

Profile

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Designation	Dean IQAC, Professor of Physics	
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Area of Interest	Materials Science, Polymer nanocomposites, EMI applications and Solid State Spectroscopy	
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Educational Qualifications:

S. No.	Degree	Specialization	University/College	Year
1	PhD	Spectroscopy Properties	Osmania University	1995
2	M.Sc	Solid State Physics	Osmania University	1990
3	B. Sc	M.P.C.	RBVRR Womens College, Osmania University	1988

Publications Details :

1. Structural, Dielectric, and EMI Shielding Characterization Studies of Aluminum Doped Magnesium Zinc Ferrite- Polypyrrole Composites for Green EMI Shielding Materials
Kanaka Durga Mallavarapu, Neeraja Rani G. and Raju Panthagani
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2. Structural, Electric, Dielectric Properties of NiCuZn Ferrite-SWCNT Nanocomposites,
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Ceramics International, <https://doi.org/10.1016/j.ceramint.2025.02.384>
3. Role of Pb(Zr_{0.52}Ti_{0.48})O₃ on Electric, Dielectric, Electromagnetic Wave Absorption Characteristics of Multiferroic Nanocomposites for Magnetoelectric Devices
Kanaka Durga Mallavarapu, Raju Panthagani and Neeraja Rani G.
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4. Influence of SWCNT on shielding and tensile properties of polyurethane nanocomposites
G. Neeraja Rani, Raju Panthagani & M. Kanaka Durga
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5. Synthesis and thermal stability of ferrites added polymers nanocomposites
P. Raju, A Thirupathi, Ch. Kalyani, Sk. Mahammed Ali, J. Shankar, G. Neeraja Rani, J. Anjaiah, M. Kanaka Durga
Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2023.06.303>
6. Influence of rare-earth ion doping on dielectric properties of lithium zinc borate glasses, J. Anjaiah, C. Laxmikanth, Stanley Ferdinand Mwanga, P. Raju, S.K. Mohammad Ali, J. Shankar, G. Neeraja Rani, Benard Mwanemwa, Optical Materials, Volume 131, September 2022, 112718, <https://doi.org/10.1016/j.optmat.2022.112718>,
7. PANI-SWCNT Blends with PVA Nanocomposite Films: Structural, Morphological and Electrical Properties for Effective EMI Shielding Applications, Neeraja Rani G, Kanaka Durga M, and Raju P, ECS Journal of Solid State Science and Technology, 2022 11 073005, <https://doi.org/10.1149/2162-8777/ac7f57>,
8. Synthesis, microstructure and ferroelectric properties of PbO-TiO₂-B₂O₃ based glass ceramics, J. Shankar, A. Shiva Kumar, P. Raju, J. Anjaiah, Sk. Mahammad Ali, G. Neeraja Rani, V.K. Deshpande, Materials Today, <https://doi.org/10.1016/j.matpr.2022.05.120>,
9. Ultrasonically induced insitu polymerization of PANI-SWCNT nanocomposites for Electromagnetic Shielding Applications, P.Raju, G.Neeraja Rani, Udaya Kumar Susarla, Andrews Joseph, K C James Raju, Journal of Materials Science: Materials in Electronics, <https://doi.org/10.1007/s10854-022-07702-2>, 27 January 2022. (Corresponding Author).
10. Enhanced microwave absorption properties of Ni_{0.48}Cu_{0.12}Zn_{0.4}Fe₂O₄ + polyaniline nanocomposites, P. Raju, P. Neelima, **G. Neeraja Rani**, M. Kanakadurga, Journal of Physics and Chemistry of Solids, [154](https://doi.org/10.1016/j.jpcs.2021.110048)(2021) 110048.

11. Effect of annealing on photoluminescence of $\text{MgAl}_{1.8}\text{Y}_{0.14}\text{Eu}_{0.06}\text{O}_4$, Kodam Ugendar, **G. Neeraja Rani** Journal of Chemical Physics, 539, 2020, 110937.
12. Quenching effect of co-dopant Pr^{3+} on red emitting yttrium vanadate phosphor doped with Eu(III) G. Neeraja Rani, J. Shankar, P. Raju, J. Anjaiah, B. Mamatha, and N. H. Ayachit Journal of American Institute of Physics (AIP), 2269, 030063-1-030063-6(2020).
13. Complex permittivity and permeability properties analysis of NiCuZn Ferrite-Polymer nanocomposites for EMI suppressor applications. P.Raju, Ch.Kalyani, J.Shankar, J.Anjaiah, **G.Neeraja Rani**, Journal of Physics: Conference Series, 1495, 012001(2020).
14. Solid State root preparation, Characterization and Electrical properties of NiCuZn, P.Raju, S.Rajesham, J.Shankar, J.Anjaiah, **G.Neeraja Rani** Journal of Physics: Conference Series, 1495(2020)012004.
15. Enhanced electrical properties of $\text{Sr}(\text{Bi}_{3.9}\text{La}_{0.1})(\text{Ti}_{3.975}\text{Zr}_{0.025})\text{O}_{15}$ ceramic with doping of Nd, B.Mamatha, K.Ashok, **G.Neeraja Rani**, A.R.James, Journal of American Institute of Physics (AIP) 2269, 030069-1-030069-4(2020).
16. Study of Microstructure and Thermal Properties of PbTiO_3 based Glass Ceramics, J.Shankar, A.Shiva Kumar, J.Anjaiah, P.Raju, **G.Neeraja Rani**, V.K.Deshpande, Journal of American Institute of Physics (AIP), 2269, 030077-1-030077-4(2020).
17. Preparation and Characterization of Red Emitting Yttrium Vanadate Phosphor Doped with Eu(III): $\text{Y}_{1-x}\text{VO}_4: \text{Eu}_x$, **G. Neeraja Rani**, J. Shankar, J. Anjaiah, B. Mamatha, and N. H. Ayachit Journal of American Institute of Physics (AIP) 2162, 020117, 2019.
18. Study of Microstructure and Dielectric Properties of PbTiO_3 based Glass Ceramics, J. Shankar, **G. Neeraja Rani**, J. Anjaiah, P. Raju, and V. K. Deshpande Journal of American Institute of Physics (AIP) 2162, 020045 2019.
19. Thermoluminescence Characteristics and dosimetric aspects of $\text{Li}_2\text{O}-\text{CaO}-\text{B}_2\text{O}_3$ glasses doped with rare earth ions, J. Anjaiah, **G. Neeraja Rani**, J. Shankar, P.Raju, Journal of American Institute of Physics (AIP), 2162, 020043, 2019.
20. Application of Dielectric Mixtures Formulae to PbTiO_3 Based Glass-Ceramic Systems. J.Shankar, **G.Neeraja Rani**, and V.K.Deshpande, Journal of American Institute of Physics (AIP), Vol.2100, 020004-1-02000404, Year 2019.
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22. Dielectric and Impedance Properties of $\text{NiFe}_{1.95}\text{R}_{0.05}\text{O}_4$ ($\text{R} = \text{Y}, \text{Yb}$ and Lu), Kodam Ugendar, Hanuma Kumar, G. Markaneyulu, and **G. Neeraja Rani**, Journal of American Institute of Physics (AIP), Vol.1942, Pages 110004-1-110004-4,Year 2018.Corresponding author.
23. Structural, Magnetic and Magnetoreactance Studies In $\text{NiFe}_{2-x}\text{R}_x\text{O}_4$ ($x = 0, 0.05$; $\text{R} = \text{Y}, \text{Yb}$ and Lu), Kodam Ugendar, Venkatrao Chunchu, **G. Neeraja Rani**, and G. Markaneyulu, Journal of American Institute of Physics (AIP), Vol.1942, Pages 130016-1-130016-4,Year 2018.
24. "Crystallization and Dielectric Properties of PbTiO_3 based Glass Ceramics" J.Shankar,V.K.Deshpand and **G.Neeraja Rani**, Journal of American Institute of Physics (AIP), Vol.1942, Pages 070001-1-070004-4,Year 2018.
25. Synthesis and Characterization of PbTiO_3 based Glass Ceramics, J. Shankar, **G.Neeraja Rani**, B.Mamatha and V.K.Deshpande, Journal of American Institute of Physics (AIP) 1832, 070016-1-3, Year 2017. Published by American Institute of Physics.

26. Low temperature synthesis of MgAl_2O_4 Spinel through sol-gel technique and its characterization, **G. Neeraja Rani** and N.H. Ayachit vol. 92, 2015, 561-564, Canadian journal of Physics.
27. Excited State Electric dipole moment of 5-Hydroxy Indole and 5-Hydroxy Indole 3-Acetic Acid through solvatochromic Shifts, **G. Neeraja Rani** and N.H. Ayachit, Journal of Electron Spectroscopy and Related phenomena, 182(2010)1-3, Elsevier Journal.
28. Density measurements and thermodynamic parameters of 4-4' dibutoxy azoxy benzene, JS Doddamani, SB Kapatkar, Narasimha H Ayachit, **G. Neeraja Rani**, Molecular Crystals Liquid Crystals, Vol.528;pp.74-80, 2010 Taylor and Francis Journal.
29. Excited state electric dipole moments of two exalite dyes from solvatochromic shift measurements, N.H. Ayachit and **G. Neeraja Rani**, Physics and Chemistry of Liquids, Vol. 45, No. 6, December 2007, 615-621.
30. Excited state polarizabilities from solvatochromic shift measurements, N.H. Ayachit and **G. Neeraja Rani**, Physics and Chemistry of Liquids, Vol. 45, No. 1, February 2007, 41-45.
31. Preparation and Characterization of Eu^{+3} doped powder spinel Phosphorous ($\text{MgAl}_{1.8}\text{Y}_{0.2-x}\text{O}_4$), **G. Neeraja Rani**, N H Ayachit, V J Rao, K Ravindranath J. of Spectrochimica Acta A, Vol.60, Issue 11, 2481-2485, Sept-2004.
32. Structural and Electrical Properties of PANI+SWCNT Nanocomposites prepared by Chemical Mixing Method, P.Raju, A.Geetha, S.Udaya Kumar, **G. Neeraja Rani**, International Conference on Multifunctional Materials, December 19-21, 2019, GCET, Cheeryal, Hyderabad.
33. Enhanced Electrical Properties of $\text{Sr}(\text{Bi}_{3.9}\text{La}_{0.1})(\text{Ti}_{3.975}\text{Zr}_{0.025})\text{O}_{15}$ Ceramic with the Substitution of Nd, B.Mamatha, **G. Neeraja Rani**, J.Shankar and V.Naveen Reddy, presented at International Conference on Advances in Humanities Sciences and Management (ICAHSM), Malla Reddy College of Engineering, Dhulapally, Secunderabad, 25th and 26th Nov, 2016.
34. On Characterization of a liquid Crystal through Acoustic and Thermodynamic parameters” International Conference on Recent Trends in Material Characterization, NITK, Suratkal, Feb.14-15, 2010
35. Excited state electric dipole moment of two substituted indoles through solvatochromic shifts International Conference on Recent Trends in Material Characterization, NITK, Suratkal, Feb.14-15, 2010
36. Thermodynamic functions of a liquid crystal through density measurements, N.H. Ayachit and **G. Neeraja Rani**, International conference on Condensed Matter Physics, Nov. 25-28, 2007, Jaipur.
37. Excited state electric dipole moment of two substituted indoles through solvatochromic shifts, **G. Neeraja Rani** and N.H. Ayachit presented at International symposium on Molecular Spectroscopy, Ohio University, Columbus, USA, 18th -22nd June, 2007
38. On The Orientation of substituents in N-Methyl and N, N-Dimethyl-Anilenes in the excited states, N.H. Ayachit and **G. Neeraja Rani**, presented at International symposium on Molecular Spectroscopy, Ohio University, Columbus, USA, 18th -22nd June, 2007.
39. Preparation and Characterization of Red Emitting Yttrium Van date Phosphor Doped With Eu (III) and Co doped With Pr (III) [$\text{Y}_1\text{-XVO}_4$: $\text{Eu}_{x-y}^{+3}:\text{Pr}_y^{+3}$], **G. Neeraja Rani** et al, International conference on Luminescence and Applications, Mumbai, Feb 9-12, 2004.
40. Intensity analysis of $\text{p-C}_6\text{H}_4\text{Cl}_2$, G. Neeraja Rani et al, XIII International Conference on Raman Spectroscopy, Germany, Aug 1992.

Patents Published

1. UNBIO- Smart Bin for Waste Management, N. S. Praneeth, Sathwika Indrakanti, K. Himaja, T. Krishna Vamshi, **Dr. G. Neeraja Rani**, Dr. B. Nagamani, Dr. V. Manjula, Dr. N. Subadra, Published on: 16-06-2023, Application No. 202341036847A
2. Robotic Arm Sathvik Parasa, Hari Sarada, Ashirith G, **Dr. G. Neeraja Rani**, Dr. B. Nagamani, Dr. N. Subadra, Dr. V. Manjula Published on: 04-08-2023, Application No. 391900-001.
3. Solarscape V. Keshav Reddy, **Dr. G. Neeraja Rani**, Dr. B. Nagamani, Dr. N. Subadra and Dr. V. Manjula Published on: 25-08-2023, Application No. 202341036676A-
4. Holesols: A smart Manhole detection and monitoring system **Dr. G. Neeraja Rani**, Dr. B. Nagamani, T. Baladitya, R. Balaji, G. Arush. R. Tarun Kumar and V. Sai Sharanya Published on: 26-07-2024, Application No. 202441055382

Books / Book chapters Published

1. Multifunctional Multiferroic Nanocomposites for Novel Device Applications, M. Kanaka Durga, **G. Neeraja Rani**, J. Anjaiah, P. Raju Multifunctional Inorganic Nanomaterials for Energy Applications, 1st Edition, 2024, Imprint CRC Press, Pages 10, eBook ISBN 9781003479239, DOI: <https://doi.org/10.1201/9781003479239>
2. Ferrite-polymer nanocomposites: structural, electrical, magnetic and EMI shielding properties, P. Raju, CH. Kalyani, **G. Neeraja Rani**, M. Kanaka Durga, J. Anjaiah, S. Katlakunta, Futuristic Trends in Chemical, Material Sciences & Nano Technology , e-ISBN: 978-93-5747-745-1, 2024, IIP Series, Volume 3, Book 21, Part 9, Chapter 1, DOI: <https://www.doi.org/10.58532/V3BECS21P9CH1>

Book Editor

1. Materials for Advanced Applications
Editors: Dr. Raju Panthagani, Dr. G. Neeraja Rani, Anjaiah Juluru , Dr. J. Shankar
ISBN- 978-93-6252-500-0, I I P Iterative International Publishers, <https://www.iipseries.org/view-pub-book.php?bookid=361&bookname=materials-for-advanced-applications>.
2. Materials today Proceedings : International Conference on Multifunctional Materials (ICMM-2022) (22-24, December, 2022). Volume 92, Part 2, Pages 439-1694 (2023)
<https://www.sciencedirect.com/journal/materials-today-proceedings/vol/92/part/P2>
Editors: Kaushik Kumar, **G. Neeraja Rani**, J. Anjaiah.
3. American Institute of Physics (AIP) Conference Proceedings : International Conference on Multifunctional Materials (ICMM-2019) (19-21, December, 2019). Volume 2269, ISBN: 978-0-7354-2032-8, ISSN: 0094-243X, 010001 (2020); <https://doi.org/10.1063/12.0001002>, Published Online: 12 October 2020
Editors: **G. Neeraja Rani**, J. Anjaiah, P. Raju
4. Journal of Physics: Conference Series , International Conference on Multifunctional Materials (ICMM-2019) (19-21, December, 2019). Volume 1495, <https://iopscience.iop.org/issue/1742-6596/1495/1> , Published Online: 11 June 2020
Editors: **G. Neeraja Rani**, J. Anjaiah, Dr. J. Shankar, Dr. M. Aruna Bharathi

Experience:

Teaching	35 Years
Industry	Nil
Research	20 Years
Total Experience	35 Years

