



SRI SHRIDEVI CHARITABLE TRUST (R.)

SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY



Name: Dr. NANDAN K R

Designation: Associate Professor

Department: PHYSICS

Date of Joining	18-04-2024		
Professional Experience	Teaching	Industry	Research
	8		4

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Academic Background
• Ph.D
• M.Sc
• B.Ed
• B.Sc

Areas of Interest	
• Material Science	• Dielectric Properties
• Energy Storage devices	• Polymers

Significant Publications

• No. of Papers Published in Journals

- [1] G. Murugesan, **K.R. Nandan**, N. Maruthi, A. Muthuraja, S. Bhaskar, M. Manigandan, Structural analysis of $\text{Ba}_{0.8}\text{Sr}_{0.2}\text{Ti}_{0.6}\text{Zr}_{0.3}\text{Mn}_{0.1}\text{O}_3$ ceramics, Powder Diffr. 1 (2023) 1–3. <https://doi.org/10.1017/s0885715622000598>.
- [2] C.H.A. Kadar, M. Faisal, N. Maruthi, B.P. Prasanna, Narasimha Raghavendra, Prasanna, S.R. **Nandan**, **K.R.** Manohara, M. Revanasiddappa, M.C. K., Anticorrosive Polypyrrole/Barium Ferrite (PPy/BaFe₁₂O₁₉) Composites with Tunable Electrical Response for Electromagnetic Wave Absorption and Shielding Performance, J. Electron. Mater. (2023) 1–14. <https://doi.org/10.1007/s11664-022-10179-8>.
- [3] C.H.A. Kadar, M. Faisal, N. Raghavendra, N. Maruthi, B.P. Prasanna, **K.R. Nandan**, Enhancing electromagnetic interference shielding effectiveness (EMI SE) of anticorrosive polypyrrole / zinc tungstate composites : multifunctional approach, J. Mater. Sci. Mater. Electron. 33 (2022) 14188–14201. <https://doi.org/10.1007/s10854-022-08348-w>.
- [4] M. Thangaraj, T.J. Kumar, **K.R. Nandan**, A precedence constrained flow shop scheduling problem with transportation time, breakdown times, and weighted jobs, J. Proj. Manag. 7 (2022) 229–240. <https://doi.org/10.5267/j.jpm.2022.4.002>.
- [5] **K.R. Nandan**, L.S. Lobo, G. Murugesan, N. Maruthi, A. Ruban Kumar, Dielectric relaxation in CaMnO_3 ceramics synthesized by sol–gel method, J Mater Sci Mater Electron. 33 (2021) 8355–8360. <https://doi.org/10.1007/s10854-021-06185-x>.
- [6] N.Maruthi, M. Faisal, N. Raghavendra, B.P. Prasanna, **K.R. Nandan**, K.Y. Kumar, S.B.B. Prasad, Polyaniline/V₂O₅ composites for anticorrosion and electromagnetic interference shielding, Mater. Chem. Phys. 259 (2021) 124059. <https://doi.org/10.1016/j.matchemphys.2020.124059>.
- [7] **K.R. Nandan**, A.R. Kumar, Structural and electrical properties of $\text{Ca}_{0.9}\text{Dy}_{0.1}\text{MnO}_3$ prepared by sol-gel technique., J. Mater. Res. Technol. 8 (2019) 2996–3003. <https://doi.org/10.1016/j.jmrt.2017.05.020>.
- [8] G. Murugesan, **K.R. Nandan**, S. Kalainathan, Rietveld refinement of X-ray powder diffraction data of $\text{Ca}_{0.925}\text{Ce}_{0.075}\text{Mn}_{0.9}\text{Fe}_{0.1}\text{O}_3$ polycrystalline material, Powder Diffr. 33 (2018) 303–305. <https://doi.org/10.1017/S0885715618000611>.
- [9] **K.R. Nandan**, A.R. Kumar, Effect of Sr-doping on structure and electrical properties of $(\text{Ba}_{1-x}\text{Sr}_x\text{Ti}_{0.6}\text{Zr}_{0.3}\text{Mn}_{0.1}\text{O}_3)$ $x = 0.1$ and 0.2 synthesized by solid state reaction, J. Mater. Sci. Mater. Electron. 28 (2017) 7221–7230. <https://doi.org/10.1007/s10854-017-6403-y>.
- [10] **K.R. Nandan**, A.R. Kumar, Structural, dielectric and impedance studies of polycrystalline $\text{La}_{0.6}\text{Dy}_{0.2}\text{Ca}_{0.2}\text{MnO}_3$, AIP Conf. Proc. 1832 (2017) 0–3. <https://doi.org/10.1063/1.4980826>.
- [11] **K.R. Nandan**, A. Ruban Kumar, Structural and Electrical Properties of CaMnO_3 Prepared by Sol-Gel Method, Mechanics. (2017) 105–109. <https://doi.org/10.2412/mmse.59.12.214>.
- [12] **K.R. Nandan**, A. Ruban Kumar, Structural and electrical properties of $\text{La}_{0.9}\text{Dy}_{0.1}\text{MnO}_3$ prepared by

sol-gel technique, Mater. Res. Innov. 22 (2018) 207-211.
<https://doi.org/10.1080/14328917.2017.1299436>.

- [13] **K.R. Nandan**, A.R. Kumar, Electrical properties of $\text{Ca}_{0.925}\text{Ce}_{0.075}\text{Mn}_{1-x}\text{Fe}_x\text{O}_3$ ($x = 0.1-0.3$) prepared by sol-gel technique, J. Mater. Sci. Mater. Electron. 27 (2016) 13179-13191.
<https://doi.org/10.1007/s10854-016-5464-7>.
- [14] **K.R. Nandan**, A. Rubankumar, S. Kalainathan, Structural, dielectric and impedance studies of polycrystalline $\text{La}_{0.6}\text{Gd}_{0.2}\text{Ca}_{0.2}\text{MnO}_3$, AIP Conf. Proc. 1731 (2016) 050127.
<https://doi.org/10.1063/1.4947781>.

• No. of Papers Presented in Conferences

1. International conference 59th DAE-Solid State Physics Symposium-2014 in VIT University.
2. 19th National Seminar on Crystal growth-2015 in VIT University.
3. Structural and dielectric property of nanocrystalline barium manganite (BaMnO_3) perovskite synthesized by sol-gel method in National Conference on Advanced Functional Materials (NCAFM) - 2015, at SRM University, Chennai
4. International conference 60th DAE-Solid State Physics Symposium-2015, Amity University, Noida, UP.
5. Investigation of structural and electrical properties of $\text{Ca}_{0.925}\text{Ce}_{0.075}\text{Mn}_{0.9}\text{Fe}_{0.1}\text{O}_3$ Synthesized by Sol-gel Method in National conference on recent developments in materials and methods (NCRDM)- 2015, at Axillium College, Vellore.
6. International conference 61st DAE-Solid State Physics Symposium-2016, KIIT University, Bhubaneswar.
7. International Conference on Materials Processing and Applications ICMIPA -2016, at VIT University Vellore.
8. National Seminar on Recent Advanced materials and Applications (RAMA-2019) at Villupuram- 605401 Tamilnadu India.
9. National conference JNANA CHILUME 29th March 2019 Recent Advances in materials, Manufacturing and Design Engineering and Technology Jain Deemed to be University.
10. Maruthi N, Prasanna B P, Nandan K R, Yogesh Kumar K, Muhammad Faisal "Structural and Electrical Properties of Polyaniline/Vanadium Pentoxide ($\text{PANi/V}_2\text{O}_5$) Composites, Electromagnetic Applications", in The International Conference on Nanoscience and Technology (ICNAN'19) organized by the Centre of Nanotechnology Research (CNR), Vellore Institute of Technology, Vellore, India during 29th November-1st December 2019.
11. National conference on Recent Trends and Innovation in Mechanical Engineering and Technology RTIMET-2019 at Cambridge Institute of Technology K R Puram Bangalore.
12. National conference on Emerging Trends, Innovations and Applications in Science and Technology 2019 at Nagarjuna College of Management Studies Chickballapur.
13. National Conference on Hybrid Materials and Medical Applications 2019 at VILLUPURAM - 605401 TAMILNADU, INDIA.
14. International Conference on Innovations and Challenges in Science and Technology 2019 at Don Bosco

Institute of Technology Bengaluru.

15. International Conference on “Advances in Materials Ceramics & Engineering Sciences (AMCES – 2023). Held on 13 – 15th March 2023 Organized by Department of Aeronautical, Biotechnology, Civil, Chemical, Chemistry, and Mechanical Engineering, Dayananda Sagar College of Engineering, S M Hill, Kumaraswamy Layout, Bengaluru-560111.
16. Maruthi.N, Muhammad Faisal, Nandan K R, Narasimha Raghavendra, Abdul Kadar C.H, Madhusudhan C.K, Polyaniline/copper oxide hybrids for broadband electromagnetic interference shielding, International Conference on Latest Trends in Science, Engineering and Technology (ICLTSET’23) on 5th – 6th May, 2023 organized by Karpagam Institute of Technology, Coimbatore – 641105, Tamil Nadu, India.
17. B.S. Rohini, Midhunlal P V, D. Kavyashree, Vaisakh Mohan K, **Nandan K R, Maruthi N “Structural and luminescence study of Bi₂Zr₂O₇:Dy³⁺ Pyrochlore structure”**, International Conference on ‘Emerging Trends in Engineering, and Interdisciplinary Sciences’ on July 6-8, 2023, organized by Global Academy of Technology, Bengaluru, An Autonomous Institution, affiliated to VTU, Belagavi, Karnataka.

- **Book Chapters**

1. Polymer Nanocomposite Films and Coatings for Anticorrosion and Anti-wear Applications”, **Polymer Nanocomposite Films and Coatings: Processes, Fundamental Properties and Applications**, January 1, 2024, pp. 445-490, Publisher: Elsevier Science Publishing Co Inc.ISBN: 978-0-443-19139-8.

- **List of FDP’s/Workshops**

1. **Workshop** on Innovative Student Projects in Thermal Studies on Material Systems at VIT University vellore.2017
2. **Five days’** faculty Development Program on “Engineering Education” at SET JGI Bangalore.
3. **One-week Faculty Development** Program on “Polymer Composites for Engineering Applications (PCEA-2023)” held from 22nd to 26th May 2023, conducted by the Department of Chemistry, B.M.S. College of Engineering, Bengaluru-560019.

- **Books**

1. Nandan K.R, A. Ruban Kumar, Maruthi N, Text book of “a materials characterization techniques and investigation on structural, electrical and magnetic properties”, Lambert Academic Publishing 2023 pp.1-81, ISBN: 978-620-6-15795-3

- **Patents Published**

1. Title of the invention: AN ADVANCED IMAGE PROCESSING TECHNIQUE FOR EARLY DETECTION OF LUNG CANCERS AND TREATING THEM THROUGH ARTIFICIAL INTELLIGENCE ENABLED NANO PARTICLES. Application No.202241036573 A, Publication Date: 01/07/2022, India
2. Title of the invention: MACHINE LEARNING APPROACH TO STUDY AND ANALYSE THE CHARACTERISTICS OF VARIOUS NANO MATERIALS ALONG WITH MOLECULAR STRUCTURES FOR UTILISING IN CROP DISEASE TREATMENT. Application No.202241036718 A, Publication Date: 01/07/2022, India
3. Nandan K R, Madhusudhan C K, Rekha M M, Prasanna B P, Namitha R, Anoushka Chaturvedi, Rohini B S, K J Ghanashyam, Vishwanatha S, Suresha R, Narasimha Raghavendra, Maruthi N, Patent Title:- MICRO REACTOR FOR NANOPARTICLES SYNTHESIS, Application No. 202341044372 A, Publication Date:01/09/2023, India.

- **KSCST Student Projects Funded /Funded project and consultancy (Numbers and Information): NIL**
- **Awards/Recognition**

Best Researcher Award from Vellore institute of Technology at 2017

- **Project Guided details: NIL**

- **Editorial Board Member**
- **Nominated as**
- **Reviewer for**
- **Invited Speaker for**
- **Resource person for**
- **In-house resource person for**
- **Professional Membership**