CURRICULAM VITAE

Dr. Sheenu Thomas
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Profile:

Dr. Sheenu Thomas took her M.Sc. (Physics-1991) and Ph.D. (Experimental Solid State Physics-1999) from Cochin University of Science and Technology. She joined CUSAT as a faculty member in 2001. Currently she is Professor at International School of Photonics, Cochin University of Science and Technology on internal deputation from Cochin University College of Engineering, Kuttanad. Her research area of interest are studies on photo-induced, thermal and optical effects of chalcogenide glass based photonic materials. She has 29 years of research experience and over seventy international journal publications to her credit. She has successfully guided ten doctoral students. Four researchers and two post-doctoral fellows are currently working under her supervision. She is the principal Investigator to funded research projects and life member of IAPT, PSI.

Academic Qualifications:

I.C.S.E. (10th): Council for the Indian School Certificate Examinations, New Delhi.
St. Mary's Anglo Indian Girls High School, Fort Cochin.

Pre-Degree: Gandhiji University.
The Cochin College (First class with Distinction).

B.Sc. (Physics): Mahatma Gandhi University.
The Cochin College (First class with Distinction).

M.Sc. (Physics): Cochin University of Science and Technology (First class).

Ph.D.: Cochin University of Science and Technology, Department of Physics.
Title: "*Photoacoustic investigation of criticality in thermal and optical properties of selected amorphous semiconductors*".
JRF- Department of Atomic Energy (DAE-BRNS), Govt. of India (1992-1995).
SRF- CSIR (1995-1997).

UGC/AICTE/ISTE recognized Orientation/Refresher/Winter Courses attended

- Refresher Course in Physics, KSCSTE and Indian Academy of Sciences, International school of Photonics, CUSAT (08.10.2003 - 22.10.2003).
- Refresher Course in Physics, UGC, Dept. Of Physics, CUSAT (22.11.2004 – 14.12.2004).
- Refresher Course in Physics UGC - Academic Staff College, University of Kerala (03.07.2010-23.07.2010)
- Stimulating Teachers through Advanced Training Programme (STAT) Govt. of Kerala International school of Photonics, CUSAT (27.09.2010- 01.10.2010)
- Refresher Course in Material Science, UGC- Academic Staff College, Calicut University (05.01.2011- 25.01.2011).

Principal Investigator of Ongoing / Completed Research projects :

- "Optical Properties of Rare Earth Doped Chalcogenide Glasses" **(Completed),** Kerala State Council for Science, Technology and Environment (KSCSTE), Govt. Of KERALA, 3 years (2010-2013) - **Rs. 9,71,800/-**
- "Chalcogenide nanomaterials for photonic device applications**"(Completed)** Kerala State Council for Science, Technology and Environment (KSCSTE), 3 years (2015-2018) - **Rs. 32,65,600/-**
- **"Optics to school- Science Popularisation Programme" (Completed)** Kerala State Council for Science, Technology and Environment (KSCSTE), 3 years (2014-2015).- Rs. 2,00,000/-

Professional Contributions:

- Reviewer of Text Book Titled: **"Optoelectronics and Photonics: Principles and Practices"**, Second Edition: Safa O. Kasap. © 2013 Pearson Education, (Pearson India Private Limited).
- Peer Reviewer of
  1) Journal of Experimental Nanoscience (Taylor and Francis).
  2) Journal of Applied Physics **(**American Institute of Physics).
  3) Physica Status Solidi (Wiley-VCH)
- Course Designer of Kerala State Higher Education Council, 2011
- Project Evaluator: M.Tech. and M.Sc.
  Centre of Excellence in Lasers and Optoelectronic Sciences (CELOS), CUSAT, International School of Photonics (ISP), CUSAT.
  Model Engineering College
  Department of Physics, CUSAT

- Invited speaker for seminars/symposia's.
- Ph.D Thesis Evaluator M G University, Calicut University, Pondicherry University.
- Member of syllabus revision of 5 year integrated M.Sc.Photonics course, CUSAT
- Coordinator of department Academic Audit
- Examiner, Ph.D. qualifying Degree, M. G. University.
- Design of Experiments for P. G. Level laboratory course, CELOS, ISP,CUSAT
- Question Paper Setter and Evaluator :
    1) **M.Tech** (Optoelectronics): Fibre Optics, Optoelectronics, Laser Technology, Biophotonics.
    2) **M.Sc. Physics**; Material Science, Applied Optics, Instrumentation.
    3) **M.Sc. Photonics**: Nonlinear Optics, Nuclear Physics, Fibre Optics, Photonic Materials, Material Science, Mechanics, Nuclear Physics, Statistical Mechanics, Advanced Solid State Physics.
    4) **B.Tech**: Engineering Physics, Material Science.

Chairmanships at National or International Conference/Seminars

- Annual Photonics Workshop (APW-14,15,16), Feb 27-28, CUSAT.
- National Photonics Symposium (NPS-2017,18,19,20,21,22) ISP,CUSAT
- National seminar on Advances in scientific and industrial instrumentation (ASCII-2017), Department of Instrumentation, CUSAT

Organiser / Convenor of International / National Conferences / Seminars:

- Convenor of *"Recent Trends in Photonics"*, Annual Photonics Workshop, International School of Photonics, CUSAT, 2012.
- Co-ordinator of National workshop on *"Recent advances in Lasers for communication, signal and material processing"*, Department of Electronics and communication Engineering in association with ISP, CUSAT, 2014.
- Coordinator of "International Year of Light (IYL)-2018, International School of Photonics, CUSAT.

Extension, Co-curricular & Field based activities

- Judging panel of Sastra 2016, Children's Science congress, 2016.
- Invited speaker of KSCSTE Pratibha Scholars programme 2017 conducted by ISP.
- Organizing member of annual science outreach programme "Optics Fair", CELOS and ISP, CUSAT.

- Organizing member of annual photonics workshop (2003 to 2017).
- Coordinator of Placement cell for M.Sc. Photonics, ISP, CUSAT.
- Coordinator of Ph. D course work, ISP, CUSAT.
- Coordinator of Academic Audit.

Contribution to Corporate Life and Management of the Institution

- Member, Passing Board M.Sc Photonics/M.Tech., CUSAT.
- Secretary, Parent Teacher Association, CELOS, ISP, CUSAT.
- Member anti- ragging squad, CELOS, ISP, CUSAT.
- Director in charge, CELOS, CUSAT.
- Director, ISP, CUSAT.
- Member of Academic Committee, CUSAT.
- Member, Board of Studies, CELOS, ISP, CUSAT.

Professional Development Activities

- Life Member of Photonics Society of India.
- Indian Association of Physics Teachers.

Research Guidance

- **Ph.D. Degree awarded: 9**

1. Tintu.R - *Fabrication and characterization of chalcogenide nano composite based materials for photonic device applications* (2012).
2. Rose Leena Thomas- *Synthesis and characterization of TeO2 glasses for Photonic applications (*2014).
3. Aparna Thankappan- *Studies of betanin natural dye incorporated ZnO composite for Photonic device applications* (2015).
4. Indu Sebastian- *Investigation on selected CHG towards realisation of Photonic devices* (2016).
5. Musfir P.N – *Germanium based chalcogenide glasses for photonic applications* (2021).

6. Ajina C – *Pseudo binary chalcogenide glass for the realization of IR photonic devices* (2021).
7. Anupama V- *Investigations on Ternary Ge-Se-Sb Chalcogenide Glass - A potential composition for Mid IR photonics and sensing applications* (2021).
8. Vijesh K R – *Studies on Carbon dots and carbon dots decorated graphene oxide for nonlinear optical applications* (2022).
9. Sony U- *Investigations on linear and non-linear optical properties of hemicyanine laser dye for bio-photonics applications in the context of technology development* (2022).
10. Alina C. Kuriakose- *Investigations on binary hybrids of CdS for photonic device applications.*

- **Number of students enrolled for Ph.D.: 4**

1. Sowmya S.
2. Arun Pappachan.
3. Anila Thomas.
4. Jijo George.

- **Number of Post- Doctoral Fellows- 2**

1. Dr. Shiju E- *Topological Defects Aided Unidirectional Light Flow and Cavity Field Enhancement Studies in Novel Photonic Structures.*
2. Dr. Vijisha M V- *Controlling the emission properties of semiconductor nanostructures using tamm plasmons in flexible bragg reflectors.*

- **Number of M.Sc. / M.Tech Projects guided: 45 Nos.**
- **Authored Books**

1. Proceedings of National Photonics Symposium 2017 (27 Feb - 1 March 2017)
ISBN: 978-93-80095-92-9 Chief Editor Prof. A Mujeeb, Editors: Dr. Saji K J Dr. Sheenu Thomas International School of Photonics Cochin University of Science and Technology
Co-Sponsored by: Kerala State Council for Science, Technology and Environment (KSCSTE) University Grants Commission (UGC)
Published by The Directorate of Public Relations and Publications for the International School of Photonics Cochin University of Science and Technology, Kochi - 682 022 Kerala, India

- **<u>List of Publications:</u> International Publications (63)**

1. General purpose high performance temperature controller for elevated temperatures.
Johney Isaac, Sheenu Thomas and J. Philip.
Int. J. Electronics, 1993, Vol. 74, No. 6, 979-982.

2. Thermal diffusivity of solids by photoacoustic cell rotation and phase lag measurement.
Sheenu Thomas, Johney Isaac and J. Philip.
Rev. Sci. Instrum. 1995, Vol. 66, No.7, 3907-3908.

3. Optical band gap, infrared absorption and thermal diffusivity of Ge-Ga-Se glasses.
Sheenu Thomas and J. Philip.
Phys. Stat. Sol. (b) 1997, Vol. 200, 359-365.

4. Carrier type reversal in Bi doped Ge-Se glasses manifested in thermal transport measurements.
Sheenu Thomas and J. Philip.
Solid State Commun. 1998, Vol. 107, No. 8, 423-425.

5. Investigation of chemical and mechanical extrema in Ge-In-Se glasses using photoacoustic technique.
Sheenu Thomas and J. Philip.
J. Phys.: Condens. Matter, 2000, Vol. 12, 4767-4774.

6. Nonlinear optical studies on nano colloidal Ga-Sb-Ge-Se chalcogenide glasses.
R. Tintu, V.P.N. Nampoori, P. Radhakrishnan and Sheenu Thomas.
Journal of Applied Physics, 2010, Vol.108, 073525.

7. Ge-Se-Sb/PVA composite films for photonics applications.
R. Tintu, K Saurav, K Sulakshna, V.P.N. Nampoori, P. Radhakrishnan and Sheenu Thomas.
Journal of Non-oxide Glasses, 2010, Vol. 2, No 4, p. 167- 174.

8. Preparation and optical characterization of a novel Ge-Se-Sb /PVA composite films for optical limiting application.
R. Tintu,V.P.N. Nampoori, P. Radhakrishnan and Sheenu Thomas.
Journal of Physics D: Applied Physics, 2011, Vol. 44 , 025101 (6p).

9. Nanocomposite thin films of Ga5Sb10Ge25Se60 Chalcogenide glass for optical limiting applications.
R. Tintu,V.P.N. Nampoori, P. Radhakrishnan and Sheenu Thomas.
Optical Materials, 2011,Vol.33 1221–1225.

10. Photoinduced changes in optical properties of Ga–Sb–Ge–Se glasses.
R. Tintu, V.P.N. Nampoori, P. Radhakrishnan and Sheenu Thomas.
Optics Communications, 2010, Vol.284, 222–225.

11. Reverse saturable absorption in nano colloidal Ge28 Sb12 Se60 chalcogenide glass.
R. Tintu, V.P.N. Nampoori, P. Radhakrishnan and Sheenu Thomas.
Journal of Non-Crystalline Solids, 2011, Vol. 357 2888–2891.

12. Optical non-linearity in ZnO doped TeO2 glasses.
Rose Leena Thomas, Vasuja, V. P. N. Nampoori, P. Radhakrishnan and Sheenu Thomas.
Journal of Optoelectronics and Advanced Materials, 2011, Vol.13, 523-527.

13. Optical limiting in TeO2–ZnO glass from Z-scan technique.
Rose Leena Thomas, Vasuja, V. P. N. Nampoori, P. Radhakrishnan and Sheenu Thomas.
Journal of Nonlinear Optical Physics & Materials, 2011, Vol. 20, No. 3 351–356.

14. Cluster size and Excitation wavelength dependent Photoluminescence behavior of nano colloidal Ge- Se-Sb-Ga chalcogenide glass solutions.
R. Tintu, V.P.N. Nampoori, P. Radhakrishnan, N.V. Unnikrishnan and Sheenu Thomas.
Journal of Optoelectronics and Advanced Materials, 2012, Vol.14, 918-922.

15. Effect of betanin natural dye extracted from red beet root on the nonlinear optical properties ZnO nanoplates embedded in polymeric matrices.
Aparna Thankapan, V.P.N. Nampoori and Sheenu Thomas.
Journal of Applied Physics, 2012, Vol.112, 123104.

16. Laser induced photoluminescence from Ge28Se60 Sb12 Chalcogenide nano colloids.
R. Tintu, V.P.N. Nampoori, P. Radhakrishnan, N.V. Unnikrishnan and Sheenu Thomas.
P**hysica B**, 2013, 414, 12–15.

17. Impact of intermediate localized states on nonlinear optical absorption of Ga- Ge-Se nanocolloidal solutions.
Indu sebastian, V.P.N. Nampoori, P. Radhakrishnan and Sheenu Thomas.
Applied Physics Letters, 2013, 102, 031115.

18. Stacked Chalcogenide and Polymer structures for photonic applications.
R. Tintu, V.P.N. Nampoori, P. Radhakrishnan, N.V. Unnikrishnan and Sheenu Thomas.
IEEE Optical Engineering (ICOE), 2012, 978-1-4673-2463-2.

19. Investigation on nonlinear properties of Ga-Ge-Se nanocolloidal solutions.
Indu sebastian, S.Divya, V.P.N. Nampoori, P. Radhakrishnan and Sheenu Thomas.
IEEE Optical Engineering (ICOE) 2012, 978-1-4674-2463-2.

20. Laser induced flourescence in Europium doped Tellurite glasses.
Rose Leena Thomas, V. P. N. Nampoori, P. Radhakrishnan and Sheenu Thomas.
Optik - International Journal for Light and Electron Optics, 2013, vol. 124, issue 22, pp. 5840-5842

21. Concentration tuned band gap and corresponding nonlinear refractive index dispersion in Ga-Ge-Se nano colloids.
Indu Sebastian,S. Mathew, V. P. N. Nampoori, P. Radhakrishnan, and Sheenu Thomas
J**ournal of Applied Physics** (2013),114, 053102 .

22. Study of regulation of anthocyanin production from confederate rose by spectroscopic method and their nonlinear optical characterization.
Ani Augustine Jose, Pranam Prakash, Aparna Thankappan, Sheenu Thomas, V.P.N.Nampoori
International Journal of Science and Nature,2013, VOL. 4(2), 294-298

23. Optical characterization of ZnO nanoplates embedded in polymeric matrices for optical limiting applications.
Aparna Thankappan, Divya S., Sheenu Thomas, V.P.N. Nampoori.
Optics & Laser Technology 52 (2013) 37–42

24. Solvent effect on the third order optical nonlinearity and optical limiting ability of betanin natural dye extracted from red beet root.
Aparna Thankappan, Sheenu Thomas, V.P.N. Nampoori
Optical Materials 2013, 35, Issue 12, 2332–2337.

25. Experimental verification of localized defect states in Ga-Ge-Se nano colloidal solutions.
Indu Sebastian, V. P. N. Nampoori, P. Radhakrishnan and Sheenu Thomas.
Journal of Material Science 2014 DOI 10.1007/s10853-014-8084-8.

26. Optical limiting performance of ZnO nanoflakes and nanoplates embedded in PVA matrix.
Aparna Thankappan, Sheenu Thomas, VPN Nampoori.
Q Science Connect 2013,:33,3-6.doi.org/10.5339/connect.2013.33

27. Novel composites based on polymer micro-rods for photonic device application.
Aparna Thankappan, Sheenu Thomas, V.P.N.Nampoori.
Optics & Laser Technology 2014 58, 63–70

28. Tuning the face orientation of ZnO nano/microcrystals by a wet chemical method.
Aparna Thankappan, Sheenu Thomas, and V. P. N. Nampoori.
Chinese Optics Letters 2013, 11(10), 101801.

29. Optical nonlinear investigations on morphology controlled growth of ZnO crystals.
Aparna Thankappan , C.L. Linslal , S. Divya , P.V. Sabitha ,Sheenu Thomas , V.P.N. Nampoori.
Optics & Laser Technology (2014) 64, 133–139.

30.Highly effificient betanin dye based ZnO and ZnO/Au Schottky barrier solar cell.

Aparna Thankappan , S. Divya, Anju K. Augustine, C.P. Girijavallaban, P. Radhakrishnan, Sheenu Thomas, V.P.N. Nampoori.

Thin Solid Films 583 (2015) 102–107.

31. Thermal diffusivity and lifetime studies of Styryl 7 dye on DNA-CTMA Complex.
Sony Udayan, Mathew Sebastian, Vijesh K.R., V.P.N. Nampoori, Sheenu Thomas.
Journal of Luminescence 194 (2017) 428–432.

32. Effect of DNA-CTMA complex on optical properties of LDS 821 dye.
U Sony ; , Vijesh K ; S Mathew ; C Pradeep ; Nampoori VP N ; Thomas Sheenu
Optical Materials 2017, 69: 49-53.

33. Effect of midgap defect states on the optical properties of Ge 20 Se 70 Te 10 Nano colloids.
Cheruvalath Ajina ; Sebastian Indu ; Sebastian Mathew ; Nampoori VPN ; Thomas Sheenu
Optical Materials 2017, 72: 265-269.

34. Effect of thickness on nonlinear absorption properties of graphite oxide thin films.
Sreeja VG ; Cheruvalathu Ajina ; Reshmi R. ; Anila EI , Thomas Sheenu ; Jayaraj MK
Optical Materials 60 (**2**016) 450-455.

35. Fabrication and Characterization of Chalcogenide Glass Based Waveguide Structures
Indu Sebastian, Dayal Chakraborty, Nampoori V. P. N,Radhakrishnan P. and Sheenu Thomas.
Sci. & Soc. 14 (1) 2016, 33-42.

36. Silica Nano-spheres Prepared by Modified Stober Process for Colloidal Crystal Growth.
C Ajina ; Shabana MA, Fathima PS, Krishnendu, Thomas Sheenu
AIP Conference Proceedings . 2017, Vol. 1849 Issue 1, p1-5. 5p. 020041 (2017); doi:10.1063/1.4984188.

37. Correlation between Physical, Thermal and Optical properties of Ge-Se-Sb Chalcogenide Glasses.
Anupama V, Thomas Sheenu
AIP Conference Proceedings . 2017, Vol. 1849 Issue 1, p1-6. 6p. 020020 (2017).

38. Concentration dependent variation of thermal diffusivity in highly fluorescent carbon dots using dual beam thermal lens technique
K.R. Vijesh, U. Sony, M. Ramya, S. Mathew, V.P.N. Nampoori, Sheenu Thomas
International Journal of Thermal Sciences 126 (2018) 137–142

39. Studies on the interaction between 7-(dimethyl amino)-4-(trifluoromethyl)-2H-1-benzopyran-2 one and cadmium sulphide quantum dots.
Alina C. Kuriakose, C. Pradeep, V.P.N. Nampoori, Sheenu Thomas
Optical Materials 78 (2018) 113 -117.

40. Surface enhanced infrared absorption from ge20se70te10 film with Silver Island over layer.

Ajina Cheruvalath and Sheenu Thomas.
Indian J.Sci.Res. 18(1) (2018) 75-78

41. Band gap tuning and enhancement of Two Photon Absorption in Zinc Tellurite glasses via thermal Poling
Rose Leena Thomas and Sheenu Thomas
J.Emerging Tech.and Innovative Research (JETIR) 5 (6) (2018), 72-77

42. Novel amorphous nanowires from solution processed $Ge_{25}Se_{65}Sb_{10}$ chalcogenide glass.
Anupama Viswanathan and Sheenu Thomas.
Journal of Materials Science: Materials in Electronics 29 (2018) 18231–18237.

43. Enhancement of defect states assisted thermal diffusivity in solution processed GeSeSb chalcogenide glass matrix on silver incorporation
Anupama Viswanathan, Sony Udayan, P.N. Musfir, V.P.N. Nampoori, Sheenu Thomas.
Journal of Non-Crystalline Solids, 503-504 (2019) 151-157.

44. Two photon induced amplified spontaneous emission at low threshold from Styryl 7 dye incorporated DNA template.
Sony Udayan, Raj Sha M M, Mathew Sebastian, V.P.N. Nampoori, Sheenu Thomas.
Optical Materials 86 (2018) 492–497.

45. Carbon dots decorated graphene oxide nanosheets prepared by a novel technique with enhanced nonlinear optical properties.
Vijesh K R, Mathew Sebastian, V. P. N. Nampoori, and Sheenu Thomas.
AIP Advances 9, 015219 (2019).

46. Investigations on Frequency and Temperature dependence of AC conductivity and dielectric parameters in Ge20Ga5Sb10S65 quaternary Chalcogenide glass.
P N Musfir, S Mathew, V P N Nampoori, Sheenu Thomas.
Optik (2019), https://doi.org/10.1016/j.ijleo.2019.01.065.

47. Tunable Optical Bandgap in Ternary Ge-As-S Chalcogenide Glass.
P N Musfir, S Soumya, C V Anees Mehaboob, V Raseem Ali and Sheenu Thomas.
AIP Conference Proceedings , 2019.

48. Oblique Angle Deposited Silver islands on Ge20Se70Te10 film substrate for Surface Enhanced Infrared Spectroscopy.
Ajina C, V P N Nampoori, Sheenu Thomas.
Sensors & Actuators: B. Chemical 287 (2019) 225-230.

49. "Tunable linear and nonlinear optical properties of GeGaSb Chalcogenide glass with solute concentration and with silver doping".
Anupama Viswanathan and Sheenu Thomas.
Journal of Alloys and Compounds 798 (2019) 424-430

50. "Facile synthesis of Au/CdS core - shell nanocomposites using laser ablation technique."

Alina Kuriakose and Sheenu Thomas.
Material Science in semiconductor processing Vol. 101(2019) 124-130.

51**.** Variations in the linear and nonlinear refractive indices of Chalcogenide glass thin films for Photonic Applications
P N Musfir, V P N Nampoori and Sheenu Thomas
Material Research Express Vol.6 (2019)115207.

52. Enhanced nonlinear optical properties of solution dispersed carbon dots decorated graphene oxide with varying viscosity.
Vijesh K. R, Musfir P. N, Titu Thomas, Manu Vaishakh, V.P.N. Nampoori, Sheenu Thomas
Optics and Laser Technology 121 (2020) 105776.

53. Enhancement of optical properties in Neutral Red Dye through energy transfer from CdS Quantum Dots.
Alina C Kuriakose, V P N Nampoori, Sheenu Thomas
Chemical Physics Letters 738 (2020) 136851.

54. Energy transfer kinetics in Basic Fuchsin dye sensitized CdS quantum dots.
Alina C Kuriakose, VPN Nampoori, Sheenu Thomas
Materials Chemistry and Physics 242 (2020) 122560.

55. Preparation and characterization studies on ternary Se rich chalcogenide glasses with Ga content for infrared photonics.
S Soumya, Sheenu Thomas
AIP Conference Proceedings 2244 (1) (2020) 100007.

56**.** Exploring the LDS 821 dye as a potential NIR probe for the two photon imaging of amyloid fibrils.
Sony Udayan , D R Sherin , Samiyappan Vijaykumar , T K Manojkumar , V P N Nampoori , Sheenu Thomas.
Biomaterial Science, 2020 Oct 1. doi: 10.1039/d0bm00548g.

57. Modulation of nonlinear optical properties in CdS based core shell nanocolloids fostered by metal nanoparticles.
Alina C. Kuriakose, U.Sony, V.P.N.Nampoori, Sheenu Thomas.
Optics & Laser Technology, Vol. 134, 2021, 10662.

58**.** Influence of laser ablated Ag core on the thermo-optic and photocatalytic characteristics of CdS nanocolloids.
Alina C Kuriakose, VPN Nampoori, Sheenu Thomas.
Materials Chemistry and Physics, Vol. 258, 2021, 123911.

59. Role of bio-nanotemplates on the lasing behavior of LDS 821 dye
Sony Udayan, R. Lakshmi , B. Anugop , P.P. Saipriya , Ajith Vengellur , M. Kailasnath V.P.N. Nampoori, Sheenu Thomas.
Optics and Laser Technology 139 (2021) 106973.

60. Hexamethine hemicyanine dye as a thermo-optical probe for serum albumin.
Sony Udayan, Drishya Elizebath, D.R. Sherin, Vakayil K. Praveen, Sini Sunny, Purushothaman Jayamurthy, T.K. Manojkumar, V.P.N.Nampoori, Sheenu Thomas.
Optics and Laser Technology 143 (2021), 107351.

61. Pyrazines with terminal donor groups for third-order nonlinear optics: effect of graphene oxide on nonlinear absorption.
E Shiju, NK Siji Narendran, S Thomas, Mehboobali Pannipara, Abdullah G Al-Sehemi, D Narayana Rao.
Journal of Chemical Sciences 133 (3), (2021)1-11

62. Synergistic effects of CdS QDs – Neutral red dye hybrid system on its nonlinear optical properties.
Alina C. Kuriakose, Sony Udayan, T. Priya Rose, V.P.N. Nampoori, Sheenu Thomas.
Optics and Laser Technology 142 (2021), 107261.

63. Fluorescence tuning, all-optical switching and OR gate realization of phloroglucinol derived carbon dots.
K R Vijesh, Titu Thomas, Manu Vaishakh, VPN Nampoori, Sheenu Thomas.
Optik, 248(2021), 168049.

64. Experimental and theoretical investigation on the nonlinear optical properties of LDS 821 dye in different solvents and DNA.
Sony Udayan, Alina C Kuriakose, Priya Mary, D R. Sherin, T K Manojkumar, VPN Nampoori, Sheenu Thomas.
Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 272 (2022) 121011

65. Nonlinear optical behaviour in amorphous GeSeSb thin films.
AnupamaViswanath ,SheenuThomas
Materials Today: Proceedings (2022), https://doi.org/10.1016/j.matpr.2022.07.007.

66. Understanding the Linear and Nonlinear Optical Responses of Few-Layer Exfoliated MoS2 and WS2 Nanoflakes: Experimental and Simulation Studies
T Abhijith, Shiju E, Rakesh Suthar, Punit Sharma, Sheenu Thomas and Supravat Karak
Nanotechnology, 2022.

67. Tellurium based materials for nonlinear optical applications.
Priya Rose Thankamani, Sheenu Thomas
Physical Sciences Reviews, 2022.

<u>Conference Publications (70)</u>

1. Photoacoustic investigation of chemical and mechanical thresholds in Ge-In-Se glasses.
J Philip and Sheenu Thomas.
Proc. DAE Solid State Physics Symp. (India) 1997, 40C, 43.

2. Photoacoustic study of optical band gap in Ge-Ga-Se glasses.
J. Philip and Sheenu Thomas.
Proc. DAE Solid State Physics Symp. (India) 1994 37C, 244.

3. Carrier type reversal in Bi doped Ge-Se glasses manifested in thermal transport measurements.
J. Philip and Sheenu Thomas.
Proc. DAE Solid State Physics Symp. (India) 1997 40C, 45, 1997.

4. Network rigidity and dimensional transition in 111-1V-V1 glasses.
J.Philip and Sheenu Thomas.
Nat.Conf. on Advances in Condens.Matter Phy. (Pondichery) 1998, 58.

5. Laser induced Photo-darkening in Ga-Sb-Ge-Se thin film.
R. Tintu, V P N Nampoori, P Radhakrishnan and Sheenu Thomas.
National Laser Symposium (NLS-09) 2009, BARC, INDIA CP-07-09, 88.

6. Optical Properties of Erbium Doped Ge-Sb-Se Thin Films.
R. Tintu, V P N Nampoori, P Radhakrishnan and Sheenu Thomas.
Int. Conf. On Materials for the Millennium (MATCON) 2010, Department of Applied Chemistry, CUSAT, PP-157, p- 161.

7. Spectral and optical Characterization of Ga-Sb-Ge-Se and polyvinyl alcohol amorphous composite.
R. Tintu, V P N Nampoori, P Radhakrishnan and Sheenu Thomas.
Int. Conf. on Advances in Polymer Technology (APT), 2010, EOP 04, 44, J.J. Murphy Research Centre,Rubber Park [P] Ltd.

8. Optical Characterization of Ga-Sb-Ge-Se and Poly vinyl alcohol amorphous composite.
R. Tintu, V P N Nampoori, P Radhakrishnan and Sheenu Thomas.
National Seminar on Nano Structured materials and Nano photonics, 2010, Department of Physics, St. Teresa's college, Kerala, Page 66.

9. Amorphous Composite Chalcogenide Glass Films for Nonlinear Optical Applications.
R Tintu, K Saurav, K Sulakshna, V P N Nampoori, P Radhakrishnan and Sheenu Thomas.
Photonics- 2010, Int. Conf. on Fibre Optics and Photonics, IIT, Guwahati, Dec.11- 15, PSW-70.
10. Optical properties of rare earth doped Zinc Tellurite glass.
Rose Leena Thomas, Vasuja, Rejimole,V P N Nampoori P Radhakrishnan and Sheenu Thomas.
Kerala Women's Science Congress, Aug 10-12, 2010, organized by KSCSTE, Department of Physics,St.Teresa's college, Kerala.

11. Photoluminescence behavior of nano colloidal Ge- Se- Sb chalcogenide glass solutions.
R Tintu, K Saurav, K Sulakshna,V P N Nampoori, P Radharishnan and Sheenu Thomas.
International Conference on Contemporary Trends in Optics and Optoelectronics, 2011, Trivandrum (ISAT).

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