2009.
3. K. C. Praveen, N. Pushpa, Y. P. Prabhakara Rao, Ambuj Tripati, Somya Gupta, Navakanta Bhat and **A. P. Gnana Prakash**, "Effect of 50 MeV $Li^{3+}$ ion irradiation on 200 GHz SiGe Heterojunction Bipolar Transistors", IUAC Annual Report, Page no. 254-256, 2008-2009.
4. N. Pushpa, K.C. Praveen, **A.P. Gnana Prakash**, Y.P. Prabhakara Rao, Ambuj Tripati, G. Govindaraj and D. Revannasiddaiah, "The effects of linear energy transfer on degradation of I-V characteristics of N-Channel MOSFETs", IUAC Annual Report, Page no. 201-203, 2009-2010.
5. N. Pushpa, K. C. Praveen, **A. P. Gnana Prakash**, Y. P. Prabhakara Rao, Ambuj Tripati and D. Revannasiddaiah, "Comparison of different LET high energy ion irradiation effects on Si BJTs", IUAC Annual Report, Page no. 203-205, 2009-2010.
6. N. Pushpa, K. C. Praveen, **A. P. Gnana Prakash**, Ambuj Tripati, S. K. Gupta and D. Revannasiddaiah, "140 MeV Silicon Ion Irradiation Effects on the I-V Characteristics of NPN RF Power Transistors", IUAC Annual Report, Page no. 213-214, 2010-2011
7. N. Pushpa, K. C. Praveen, **A. P. Gnana Prakash**, S. K. Gupta, Ambuj Tripati and D. Revannasiddaiah, "The effect of 140 MeV Silicon Ion Irradiation on Subthreshold and Transconductance Characteristics of N-channel Depletion MOSFETs", IUAC Annual Report, Page no. 214-215, 2010-2011
8. K. C. Praveen, N. Pushpa, John D Cressler, Ambuj Tripati and **A. P. Gnana Prakash**, "Assessment of 50 GHz SiGe HBTs for Harsh Radiation Environment by Heavy Ion Irradiation", IUAC Annual Report, Page no. 215-217, 2010-2011.
9. 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**, "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.
10. N. H. Vinayak Prasanna, K. C. Praveen, T. M. Pradeep, B. C. Hemaraju, Arshiya Anjum, John D. Cressler, Ambuj 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.
11. 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.
12. Arshiya Anjum, N. H. Vinayakprasanna, K. C. Praveen, T. M. Pradeep, B. C. Hemaraju, N. Pushpa, Ambuj Tripathi, K. Asokan, J. B. M. Krishna, and **A. P. Gnana Prakash**, "Swift heavy ion induced radiation effects at $Si/SiO_2$ interface of MOS devices", IUAC Annual Report, Page no.157-158, 2015-2016.
13. N. H. Vinayakprasanna, K. C. Praveen, T. M. Pradeep, B. C. Hemaraju, Arshiya Anjum, 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.

14. N. H. Vinayakprasanna, T. M. Pradeep, John D. Cressler, Ambuj Tripathi, K. Asokan, and **A. P. Gnana Prakash**, "Studies on the Low Temperature Lithium Ion Irradiation Effects on SiGe HBTs", IUAC Annual Report, Page no.139-140, 2017-2018.
15. T. M. Pradeep, N. H. Vinayakaprasanna, N. Pushpa, Ambuj Tripathi and **A. P. Gnana Prakash**, "An In-situ Investigation of Bromine and Copper Ion Irradiation on NPN Transistors", IUAC Annual Report, Page no.113-114, 2018-2019.
16. Arshiya Anjum, T. M. Pradeep, Vinayakprasanna N Hegde, N. Pushpa, Ambuj Tripathi and **A. P. Gnana Prakash**, "Analysis of 140 MeV Copper and 160 MeV Bromine Ion Irradiation Effects on N-Channel MOSFETs", IUAC Annual Report, Page no.116, 2018-2019.

**Invited Talks/Special Lectures**

1. High Energy Radiation Effects on Si NPN Transistors and Si Heterojunction Solar Cells, International Conference on Ion Beams in Materials Engineering and Characterizations (IBMEC-2020), Inter-University Accelerator Center, New Delhi, 8-11, December, 2020.
2. "Radiation Effects on Semiconductor Devices", Special Lecture, Veerasaiva College, Ballari, 22, February 2020.
3. "Application of Nano-Engineered Semiconductor Devices for Low Temperature, High Temperature and Radiation Environments", International Conference on Recent Advances in Applied Sciences (ICRAAS-2019), Reva University, Bangalore, 17-18, October 2019.
4. "Co-60 Gamma and High Energy Ion Irradiation Studies on Semiconductor Devices", Thematic Workshop on Science and Engineering of Materials using Ion Beams and Gamma Radiation, Variable Energy Cyclotron Center (VECC), Kolkata, 28-29, May 2019.
5. "Application of High Energy Ions to Study Total Dose Radiation Effects on Semiconductor Devices", National Symposium on Application of Radiation, Radiation Environment and Human Health, Department of Studies in Physics, University of Mysore, 19-23, December 2016.
6. "Application of Pelletron Accelerator to Study High Total Dose Radiation Effects on Semiconductor Devices", International Conference on Ion Beams in Materials Engineering and Characterizations (IBMEC-2016), Inter-University Accelerator Center, New Delhi, 28$^{th}$ September – 1$^{st}$ October, 2016.
7. "Applications of Nano-Engineered Silicon-Germanium Heterojunction Bipolar Transistors for Extreme Environment Electronics", International Conference on Advanced Materials and Technology (ICMAT-2016), Sri Jayachamarajendra College of Engineering, Mysuru, 26$^{th}$-28$^{th}$ May, 2016.
8. "Application of Nano-Engineered Semiconductor Devices for Low Temperature, High Temperature and Radiation Environment", One Day Seminar on Materials Science and Nanotechnology, Vidya Vikas Institute of Engineering & Technology, Mysore, September 29, 2015.
9. "Application of Nano-Engineered SiGe HBTs for Extreme Environment Electronics", National Conference on Emerging Trends in Condensed Matter Physics, Bettampady, September 5-6, 2013.

10. "Analysis of Silicon Germanium HBTs for Extreme Environment Electronics", One Day Workshop on Advanced Materials and their Applications, BMS Institute of Technology (BMSIT), Bangalore, 26th March 2011.
11. "The Effects of 50 MeV $Li^{+3}$ Ion Irradiation on SiGe Heterojunction Bipolar Transistors", IUAC Acquaintance Program, DOS in Physics, University of Mysore, August 24, 2010.
12. "The Effects of 63 MeV Hydrogen Ion Irradiation on SiGe Heterojunction Bipolar Transistors", MCIA Workshop, Institute of Physics (IOP), Bhubaneswar, March 31st - April 4th, 2008.

**Workshop/Conferences Organized**

Chairman, National Symposium on Application of Radiation, Radiation Environment and Human Health, University of Mysore, Mysore, 20-21 December, 2016.

**Workshop/Conferences Attended**

1. Three day Lecture-Workshop on Statistical Thermodynamics, DOS in Physics, University of Mysore, Sept 7-9, 2007.
2. Symposium on Nanotechnology and Smart Materials, PES Institute of Technology, Bangalore, Sept 29, 2007.
3. One day Workshop on Super fluids, Superconductivity and X-ray Crystallography, DOS in Physics, University of Mysore, March 15, 2007.
4. Three day workshop on Diffraction and Scattering, DOS in Physics, University of Mysore, Feb 26-28, 2010.
5. One day workshop on Statistical Mechanics in Biological Systems, DOS in Physics, University of Mysore, March 31, 2010.
6. IUAC Acquaintance Program, DOS in Physics, University of Mysore, August 24, 2010.
7. National Workshop on Science with ECR Based KeV Ion Beams, Variable Energy Cyclotron Centre, Kolkata, January 20-21, 2011.
8. INUP Familiarization Workshop on Nanofabrication Technologies, IISc, Bangalore, January 28-30, 2015.
9. Radiation-Its Applications in Physical, Chemical and Life Sciences, Mangalore University, June 24-25, 2015.
10. One day seminar Radiation Physics, Department of Studies in Physics, University of Mysore, May 14, 2016.
11. 10th Bengaluru India Nano, December 5-7, 2018.

**Resource Person for Refresher Course in Experimental Physics conducted by Indian Academy of Science, Bangalore and National Academy of Science, New Delhi**

1. Pondicherry University: July 07-23, 2008
2. Mangalore University: June 1-16, 2009
3. MG University: Nov 16-Dec 3, 2010

**Memberships**

| | |
|---|---|
| Member | IEEE, USA |
| Life member | Semiconductor Society India (SSI) (No. 200807586) |

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| Life member | Indian Society for Radiation Physics (ISRP) (No. 914) |
| Life Member | Indian Association of Crystal Growth (IACG)-(No. 2010-002) |
| Life Member | Luminescence Society of India – Karnataka Chapter (LSIKC-No.068) |
| Life Member | Ion Beam Society of India (IBSI) |

**Academic/Administrative Experience**

| | | |
|---|---|---|
| Member | Science and Technology of University of Mysore | 2007-till date |
| Member | BOS in Physics, Tumkur University | 2012-16 |
| Member | BOS in Physics, University of Mysore | 2013-16 |
| Chairman | BOE in Physics (PG) | 2015-16 |
| Chairman | Admission Committee, DOS in Electronics | 2014-16 |
| Member | BOS in Electronics, University of Mysore | 2016-22 |
| Member | BOS in Organic Chemistry, University of Mysore | 2016-19 |
| Member | BOE in Physics, Tumkur University | 2017-18 |
| Member | BOE in Physics, Kuvempu University | 2018-19 |
| Member | BOS in Physics, Bengaluru North University | 2018-20 |
| Member | BOE in Physics, JSS College (PG), Mysore | 2018-20 |
| Member | BOE in Physics, Bengaluru North University | 2018-20 |
| Member | Advisory Board, Department of Physics, SIT, Tumkur | 2015 to till date |
| Member | BOS, Mandya University | 2019-21 |
| Member | Accelerator User Committee (AUC), Inter University Accelerator Center (IUAC), New Delhi | 2019-21 |
| Member | BOS in Physics & Electronics, Vijayanagara Sri Krishnadevaraya University, Ballari | 2019-22 |
| Member | BOE in Physics, Davanagere University | 2019-20 |
| Member | BOS in Physics, University of Mysore | 2019-22 |
| Member | BOS in Physics, St. Philominas College, Mysore | 2019-22 |
| Chairman | BOE in Physics, University of Mysore | 2020-21 |
| Member | BOS in Physics, JSS College, Ooty Road | 2020-23 |