

Faculty Profile

Personal Information

- **Name:** Dr. Srinatha N
- **Designation:** Assistant Professor (Sr. Scale)
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Google Scholar: <https://scholar.google.co.in/citations?user=mlwDAWwAAAAJ&hl=en>

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Research Focus

- Metal Oxide Nanoparticles
- Thin Films
- Thermoelectrics
- Ferrites
- Glasses and glass-ceramics
- Green synthesis of Metal Nanoparticles
- Quantum Information and Quantum Computation

Academic Qualifications

- **Ph.D.:** [Physics], [Bangalore University], [2017]
- **M.Sc.:** [Physics], [Bangalore University], [2009]
- **B.Sc. :** [PCM], [Bangalore University], [2007]

Professional Experience

Sl. No.	Institute/College/Industry	Job Title	Duration (From- To)
1.	RVITM	Assistant Professor (Sr Scale)	July 1, 2025 – Till Date
2.	RVITM	Assistant Professor & I/c HoD, Physics	October 1, 2024 – June 30, 2025
3.	RVITM	Assistant Professor	July 1, 2019 – Sep 30, 2024
4.	Surana College – Peenya	Assistant Professor	June 1, 2017 – May 31, 2019
5.	Vijaya College	Assistant Professor	Feb 2016 – May 2017
6.	K.L.E's SNC college	Assistant Professor	May 2015 – Jan 2016
7.	Sri Devi PG centre, Tumkur	Guest Faculty	April 2015 – May 2015
8.	UVCE, Bangalore	Guest Faculty	Feb 2015 – May 2015
9.	Bangalore University	Guest Faculty	July 2014 – Jan 2015
10.	GSSIT, Bangalore	Guest Faculty	Jan 2013 – May 2013
11.	M S Ramaiah PU College, Bangalore	Lecturer	Oct 2009 - April 2010 September 2011 – March 2012

Publications & Patents

Journal Publications

1. A Madhu, AS Alqarni, UK Kagola, B Angadi, N Srinatha, Performance evaluation of NIR and cooperative luminescence in Yb₂O₃-doped Lithium-Calcium-Bismuth-Borate glasses, Ceramics International, In press, Accepted, <https://doi.org/10.1016/j.ceramint.2026.02.062>.
2. M. Shwetha, A.S. Alqarni, S.O. Manjunatha, C.R. Kesavulu, N. Srinatha, A. Madhu, WO₃-induced crystallization and enhanced orange–red luminescence in Sm³⁺ -doped Lithium-Strontium-Bismuth-Borate glasses and glass-ceramics, J. Alloys Compd. 1055 (2026) 186533. <https://doi.org/10.1016/j.jallcom.2026.186533>.
3. A.S. Alqarni, A. Madhu, Y. Namratha, N. Srinatha, Synergistic effects of mixed glass former effect and Eu³⁺-doping on structural-thermal stability and luminescence in borosilicate glasses, J. Alloys Compd.

- 1055 (2026) 186451. <https://doi.org/10.1016/j.jallcom.2026.186451>.
4. A.S. Alqarni, N. Srinatha, Y. V. Naik, M.B. Karthik Kumar, P.R. Kousalya, A. Madhu, Enhanced thermal stability, visible-light absorption, band gap narrowing and electrochemical performance of Cr³⁺-doped lithium borate glasses, *Journal of Materials Science: Materials in Electronics* 37 (2026) 2. <https://doi.org/10.1007/s10854-025-16414-2>.
 5. A.S. Alqarni, U.K. Kagola, C. Kesavulu, B. Angadi, M. Katageri, Srinatha N., Madhu A., Simultaneous tunability of optical properties and white light emission in (Ce³⁺, Dy³⁺) co-doped Borate glasses via efficient energy transfer, *Applied Physics A* 131 (2025) 1012. <https://doi.org/10.1007/s00339-025-09148-9>.
 6. A. Madhu, T.R. Josephine Princy, S. Pooja, M.S. Shriya, B. Rohan, H.N. Pradeep, N. Yaduvanshi, A.A. Jeffery, N. Srinatha, Green synthesis of Cu nanoparticles using *Canna Indica*: Evaluation of structural, optical, antioxidant, antimicrobial, and cytotoxicity, *J. Mol. Struct.* 1353 (2026) 144821. <https://doi.org/10.1016/j.molstruc.2025.144821>.
 7. A. Madhu, P.A. Hoskeri, C.R. Kesavulu, A.S. Alqarni, N. Yaduvanshi, A. Anto Jeffery, N. Srinatha, Tailoring efficient green emission of Tb³⁺ activated Li₂O-CaO-Bi₂O₃-B₂O₃ glasses, *Ceram. Int.* 51 (2025) 64172–64185. <https://doi.org/10.1016/j.ceramint.2025.11.154>.
 8. Srinatha N, A.S. Alqarni, K.A. Gupta, B. Angadi, M. Katageri, A.A. Jeffery, M. A, Tailoring visible and NIR emission in borate glasses via Pr³⁺-sensitised Er³⁺ energy transfer, *Physica B Condens. Matter* 720 (2026) 418023. <https://doi.org/10.1016/j.physb.2025.418023>.
 9. K. Suresh, K. Vijayalakshmi, Ch. Hemalatha, A. Madhu, C.S.D. Viswanath, A.A. Jeffery, N. Srinatha, Photon down-conversion characteristics of Tm³⁺/Yb³⁺ doped tellurite glasses for Si-based solar cell applications, *The European Physical Journal Plus* 140 (2025) 1128. <https://doi.org/10.1140/epjp/s13360-025-07070-w>.
 10. M. Shwetha, S. Keenatampalle, A.S. Alqarni, B. Angadi, A. Madhu, A.A. Jeffery, N. Srinatha, Structural, optical and elastic characteristics of WO₃-doped B₂O₃+Bi₂O₃+SrO+Li₂O glasses, *Mater. Chem. Phys.* 348 (2026) 131709. <https://doi.org/10.1016/j.matchemphys.2025.131709>.
 11. A. Madhu, A.S. Alqarni, C.R. Kesavulu, T. Uthayakumar, N. Yaduvanshi, B. Angadi, A.A. Jeffery, N. Srinatha, Evaluation of structural and spectroscopic properties of Ho³⁺-doped Li₂O-Al₂O₃-ZnO-B₂O₃ glasses, *J. Alloys Compd.* 1043 (2025) 184276. <https://doi.org/10.1016/j.jallcom.2025.184276>.
 12. S. Hemalatha, N. Srinatha, A.S. Alqarni, U.K. Kagola, N. Suriyamurthy, N. Basavegowda, A. Madhu, Unveiling the structural, optical, photoluminescence and radiation shielding properties on the Sm₂O₃ doped Na₂O–ZnO–B₂O₃ glasses, *The European Physical Journal Plus* 140 (2025) 984. <https://doi.org/10.1140/epjp/s13360-025-06919-4>.
 13. A. Madhu, C.R. Kesavulu, B. Angadi, A.A. Jeffery, N. Srinatha, Modulating structural and optical attributes of Eu₂O₃-doped Na₂O + ZnO + P₂O₅ glasses for intense red emission photonics applications, *Inorg. Chem. Commun.* 181 (2025) 115272. <https://doi.org/10.1016/j.inoche.2025.115272>.

14. A. Madhu, C.R. Kesavulu, A.S. Alqarni, N. Basavegowda, A.A. Amir, N. Srinatha, Unravelling energy transfer mechanisms in Dy³⁺-doped Li₂O + CaO + B₂O₃ glasses through optical, luminescence and JO analysis, *The European Physical Journal Plus* 140 (2025) 715. <https://doi.org/10.1140/epjp/s13360-025-06649-7>.
15. M. A, M. Nagaraja, M. A, N. Basavegowda, M. Zikriya, Srinatha N, Evaluation of concentration-dependent structural, micro-structural, optical and photocatalytic activity of Cr³⁺-doped NiO nanoparticles, *Surfaces and Interfaces* 72 (2025) 107075. <https://doi.org/10.1016/j.surfin.2025.107075>.
16. R. Kumar K J, A.S. Alqarni, A.K. R, M.S. O, U.K. Kagola, G. K, S. Reddy Srinatha N. Basavegowda, M. A, S. N, Fe-doped NiO nanopowders for advanced photochemical applications: Synthesis, characterization, photo-assisted dye degradation and latent fingerprint visualization, *Physica B Condens. Matter* 701 (2025) 416991. <https://doi.org/10.1016/j.physb.2025.416991>.
17. J. Choudhary, M. A, Srinatha N, U.K. Kagola, Synthesis, structural, photoluminescence, photocatalytic and antibacterial properties of Pr³⁺ doped Zn₃(VO₄)₂ nanoparticles, *Surfaces and Interfaces* 59 (2025) 105895. <https://doi.org/10.1016/j.surfin.2025.105895>.
18. A. Madhu, M. Al-Dossari, U.K. Kagola, N.S.A. EL-Gawaad, C.R. Kesavulu, B. Angadi, Srinatha N, Spectroscopic and theoretical investigation of Pr³⁺ doped Li₂O-ZnO-B₂O₃ glasses, *J. Alloys Compd.* 1010 (2025) 177583. <https://doi.org/10.1016/j.jallcom.2024.177583>.
19. A. Madhu, M. Al-Dossari, U.K. Kagola, B. Angadi, N. Srinatha, Comprehensive investigation of (Ce³⁺, Eu³⁺) codoped LiCaBiB glasses: physical, structural, and photoluminescence analyses, *Applied Physics A* 131 (2025) 31. <https://doi.org/10.1007/s00339-024-08124-z>.
20. Exploring the Impact of Sm³⁺ Doping on the Structural, Optical, and Photocatalytic Properties of ZnAl₂O₄ Spinel, N Srinatha, S Satyanarayana Reddy, K Gurushantha, M Al-Dossari, SO Manjunatha, A Madhu, *Ceramics International*, 2024, Accepted. <https://doi.org/10.1016/j.ceramint.2024.07.136>
21. Investigation of the Gamma Irradiation-Induced Structural, Optical, Luminescence and Shielding Properties of CuO-Integrated Sodium-Zinc-Borate Glasses, Areej S. Alqarni, N. Srinatha, S. Hemalatha, N. Suriyamurthy, A. Madhu, Upendra Kumar Kagola, *Silicon*, pp. 1 - 4, 2024. <https://doi.org/10.1007/s12633-024-03052-2> (Springer - Q2; I.F: 3.4)
22. Probing the structural and spectroscopic characteristics of Ag₂O-modified Li₂O–CaO–B₂O₃ glasses doped with Nd₂O₃, A Madhu, M Al-Dossari, Upendra Kumar Kagola, NS Abd EL-Gawaad, N Srinatha, *Ceramics International*, vol. 50, issue 11, pp. 20764-20776, 2024. <https://doi.org/10.1016/j.ceramint.2024.03.205> *Corresponding Author. (Elsevier – Q1; I.F: 5.2)
23. Exploring CeO₂ dopant-induced emission in lithium calcium borate glasses, A Madhu, Areej S Alqarni, Upendra Kumar Kagola, N Srinatha, *Applied Physics A*, vol. 130, pp. 355, 2024. <https://doi.org/10.1007/s00339-024-07543-2> *Corresponding Author. (Springer – Q2; I.F: 2.7)
24. Enhanced white light emission and quantum efficacy of borate-zinc–lithium-aluminium glasses doped with Dy₂O₃ for potential white light emission applications, Namrata Yaduvanshi, Ch Basavapoornima, Areej S Alqarni, Upendra Kumar Kagola, T Uthayakumar, A Madhu, N Srinatha, *Optical Materials*, vol.

- 151, pp. 115359, 2024. <https://doi.org/10.1016/j.optmat.2024.115359> *Corresponding Author. (Elsevier – Q1; I.F: 3.9)
25. Effect of immersion liquids on physical properties of Pr³⁺-ions doped lithium zinc borate glasses, T Uthayakumar, Namrata Yaduvanshi, A Madhu, N Srinatha, IOP Conference Series: Materials Science and Engineering, vol. 1300, pp. 012043, 2024, DoI: 10.1088/1757-899X/1300/1/012043. (Springer – Q2; I.F: NA)
 26. Optical and spectroscopic studies on Eu³⁺ doped LCBB glasses for photonic device applications, A Madhu, Upendra Kumar Kagola, R Rajaramakrishna, CK Jayasankar, M Al-Dossari, NS Abd EL-Gawaad, N Srinatha, Applied Physics A, vol. 130, 193, 2024. <https://doi.org/10.1007/s00339-024-07346-5> *Corresponding Author. (Springer – Q2; I.F: 2.7)
 27. Investigation of sensing properties of Sn-doped NiO thin films for the detection of ammonia gas, NV Srinivasa, Kumar Haunsbhavi, N Srinatha, HM Mahesh, S Valanarasu, Basavaraj Angadi, Materials Science and Engineering: B, vol. 301, pp. 117178, 2024. <https://doi.org/10.1016/j.mseb.2024.117178> (Elsevier – Q2; I.F: 3.6)
 28. UV-C and gamma radiation mediated L-DOPA production from in-vitro cultures of Mucuna pruriens (L.) DC, Rakesh Bhaskar, Praveen Nagella, A Madhu, N Suriyamurthy, N Srinatha, Vegetos, pp. 1-11, 2024. <https://doi.org/10.1007/s42535-024-00842-2> (Elsevier – Q3; I.F: NA)
 29. Spectroscopic investigation of Ho³⁺ and (Ho³⁺⁺ Au⁰) inclusion on the structural, optical and luminescence attributes of Li₂O+ Bi₂O₃+ B₂O₃+ P₂O₅ glasses, A Madhu, Suresh Keenatampalle, M Al-Dossari, NS Abd EL-Gawaad, N Srinatha, Applied Physics A, vol. 130, issue 2, pp. 116, 2024. <https://doi.org/10.1007/s00339-024-07278-0> *Corresponding Author. (Springer – Q2; I.F: 2.7)
 30. Role of structural asymmetry on the delivery of all-optical logical binary half adder in an asymmetric triple core photonic crystal fiber, T Uthayakumar, N Nallamuthu, A Madhu, N Srinatha, Engineering Research Express, vol. 6, issue 1, pp. 015032, 2024. DoI: 10.1088/2631-8695/ad1b6f. (IOP – Q3; I.F: 1.7)
 31. Phytofabricated bimetallic synthesis of silver-copper nanoparticles using Aerva lanata extract to evaluate their potential cytotoxic and antimicrobial activities., G. Thirumoorthy, B. Balasubramanian, Jincy A. George, Aatika Nizam, Praveen Nagella, N. Srinatha, M. Pappuswamy, Amer M. Alanazi, A. Meyyazhagan, Kannan R. R. Rengasamy, Vasantha V. L., Scientific Reports, vol.14, issue 1, pp.1270, 2024. <https://doi.org/10.1038/s41598-024-51647-x> (Nature – Q1; I.F: 4.6)
 32. Achieving narrow bandwidth and high stimulated cross-section in Nd³⁺-doped LiCaB glasses for near infra-red laser amplifiers, A. Madhu, R. Rajaramakrishna, Jaimson T. James, K. Suresh, M. Al-Dossari, N.S. Abd EL-Gawaad, N. Srinatha, Infrared Physics & Technology, vol. 136, pp. 105087, 2024. <https://doi.org/10.1016/j.infrared.2023.105087> *Corresponding Author. (Elsevier – Q2; I.F: 3.3)
 33. Effect of aliovalent substitution in the band structure engineered Ca²⁺-doped LaFeO₃ nanoparticles for visible light-induced photocatalytic studies, N. Srinatha*, S. Satyanarayana Reddy, M. Al-Dossari b, K. Gurushantha, N.S.Abd EL-Gawaad, S.O. Manjunatha, K.J. Rudresh Kumar, M.R. Suresh Kumar, Vadiraj B. Tangod, A. Madhu, Ceramics International, vol. 50, issue 1, pp. 1836-1848, 2024, DoI:

<https://doi.org/10.1016/j.ceramint.2023.10.283>. *Corresponding Author. (Elsevier – Q1; I.F: 5.2)

34. Structural, elastic and optical properties of rare earth ions (Nd³⁺, Dy³⁺, & Nd³⁺/Dy³⁺) incorporated B₂O₃+K₂O+ZnO+ZnF₂ glasses, A. Madhu, Sahar Ahmed Idris, N.S. Abd El-Gawaad, Vadiraj B Tangod, N. Srinatha, Journal of Molecular Structure, vol. 1294, issue 1, pp. 136446, 2024. <https://doi.org/10.1016/j.molstruc.2023.136445> *Corresponding Author. (Elsevier – Q2; I.F: 3.8)
35. Up-conversion and near-infrared luminescence in Er³⁺ -doped La₂O₃-PbO-B₂O₃-TeO₂ glasses for the generation of fibre amplifiers and green LED applications, Madhu A, Ch. Basavapoornima, Sahar Ahmed Idris, N.S. Abd EL-Gawaad, Vadiraj B. Tangod, N Srinatha*, Journal of Alloys and Compounds, vol. 968, pp. 171789, 2023. DoI: <https://doi.org/10.1016/j.jallcom.2023.171789>.
*Corresponding Author. (Elsevier – Q1; I.F: 6.2)
36. Structural, physical, optical, and elastic properties of transition metal oxide (CuO, TiO₂) incorporated B₂O₃ + K₂O + ZnO + ZnF₂ glasses, A Madhu, Zehbah Ali Mohammed Al-Ahmed, NS Abd EL-Gawaad, N Srinatha, Applied Physics A, vol. 129, pp. 739, 2023. DoI: <https://doi.org/10.1007/s00339-023-07014-0>. *Corresponding Author. (Springer – Q2; I.F: 2.7)
37. NLO and white light emission in AuNPs reinforced Li₂O–Bi₂O₃–B₂O₃–P₂O₅ glasses: Role of surface plasmonic resonance AuNPs, A Madhu, Satyanarayana Reddy S, NS Abd EL-Gawaad, Suhad Ali Osman Abdallah, N Srinatha*, Ceramics International, vol. 49, issue. 21, pp. 33566-33577, 2023, DoI: <https://doi.org/10.1016/j.ceramint.2023.08.019>. *Corresponding Author. (Elsevier – Q1; I.F: 5.2)
38. Investigation of Co-dopant (Eu³⁺-Ce³⁺) Induced Electronic Transitions in LiCaBiB Glasses, A. Madhu, Namrata Yaduvanshi, T. Uthayakumar, N. Srinatha, In: Jung, DW. (eds) Proceedings of the 5th International Conference on Metal Material Processes and Manufacturing. ICMMPM 2023. Springer Proceedings in Materials, vol 44, 2024, Springer, Singapore. https://doi.org/10.1007/978-981-97-1594-7_7 (Springer – Q3, I.F: NA)
39. Photocatalytic and antimicrobial activities of biofunctionalized Ag nanoparticles derived from combustion method, D Rajeshree Patwari, BN Swetha, K Gurushantha, G Shobha, N Srinatha, Sadanand K Mushrif, Rajeev Ramachandra Kolgi, KP Roopa, K Keshavamurthy, Results in Optics, vol. 12, pp. 100472, 2023. DoI: <https://doi.org/10.1016/j.rio.2023.100472>. (Elsevier – Q3; I.F: NA)
40. Unravelling the conductivity behaviour of thermally stable Li₂O–Bi₂O₃–B₂O₃–P₂O₅ glasses embedded with V₂O₅, A Madhu, NS Abd EL-Gawaad, Suhad Ali Osman Abdallah, Sunanda T Dadami, BG Hegde, T Uthayakumar, Karthik Kumar, N Srinatha, Ceramics International, (2023). DoI: <https://doi.org/10.1016/j.ceramint.2023.06.138>
41. Visible Light Active WO₃/TiO₂ Heterojunction Nanomaterials for Electrochemical Sensor, Capacitance and Photocatalytic Applications, K Gurushantha, Nagaraju Kottam, SP Smrithi, MS Dharmaprakash, K Keshavamurthy, S Meena, N Srinatha, Catalysis Letters, (2023). DoI: <https://doi.org/10.1007/s10562-023-04362-7>
42. Photocatalytic and Antimicrobial Activities of Biofunctionalized Ag Nanoparticles Derived from Combustion Method, D Rajeshree Patwari, BN Swetha, K Gurushantha, G Shobha, N Srinatha, Sadanand K Mushrif, Rajeev Ramachandra Kolgi, KP Roopa, K Keshavamurthy, Results in Optics, 12

(2023) 100472. DoI: <https://doi.org/10.1016/j.rio.2023.100472>

43. Annealing temperature-dependent structural and optical characteristics of spray pyrolyzed ZnO thin films, S Uday Balegar, N Srinatha, R Shashidhar, A Raghu, Materials Today Proceedings, (2023). DoI: <https://doi.org/10.1016/j.matpr.2023.05.651>
44. Preparation and characterization of Sn doped NiO thin films by sol–gel spin coating technique, NV Srinivasa, Kumar Haunsbhavi, N Srinatha, HM Mahesh, Basavaraj Angadi, Materials Today Proceedings, (2023). DoI: <https://doi.org/10.1016/j.matpr.2023.05.597>
45. Chromium-doped ZnO nanoparticles synthesized via auto-combustion: Evaluation of concentration-dependent structural, band gap-narrowing effect, luminescence properties and photocatalytic activity, A Mahesha, M Nagaraja, A Madhu, N Suriyamurthy, S Satyanarayana Reddy, M Al-Dossari, NS Abd EL-Gawaad, SO Manjunatha, K Gurushantha, N Srinatha*, Ceramics International, 49(14) (2023) 22890-22901. DoI: <https://doi.org/10.1016/j.ceramint.2023.04.113>
46. Improved photocatalytic, antimicrobial and photoelectrochemical properties of nanocrystalline Cu²⁺-doped ZnO nanoparticles, Raksha Umashankar, S Harshitha Devi, K Gurushantha, SO Manjunatha, M Al-Dossari, G Shobha, KJ Rudresh Kumar, MR Suresh Kumar, K Keshavamurthy, NS Abd EL-Gawaad, A Madhu, S Satyanarayana Reddy, N Srinatha*, Ceramics International, 49(14) (2023) 22449. DoI: <https://doi.org/10.1016/j.ceramint.2023.04.077>
47. Structural, optical and luminescence properties of Nd³⁺ ions in B₂O₃+SiO₂+ TeO₂+Na₂O glasses, A Madhu, M Al-Dossari, NS Abd EL-Gawaad, Devarajulu Gelija, KN Ganesha, N Srinatha, Optical Materials, 136 (2023) 113436. DoI: <https://doi.org/10.1016/j.optmat.2023.113436>.
48. A comprehensive review on the antimicrobial and photocatalytic properties of green synthesized Silver Nanoparticles, Srinatha N*, Rakesh B, Rudresh Kumar K J, Suresh Kumar M R, Madhu A, Letters in Applied NanoBioScience, vol. 2, issue 4, pp. 140 2023. <https://doi.org/10.33263/LIANBS124.140>
49. Rare earth (Dy³⁺-ion) induced near white light emission in sodium-zinc-borate glasses, Hemalatha S, Nagaraja M, Madhu A, Srinatha N, Results in Optics, 9 (2022) 100275. DOI: <https://doi.org/10.1016/j.rio.2022.100275>.
50. New fuel governed combustion synthesis and improved luminescence in nanocrystalline Cr³⁺ doped ZnAl₂O₄ particles, N. Srinatha, S. Satyanarayana Reddy, N. Suriyamurthy, K J Rudresh Kumar, M R Suresh Kumar, A. Madhu, Basavaraj Angadi, Results in Optics, vol. 8, pp. 100242, 2022. <https://doi.org/10.1016/j.rio.2022.100242>
51. Antibacterial activity and spectroscopic characteristics of silver nanoparticles synthesized via plant and invitro leaf-derived callus extracts of Mucuna pruriens (L.) DC, B Rakesh, N Srinatha, RK KJ, A Madhu, SK MR, N Praveen, South African Journal of Botany 148 (2022) 251-258. <https://doi.org/10.1016/j.sajb.2022.04.047>
52. Structural and spectroscopic studies of V₂O₅ incorporated lithium-bismuth-boro-tellurite glass ceramics, A Madhu, CM Joseph, ST Dadami, N Srinatha, Materials Today: Proceedings, vol. 62, part 8, pp. 5489-5493, 2022. <https://doi.org/10.1016/j.matpr.2022.04.154>

53. Spin rate influenced structural and optical characteristics of $\text{Zn}_{0.95}\text{Al}_{0.03}\text{Ni}_{0.02}\text{O}$ thin films, N Srinatha, P Raghu, HM Mahesh, A Madhu, MRS Kumar, B Angadi, *Materials Today: Proceedings* vol. 62, part 8, pp. 5483-5488, 2022. <https://doi.org/10.1016/j.matpr.2022.04.153>
54. The effect of co-dopants (Cu^{3+} , Sm^{3+} -ions) on the optical properties of Sodium-Zinc-Borate glasses, S Hemalatha, M Nagaraja, A Madhu, V Pattar, K Suresh, N Srinatha, *IOP Conference Series: Materials Science and Engineering* 1221 (1) (2022) 012021. <https://doi.org/10.1088/1757-899X/1221/1/012021>
55. The structural and optical properties of combustion synthesized Ag doped ZnO nanoparticles, A Mahesha, M Nagaraja, SS Reddy, A Madhu, N Srinatha, *IOP Conference Series: Materials Science and Engineering* 1221 (1) (2022) 012054. <https://doi.org/10.1088/1757-899X/1221/1/012054>
56. A novel combustion fuel for the synthesis of nanocrystalline ZnAl_2O_4 particles based on the thermodynamic correlations and their structural and optical studies, Srinatha N, Rudesh Kumar K J, Suresh Kumar M R, Madhu A and Basavaraj Angadi, *Ceramics International*, 48(3) (2022) 3669-3675, DoI: <https://doi.org/10.1016/j.ceramint.2021.10.148> (I. F: 4.527). Q1
57. Spectroscopic studies of transition metal ion - doped borate glasses for optical applications, Hemalatha S, Nagaraja M, Madhu A, Suresh K, Srinatha N, *Materials Today: Proceedings*, 49(5) (2022) 1875-1879, DoI: <https://doi.org/10.1016/j.matpr.2021.08.075>.
58. Study on the effect of Ni co-doping on structural, micro-structural and optical properties of transparent AZO thin films, Srinatha N, Raghu P, H M Mahesh, Madhu A, Shamima Hussain, Siddartha Dam, Suresh Kumar M R and Basavaraj Angadi, *Optical Materials*, vol. 113, pp. 110872, 2021 (I.F: 2.779). Q1
59. Combustion synthesis of Al-doped ZnO nanoparticles using a new fuel and the study of its structural, micro-structural and optical properties, Srinatha N, Rudresh Kumar K J, Suresh Kumar M R, K Vinayak Pattar, Madhu A, and Basavaraj Angadi, *Applied Nanoscience*, vol. 11, pp. 1197-1209, 2021 (I.F: 2.880) Q2
60. The role of Sm_2O_3 on the structural, optical and spectroscopic properties of multi-component ternary borate glasses for orange-red emission applications, Hemalatha S, Nagaraja M, Madhu A, Suresh K, Srinatha N, *Journal of Non-Crystalline Solids*, vol. 554, pp. 120602, 2021 (I.F: 2.929)
61. Gamma irradiation effects on the structural, thermal and optical properties of Samarium doped Lanthanum Lead Boro Tellurite Glasses, Madhu A, B. Eraiah and Srinatha N, *Journal of Luminescence* vol. 221, pp. 117080, 2020. (I.F: 2.961)
62. Concentration dependent enhanced luminescence and its quenching effect in erbium incorporated heavy metal oxide-borate glasses, Madhu A N Srinatha and B Munisudhakar, *Materials Research Express* vol. 6, pp.12, 2020. (I.F: 1.449)
63. Structural and spectroscopic studies on the concentration dependent erbium doped lithium bismuth boro tellurite glasses for optical fiber applications, Madhu A and Srinatha N, *Infrared Physics and Technology* vol. 107, pp. 103300, 2020. (I.F: 2.313)

64. Nd³⁺ doped lanthanum lead borotellurite glass for lasing and amplification applications, Madhu A, B. Eraiah, P. Manasa and Srinatha N, Optical Materials, 75 (2018) 357-366 (I.F: 2.238)
65. Effect of Zn Substitution on the structural and magnetic properties of NiFe₂O₄, Anupama M K, Srinatha N, Basavaraj Angadi, BalaramSahoo and B. Rudraswamy, Ceramics International 44 (2018) 4946-4954 (I.F: 2.986)
66. Effect of spin rate on the properties of Zn_{0.98}Al_{0.02}O transparent films, Srinatha N, Raghu P, H M Mahesh and Basavaraj Angadi, IOP Conference Series: Material Science and Engineering 310 (2018) 012085
67. Bio-synthesis and antimicrobial activity of silver nanoparticles using anaerobically digested Parthenium slurry, Alaknanda J Adur, Nandini N, ShilpashreeMayachar K, Ramya R and Srinatha N, Journal of Photochemistry and Photobiology B: Biology 183 (2018) 30-34
68. Structural, optical optical studies on spin coated ZnO-Graphene conjugated thin films, Srinatha N, Basavaraj Angadi, D. I. Son and W. K. Choi, AIP Conference proceedings 1953 (2018) 100042
69. Transparent, crystalline ZnO thin films: Effect of spin coating parameters on the structural and optical properties, Raghu P, Srinatha N, H M Mahesh and Basavaraj Angadi, AIP Conference proceedings 1953 (2018) 100052
70. Spin-coated Al-doped ZnO thin films for optical applications: structural, micro-structural, optical and luminescence studies, Srinatha N, Raghu P, Mahesh H Mand Basavaraj Angadi, Journal of Alloys and Compounds 722 (2017) 888-895(I.F: 3.014)
71. Effect of Fe doping on the structural, optical and magnetic properties of combustion synthesized nanocrystalline ZnO particles, Srinatha N, K. G. M. Nair and Basavaraj Angadi, Advanced Powder Technology 28 (2017) 1086-1091(I.F: 2.478)
72. Investigation on the effect of Al concentration on the structural, optical and electrical properties of spin coated Al : ZnO thin films, Raghu P, Srinatha N, Naveen C S, Mahesh H Mand Basavaraj Angadi, Journal of Alloys and Compounds 694 (2017) 68 – 75 (I.F: 3.014)
73. Effect of RF power on the structural, optical and gas sensing properties of RF-sputtered Al doped ZnO thin films, N Srinatha, YS No, Vinayak B Kamble, SujoyChakravarty, N Suriyamurthy, Basavaraj Angadi, RSC Advances 6 (12) (2016). 9779 - 9788 (I.F: 3.289)
74. Effect of Sc³⁺ on structural and magnetic properties of Mn-Zn nano ferrites, J. Angadi V, S. Matteppanavar, Srinatha N, E. Melagiriappa, and B. Rudraswamy AIP Conference Proceedings 1731, 050047 (2016) (I.F : --)
75. Structural and optical studies on the thin films of ZnO-C₆₀ core-shell quantum dots, Srinatha N, Basavaraj Angadi, K. G. M. Nair, Dong Ick Son and Won Kook, Nanomaterials and Energy 4(2) (2015) 167-172 (I.F: 0.1912)
76. The effect of fuel and fuel-oxidizer combinations on ZnO nanoparticles synthesized by Solution Combustion Technique, Srinatha N, V Dinesh Kumar, K. G. M. Nair and Basavaraj Angadi, Advance

Powder Technology 26 (2015) 1355 - 1363 (I.F: 2.478)

77. Microstructure, electronic structure and optical properties of combustion synthesized Co doped ZnO nanoparticles, Srinatha N, K. G. M. Nair, Basavaraj Angadi, Physica B: Condensed Matter 474, 97 - 104 (2015) (I.F: 1.352)
78. Spectroscopic investigation of an intrinsic room temperature ferromagnetism in Co doped ZnO nanoparticles, Srinatha N, Basavaraj Angadi, K. G. M. Nair, Nishad G Deshpande, Y. C. Shao and Way-Faung Pong, Journal of Electron Spectroscopy and Related Phenomena 195 (2014) 179 – 184(I.F: 1.569)
79. The quantum cryptographic switch, Srinatha N, S. Omkar, R. Srikanth, Subhashish Banerjee, Anirban Pathak, Quantum Information Processing 13 (2014) 59-70.(I.F : 1.923)
80. In how many ways can quantum information be split?, Sreraman Muralidharan, Siddharth K, Srinatha N, R. Srikanth, Prasanta K. Panigrahi, arXiv:0907.3532 (Online)

Book Chapters

1. M Shwetha, A Madhu, N Srinatha, Unveiling the Potential of Tungsten Lithium-Strontium-Bismuth-Borate Glasses, Recent Trends in Applied Physics and Material Science, CRC Press, 2025

Patents **[Filed / Published / Granted]**

1. A glass fibre composition and method thereof, **Patent Number:** 202341009306, **Date of Publication:** 17/02/2023 (**Status Published**): **Inventor(s):** Madhu A, **Srinatha N**, K. Suresh, S. Hemalatha, N. Manohar Reddy
2. Phyto-mediated green synthesis of dysprosium oxide nanoparticles and their applications in antimicrobial and anticancer therapeutics, **Patent Number:** 202541089328, **Date of Publication:** 17/10/2025, (**Status Published**), **Inventor(s):** Madhu A, **Srinatha N**, Mohammed Zikriya, Pradeep H N, Josephine Princy T R, M. Sai Shriya, Pooja S, Bipin Rohan

R & Grants & Consultancy Projects

Ongoing & Completed Research Projects

- **High Performance GeTe based Thermoelectric Materials, DST-SERB – PI, Duration: 2022 – 2025, Funding amount: Rs 18,30,000/-**

Awards & Recognitions

- PRISM - Excellent performer from RSST from 3 consecutive years (2022-23, 2023-24, 2024-25)
- Achievers Award from RSST from last 5 years (2019-20, 2021-22, 2022-23, 2023-24, 2024-25)
- Recognized by the 'International Centre for Diffraction Data (ICDD)' for the contribution of 4 patterns to Powder Diffraction File - Release 2026

Student Supervision

- Ph.D. Candidates: 2 Pursuing

Professional Roles

- Reviewer for More than 50 journals including Elsevier, Springer, RSC, Wiley, Taylor and Francis journals.

Teaching

- Engineering Physics
- Physics for CSE & ECE Streams
- Quantum Physics and Applications

Responsibilities

- Member of R&D Committee (Institute Level)
- Faculty Coordinator for Science Club

External Connect

- BoE member at RVCE (Physics)
- BoE member of MSRIT(Physics)
- BOE member – UVCE (Physics)
- BoE member – Bangalore University (BSc Honors)
- BoE member - DBIT