FACULTY PROFILE

Name of Faculty	:	Dr.Nithyaja B
Department	:	Physics
Designation	:	Associate professor
Email ID	:	nithyashajeesh@gmail.com
Teaching Experience	:	14 years
Field of Research (if any)	:	Photonics,Nanomaterialas
Research Activities	:	Research Guide
Major and Minor Projects Undertaken	:	Photonic Applications of Dye Doped Thin Films Prepared In DNA based Biotemplate. (Completed project - UGC funded (205-2017) Order no: 1641-MRP/14-15/KLCA026/UGC- SWRO

Mentorship & Research Supervision

Mentor, Chief Minister's Navakerala Post Doctoral Fellowships (CMNPF-2024)

Academic Qualifications

Examinations	*Name of the Board/University*	*Year of Passing*	*Subject*
Graduation	Govt.COLLEGE MADAPPALLY(Calicut university)	2000	PHYSICS
Post Graduation	IIT MADRAS	2002	PHYSICS
Ph. D	International School of Photonics (Cochin University of Science and Technology	2012	PHOTONICS
Others	MTech. International School of Photonics (Cochin University of Science and Technology	2005	MTech in Opto-electronics and Laser Technology

List of publications

1. Tunable nonlinear optical responses in defective DNA-capped polyoxometalate ([α-SiW12O40]) one-dimensional silica/DNA/ZnO ternary photonic crystal systems, Bhagyasree G. S. Nithyaja B, Reena V. N, Dhanusha A ,T. C. Sabari Girisun , Applied Optics , March2025 64(9):2125-2138 DOI:10.1364/AO.551660

2. Multifaceted Applications of DNA-Capped Silver Nanoparticles in Photonics, Photocatalysis, Antibacterial Activity, Cytotoxicity, and Bioimaging, V N Reena , G S Bhagyasree , T Shilpa , R Aswati Nair , B Nithyaja , Journal of Fluorescence (2024), doi: 10.1007/s10895-023-03556-x

3. Photocatalytic, Antibacterial, Cytotoxic and Bioimaging Applications of Fluorescent CdS Nanoparticles Prepared in DNA Biotemplate, V. N. Reena, G. S. Bhagyasree, T. Shilpa, R. Aswati Nair, H. Misha, B. Nithyaja, Journal of Fluorescence (2023) https://doi.org/10.1007/s10895-023-03292-2

4. Enhanced adsorption and non-linear optical properties of DNA-CTAB functionalized mesoporous silica nanoparticles and their influence on enhancement of photoluminescence of Rhodamine 6G dye, G. S. Bhagyasree,1,a) V. N. Reena,1 M. Abith,2 T. C. Sabari Girisun,2 and B. Nithyaja, *AIP Advances* 13, 055017 (2023), https://doi.org/10.1063/5.0149009 , ISSN 2158-3226 , Journal link: https://pubs.aip.org/aip/adv

5. Photocatalytic and enhanced biological activities of schiff base capped fluorescent CdS nanoparticles,, V. N. Reena , K. Subin Kumar, T. Shilpa, R. Aswati Nair, G. S. Bhagyasree, B. Nithyaja , Journal of Fluorescence, (2023) ,https://doi.org/10.1007/s10895-023-03193-4

6. Mosquito Larvicidal Activity of DNA Capped Colloidal Silver Nanoparticles, Reena V N, Shanasree M, Subin Kumar K, Bhagyasree G Sand Nithyaja B, Second International Conference on Physics of Materials and Nanotechnology, IOP Conf. Series: Materials Science and Engineering 1221 (2022) 012051, IOP Publishing doi:10.1088/1757-899X/1221/1/012051

7. Enhanced photoluminescence and color tuning from Rhodamine 6G-doped sol–gel glass matrix via DNA, templated CdS nanoparticles, V. N. Reena ,H. Misha; G. S. Bhagyasree; B. Nithyaja, AIP Advances 12, 105217 (2022), https://doi.org/10.1063/5.0123529

8. One-pot synthesis, characterization, optical studies and biological activities of a novel ultrasonically synthesized Schiff base ligand and its Ni (II) complex, V.N. Reena, K. Subin Kumar , G.S. Bhagyasree , B. Nithyaja, Results in Chemistry 4 (2022) 100576

9. Theoretical Studies of One Dimensional DNA Templated Silica/Metal Oxides, Graphite Oxide Photonic Crystals, Bhagyasree G S and Nithyaja B, 2022 *ECS Trans.* 107 12161, DOI: 10.1149/10701.12161ecst, ISSN: 1938-6737, Journal link: https://iopscience.iop.org/journal/1938-5862

10. Transmission characteristics of DNA templated 1D photonic crystal system for 3D printing applications: Simulation G.S. Bhagyasree, Sithara Sreenilayam, Dermot Brabazon, V.N. Reena, B. Nithyaja,,Results in Engineering,Volume 16,2022,100750,ISSN 2590-

1230,https://doi.org/10.1016/j.rineng.2022.100750., ISSN **2590-1230**, Journal link: https://www.sciencedirect.com/journal/results-in-engineering

11. Dileep Krisnan P, Nithyaja B, Pavena K " Biophotonics fo Life with Special Emphasis on DNA & Silk as Biomaterials" Intenational Journal of Modern Trends in Engineering and Science Vol: 4 Issue 03 (2017)
12. C. Pradeep·S. Mathew·B. Nithyaja· P. Radhakrishnan·V.P.N. Nampoori "Studies of nonlinear optical properties of PicoGreen dye usingZ-scan technique"Appl Phys A 115:291–295 (2014).
13. Rejeena, B.Lillibai, B.Nithyaja, V.P.N.Nampoori, P.Radhakrishnan "Optical Studies on Sol-Gel Derived Lead Chloride Crystals" J. Engineering, Computers & Applied Sciences Vol. 2, No 4 (2013)
14. C. Pradeep, S. Mathew, B. Nithyaja, P. Radhakrishnan, V. P. N. Nampoori "Effect of marine derived deoxyribonucleic acid on nonlinear optical properties of PicoGreen dye "Applied Physics B (2013)
15. Sasidharan Sreeja, Balan Nithyaja, Debasis Swain, Vadakkedathu Parameswaran Narayana Nampoori, Padmanabhan Radhakrishnan Soma Venugopal Rao "Nonlinear Optical Studies of DNA Doped Rhodamine 6G-PVA Films Using Picosecond Pulses"Optics and Photonics Journal 2 135-139 (2012)
16. B. Nithyaja, H. Misha and V.P.N. Nampoori " Synthesis of silver nanoparticles in DNA template and its influence on nonlinear optical properties ",; Nanoscience and Nanotechnology, 2(4), pp. 99-103, 2012
17. B. Nithyaja, K. Vishnu, S. Mathew, P. Radhakrishnan, and V. P. N. Nampoori "Studies on CdS nanoparticles prepared in DNA and bovine serum albuminbased biotemplates" J. Appl. Phys 112, 064704 (2012)
18. M. Libish, J. Linesh, M. C. Bobby, B. Nithyaja, S. Mathew, C. Pradeep, P. Radhakrishnan "Glucose concentration sensor based on long period grating fabricated from hydrogen loaded photosensitive fiber ", T.; Sensors & Transducers Journal, Vol. 129, Issue 6, pp. 142-148, (2011) .
19. Rose Leena Thomas, Vasuja, Misha HariI, B. Nithyaja S. Mathew, I. Rejeena, Sheenu Thomas , V. P. N. Nampoori and P. Radhakrishnan; "Optical Limiting in TeO_2–ZnO glass from Z-scan technique" , J. Nonlinear Optical Physics & Materials 20, 3 (2011)
20. K.Vishnu ,B. Nithyaja ,C. Pradeep , R. Sujith ,P. Mohanan and V.P.N. Nampoori; "Studies on the effect of mobile phone radiation on DNA using laser induced fluorescence technique", Laser Phys. 21, 1(2011))
21. Nithyaja B, Misha H, Nampoori V P N; "Fluorescence enhancement of silver nanoparticles using DNA as a stabilizing agent", Proc. SPIE 8173, 81731K (2010)
22. B. Nithyaja, H. Misha, P. Radhakrishnan and V P N Nampoori; " Effect of DNA on nonlinear optical properties of Rhodamine6G-PVA solution", J. Appl. Phys. 109, 023110 (2011)

23. Nithyaja B, Yogeshwar Nath M , Amit Kumar S,Misha H and Nampoori V P N; “Linear and nonlinear optical properties of silver nanoparticles stabilized by bovine serum albumin” J. Nonlinear Optical Physics and Materials 20 (2011)
24. B. Nithyaja, H. Misha, P. Radhakrishnan and V P N Nampoori; “ Effect of DNA on nonlinear optical properties of Rhodamine6G-PVA solution”, J. Appl. Phys. 109, 023110 (2011)
25. Nithyaja B, Yogeshwar Nath M , Amit Kumar S,Misha H and Nampoori V P N; “Linear and nonlinear optical properties of silver nanoparticles stabilized by bovine serum albumin” J. Nonlinear Optical Physics and Materials 20 (2011)
26. B. Nithyaja, V. K. Jisha, R. Tintu, A.V. Saramma and V. P. N. Nampoori; “kinetics of bacterial colony growth by laser induced fluorescence” , Laser Phys. 19, 468 (2009)
27. Nithyaja Balan, Misha Hari, Vadakkedathu Parameswaran Narayana Namppori; “Selective mode excitation in the dye –doped DNA polyvinyl alcohol thin film”, Appl. Opt. 48 3521(2009)