Dr. Shivakiran Bhaktha B. N.

Associate Professor
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Research Interests: Random Lasers, Photonic crystals, Microcavities, Glass Photonics, Optofluidics and Nonlinear Optics.

EDUCATION

Ph.D. (Physics)
Thesis Title : "**Fabrication and Characterization of Silica based Rare-earth doped Waveguides and 1-D Photonic Crystals for Integrated Optics Applications**".
University : The thesis was pursued under an internationally co-tutored PhD programme at the School of Physics, ***University of Hyderabad***, Hyderabad, India, and at the Department of Physics, ***University of Trento***, Trento, Italy, under the supervision of Prof. D. Narayana Rao (University of Hyderabad), Dr. Maurizio Ferrari (CNR-IFN) and Prof. Maurizio Montagna (University of Trento).
Year : August 2003 – December 2006

Master of Science (Physics)
Specialization : Quantum Electronics and Photonics
University : Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam, India
Year : June 2001 – March 2003

Bachelor of Science (Physics Honours)
Discipline : Physics, Chemistry, Mathematics
University : Sri Sathya Sai Institute of Higher Learning, Prasanthi Nilayam, India
Year : June 1998 – March 2001

Positions Held

Associate Professor: Department of Physics, Indian Institute of Technology Kharagpur, India, 15th March 2018 till date.
Assistant Professor: Department of Physics, Indian Institute of Technology Kharagpur, India, 19th Dec 2011 till 14th March 2018.
Visiting Fellow: Tata Institute of Fundamental Research, Mumbai, India, Aug 2011- Dec 2011.
Post-Doctoral Researcher: Laboratoire de Physique de la Matière Condensée, CNRS, France, Apr 2009 – May 2011.
Post-Doctoral Researcher: CNR-IFN, University of Trento, Trento, Italy. Apr 2008- Mar 2009
Post-Doctoral Researcher: Université des Sciences et Technologies de Lille 1, Lille, France. Feb 2007 – Mar 2008

Frequent Reviewer for the following Journals

Applied Physics Letters (*AIP*)
Optics Express (*OSA*)
Optical Materials, Materials Science and Engineering B, Materials Chemistry and Physics, Journal of Luminescence, Optics Communication, Thin Solid Films, Journal of Non-Crystalline Solids (*Elsevier*);
Physica Scripta (*IOP*);
Analyst, Physical Chemistry Chemical Physics (*RSC*);
Pramana (*Springer*);
Optical Engineering (*SPIE*).

Events Organized

- Secretary, *DAE-BRNS National Laser Symposium NLS-31*, 3-6 December, 2022, IIT Kharagpur: Participants: 350.
- Secretary, *National Workshop on Advances in Photonics*, 13-14 November, 2015, IIT Kharagpur: Participants: 100.
- Treasurer, *12th International conference on Fiber Optics and Photonics, PHOTONICS 2014*, IIT Kharagpur, India, December 13-16, 2014: Participants: 500.
- Treasurer, DAE-BRNS *Theme Meeting on Ultrafast Science, UFS 2013*, IIT Kharagpur: Participants: 85.
- Member of the Local Organising Committee: DAE-BRNS *7th National Symposium on pulsed laser deposition of thin films and nanostructured material*, IIT Kharagpur: Participants: 100
- Member of the Local Organising Committee: *Eighth International conference on Optoelectronics, Fiber Optics and Photonics, PHOTONICS 2006*, Hyderabad, India, December 13-16, 2006: Participants: 500.
- Member of the Local Organising Committee: *Nice Days of Waves in Complex Media 2010* " Special session on Random Lasing," Nice, France, June 7-9, 2010.

Guidance of Ph.D. Students *(Completed)*:

S. No.	Name of the Student	Title of the Thesis	Year of Completion	Supervisor / Co-Supervisor
1	Anirban Sarkar	Investigations on Lasing Modes in Weakly Scattering Polymer and Optofluidic Random Structures	Nov 2017	Supervisor
2	Subhabrata Ghosh	Europium Doped Zinc Oxide and Graphene Oxide Integrated Glasses and Glass-Ceramics for Integrated Optics	Jul 2018	Supervisor
3	Pratyusha Das	Enhanced Spontaneous Emission by Coupling of Radiation to Microcavity, Surface and Internal Guided Modes of One-Dimensional Photonic Crystals	Mar 2020	Supervisor
4	Rup Kumar Chowdhury	Ultrafast Studies on Light-Matter Interactions in Layered Transition Metal Disulfides for Photonics	Aug 2020	Co-Supervisor
5	Priyanka S. Choubey	Spectroscopic and Statistical Investigations on the Modes of Weakly Scattering Dye-Doped Polymeric Random Lasers	Aug 2021	Supervisor

Ongoing Guidance of Ph.D. Students: 10 [6 as Supervisor (3 Jointly Guided), 4 as Co-Supervisor]

Guidance of M.Tech. Project Students *(Completed)*:

S. No.	Name of the Student	Title of the Thesis	Year of Completion	Supervisor / Co-Supervisor
1	Kumara Raja Kandula	Fabrication and Characterization of Planar Optical Waveguides for Applications in Photonics	April 2013	Supervisor (Jointly Guided)
2	Pratyusha Das	Development of Waveguides and Photonic Crystals for application in Optical Integrated Circuit	April 2014	Supervisor
3	Arijit Sarkar	Plasmonic Enhancement of Optical Properties of Ag-ZnO Nanostructured Thin Films for Optoelectronic Applications	April 2014	Co-Supervisor (Jointly Guided)
4	N.N. Subhashree Ojha	Fabrication of Polystyrene Opals and DCM doped PVA Waveguides for Integrated Optic Applications	April 2016	Supervisor
5	Prathul Nath P. P.	Fabrication of Optical Waveguides for Integrated Optic and Optofluidic Device Applications	April 2017	Supervisor
6	Sakshi Sharma	Fabrication of 1D SiO_2/TiO_2 Photonic Crystals for Optical Integrated Circuits	April 2017	Supervisor
7	Sudha Maria Lis S	Optical Properties of Tamm States in Metal Grating One-Dimensional Photonic Crystal Structures	May 2018	Supervisor
8	Soumyajyoti Mallick	Colloidal and Waveguide Random Lasers	May 2019	Supervisor
9	Brijesh Kumar	Characterization of Dye-Doped Poly (methyl methacrylate) Thin Films and Fabrication of Microdisc Resonators by Solvent Immersion Imprint Lithography	June 2020	Supervisor
10	Vaibhav Chaturvedi	Finite Difference Time Domain Computation of One-Dimensional Photonic Crystal Structures	May 2021	Supervisor
11	Pallabi Gogoi	Finite Difference Time Domain Computational Studies of Soft-Lithography Fabricated Whispering Gallery Mode Resonator	May 2022	Supervisor

Ongoing Guidance of M.Tech. Students: 1 (as Supervisor)

Sponsored Research Projects

Sl. No.	Title of the project	Agency	Present status	Role
1.	Development of Random Laser Spectroscopy as a Probe to Study the Evolution of Polymer Thin Films	SERB	**Ongoing:** 24.02.2021 – 23.02.2024	*PI*
2.	Development of Wearable On-Chip Spectrometer for Monitoring Respiratory Motion	DST	**Successfully Completed**: 13.09.2018 – 12.03.2021	*PI*
3.	Optical Fiber Based Solar Illumination of Pit Bottom and Underground Mine Roadways and Working Face	CMPDI, CIL	**Successfully Completed**: 01-08-2017 – 31.01.2021	*PI*
4.	Experimental investigation of the modes of random laser in disordered microfluidic channels.	SERB (DST, Young Scientist)	**Successfully Completed:** 05.07.2013 – 04.07.2016	*PI*
5.	Development of Rare-Earth Doped Low-Loss Glass-Ceramic Waveguides by Sol-gel technique for Photonics Applications	ISIRD, IIT Kharagpur	**Successfully Completed:** (16.03.2012 – 17.03.2015)	*PI*
6.	On-Chip Nanophotonic Sources: Stabilized Frequency Comb and Plasmonic Microcavity Sources	MEITY	**Ongoing:** 01.04.2018 – 31.03.2022	*Co-PI*
7.	On-Chip Nanophotonic Sources: Stabilized Frequency Comb and Plasmonic Microcavity Sources	DST	**Ongoing:** 01.04.2018 – 31.03.2022	*Co-PI*
8.	Generation of Exciton-polariton Laser using Two Dimensional Semiconductor Embedded Optical Microcavity	SERB	**Ongoing:** 27.03.3030 – 26.03.2023	*Co-PI*

9.	Solid State Quantum Optical Devices using 2D Materials	MHRD-STARS	**Ongoing:** 10.06.2020 – 09.06.2023	*Co-PI*
10.	Study of Double Pulse Laser Ignition of an Atomized Fuel-air Mixture	SERB	**Ongoing:** 07.03.2020 – 06.03.2023	*Co-PI*
11.	Micro/Nano manufacturing and characterization facility for robotics in nano-scale manipulation	IIT-Kharagpur	**Successfully Completed:** (24-02-2015 – 23.02.2018)	*Co-PI*
12.	Studies on ultrafast processes in electronics, spintronics, magnonics and photonics	IIT-Kharagpur	**Successfully Completed:** (01-08-2014 – 31.07.2017)	*Co-PI*
13	Green photonics using semiconductor nanostructures	DST-ITPAR	**Successfully Completed:** (01.08.2013 – 31.12.2016)	*Co-PI*

Publications

1. Rina Mudi, Samik Mallik, Bhargavi Veeraghattam, Dipak Kumar Goswami, **Shivakiran Bhaktha B.N.** and Kapil Debnath, "Morphology Dependent Excitation of Hybrid Tamm-Bandedge State in Metal Coated Opal Three-Dimensional Photonic Crystal," *accepted for publication in Optical Materials.*
2. Sarbojit Mukherjee, Dushasan Kundu, Khanindra Pathak, and **Shivakiran Bhaktha B. N.**, "Design and Implementation of Solar-Powered Optical Fiber-Based Illumination and Communication System for Underground Coal Mines," *Mining, Metallurgy & Exploration* (2023).
1. Sarbojit Mukherjee, Khanindra Pathak, and **Shivakiran Bhaktha B. N.**, "Mapping the Geometry Dependent Relative Stress in Stretched Polymer Membranes by Polarization and Interferometric Techniques," *Optical Materials* **137**, 113595 (2023).
2. Renu Yadav, Patrick Sebbah, Maruthi M. Brundavanam, and **Shivakiran Bhaktha B. N.**, "Tracking nanoscale perturbation in active disordered media," *Phys. Rev. A* **107**, 023513 (2023).
3. Seemesh Bhaskar,# Sudha Maria Lis S,# Sriram Kanvah, **Shivakiran Bhaktha B. N.**, and Sai Sathish Ramamurthy, "Single-Molecule Cholesterol Sensing by Integrating Silver Nanowire Propagating Plasmons and Graphene Oxide π-Plasmons on a Photonic Crystal-Coupled Emission Platform," *ACS Appl. Opt. Mater.* **1**, 159−172 (2023). (# Equal contributions)
4. Priyanka S. Choubey, Shailendra K. Varshney, and Shivakiran Bhaktha B. N., "Glassy behavior of modes in lasing systems with varying openness: random and whispering gallery," *J. Opt. Soc. Am. B* **39**, 3059 (2022). (***Editors' Pick***)
5. Seemesh Bhaskar, Pratyusha Das, Venkatesh Srinivasan, **Shivakiran B.N. Bhaktha**, Sai Sathish Ramamurthy, "Plasmonic-Silver Sorets and Dielectric-Nd_2O_3 nanorods for Ultrasensitive Photonic Crystal-Coupled Emission," *Materials Research Bulletin* **145**, 111558 (2022).
6. Subhajit Jana, Sourabh Pal, **Shivakiran B. N. Bhaktha**, and Samit K. Ray, "Synergistic Effects of Plasmonic Au Nanoislands on a $MoSe_2$ Nanoflake/ZnO Nanorod Heterostructure for an Enhanced Broadband Photoresponse," *ACS Appl. Nano Mater.* **5**, 18106−18115 (2022).
7. Brijesh Kumar, Priyanka S. Choubey, and **B.N. Shivakiran Bhaktha**, "High-quality-factor dye-doped polymeric microdiscs fabricated by soft imprint lithography," *Eur. Phys. J. Spec. Top* **231**, 781 (2022).
8. S. Sudha Maria Lis, K. Rajasimha, Kapil Debnath, V. Krishna Chaitanya, **B.N. Shivakiran Bhaktha**, "Femtosecond laser micromachined one-dimensional photonic crystal channel waveguides," *Optical Materials* **126**, 112114 (2022).
9. Subhajit Jana, Subhrajit Mukherjee, **Shivakiran Bhaktha B N**, and Samit K. Ray, "Plasmonic Silver Nanoparticle-Mediated Enhanced Broadband Photoresponse of Few-Layer Phosphorene/Si Vertical Heterojunctions," *ACS Appl. Mater. Interfaces* **14**, 1699 (2022).
10. R. Sattibabu, P.K. Dey, **B.N.S. Bhaktha**, P. Ganguly, "Passive polarization splitter using zero-gap directional coupler in $LiNbO_3$," *Results in Optics* **8**, 100262 (2022).
11. Anirban Sarkar and **B. N. Shivakiran Bhaktha**, "Replica symmetry breaking in coherent and incoherent random lasing modes," *Optics Letters* **46**, 5169 (2021).
12. Seemesh Bhaskar, Pratyusha Das, Maku Moronshing, Aayush Rai, Chandramouli Subramaniam, **Shivakiran B. N. Bhaktha** and Sai Sathish Ramamurthy, "Photoplasmonic assembly of dielectric-metal, Nd_2O_3-Gold soret nanointerfaces for dequenching the luminophore emission," *Nanophotonics* **10**, 3417 (2021).
13. Venkatesh Gude, Priyanka S. Choubey, Susobhan Das, **Shivakiran Bhaktha B. N.**, C. Malla Reddy and Kumar Biradha, "Elastic orange emissive single crystals of 1,3-diamino-2,4,5,6-tetrabromobenzene as flexible optical waveguides," *J. Mater. Chem. C* **9**, 9465 (2021).
14. Bhargavi Veeraghattam, Prasanta Kumar Guha, and **B. N. Shivakiran Bhaktha**, "Temporal Dynamics of Photonic Stop-Band in Volatile Solvent Infiltrated Opals," *Optical Materials* **117**, 111146 (2021).
15. Apurba Maity, Anirban Sarkar, **Shivakiran Bhaktha B. N** and Sanjib K. Patra, "Design and synthesis of perfluoroalkyl decorated BODIPY dye for random laser action in a microfluidic device, *New Journal of Chemistry* **44**, 14650 (2020).
16. Seemesh Bhaskar#, Adarsh Kumar Singh#, Pratyusha Das#, Palash Jana, Sriram Kanvah, **Shivakiran Bhaktha B N** and Sai Sathish Ramamurthy, "Superior Resonant Nanocavities Engineering on the Photonic Crystal-Coupled Emission Platform for the Detection of Femtomolar Iodide and Zeptomolar Cortisol," *ACS Appl. Mater. Interfaces* **12**, 34323 (2020). (# Equal contributions)
17. Priyanka S. Choubey, Anirban Sarkar, Shailendra K. Varshney and **Shivakiran Bhaktha B. N.**, "Random laser spectroscopy and replica symmetry breaking phase transitions in a solvent-rich polymer thin film waveguide," *J. Opt. Soc. Am. B* **37**, 2505 (2020). (***Editors' Pick***)
18. Pratyusha Das, Subhrajit Mukherjee, Subhajit Jana, Samit Kumar Ray and **B N Shivakiran Bhaktha**, "Resonant and non-resonant coupling of one-dimensional microcavity mode and optical Tamm state," *J. Opt.* **22**, 065002 (2020).

19. Seemesh Bhaskar#, Pratyusha Das#, Venkatesh Srinivasan, **Shivakiran Bhaktha B. N**., and Sai Sathish Ramamurthy, "Bloch Surface Waves and Internal Optical Modes-Driven Photonic Crystal-Coupled Emission Platform for Femtomolar Detection of Aluminum Ions," *J. Phys. Chem. C.* **124**, 7341 (2020). (# Equal contributions)
20. Priyanka S Choubey, Subhashree Ojha N N, Subhabrata Ghosh, Shailendra K Varshney and **Shivakiran Bhaktha B N**, "Origin of light scattering in dye doped polymeric waveguides and the dependence of excitation geometry on coherent random lasing," *J. Phys. D: Appl. Phys.* **53**, 245104 (2020).
21. Anirban Sarkar, **B. N. Shivakiran Bhaktha** and Jonathan Andreasen, "Replica Symmetry Breaking in a Weakly Scattering Optofluidic Random Laser," *Sci. Reports* **10**, 2628 (2020).
22. Subhajit Jana, Subhrajit Mukherjee, Arup Ghorai, **Shivakiran B. N. Bhaktha** and Samit Kumar Ray, "Negative Thermal Quenching and Size-Dependent Optical Characteristics of Highly Luminescent Phosphorene Nanocrystals," *Advanced Optical Materials* **8,** 2000180 (2020).
23. R. K. Chowdhury, S. Mukherjee, **S. N. B. Bhaktha**, and S. K. Ray, "Ultrafast real-time observation of double Fano resonances in discrete excitons and single plasmon-continuum," *Phys. Rev. B.* **101**, 245442 (2020).
24. Rup K Chowdhury, Prasanta K Datta, **Shivakiran N B Bhaktha**, and Samit K Ray, "Ultrafast Investigation of Individual Bright Exciton-Plasmon Polaritons in Size-Tunable Metal-WS_2 Hybrid Nanostructures," *Advanced Optical Materials* **8**, 1901645 (2020).
25. Subhabrata Ghosh, Debabrata Mandal, Amreesh Chandra, and **Shivakiran N. B. Bhaktha**, "Effect of Laser Irradiation on Graphene Oxide Integrated TE-Pass Waveguide Polarizer," *Journal of Lightwave Technology* **37**, 2380 (2019).
26. Romala Sattibabu, **Shivakiran Bhaktha B N**, and Pranabendu Ganguly, "Estimation of fiber-waveguide coupling loss and waveguide propagation loss by spectral analysis," *IEEE Photonics Technology Letters* **31**, 517 (2019).
27. Pratyusha Das, Subhrajit Mukherjee, Meher Wan, Samit K Ray, **Shivakiran Bhaktha B N**, "Optical Tamm State Aided Room – temperature Amplified Spontaneous Emission from Carbon Quantum Dots Embedded One-dimensional Photonic Crystals," *J. Phys. D: Appl. Phys.* **52**, 035102 (2019).
28. Rup K Chowdhury, Snehasish Nandy, Sayantan Bhattacharya, Manobina Karmakar, **Shivakiran N B Bhaktha**, Prasanta K Datta, Arghya Taraphder and Samit K Ray, "Ultrafast time-resolved investigations of excitons and biexcitons at room temperature in layered WS_2," *2D Mater.* **6**, 015011 (2019).
29. Subhabrata Ghosh and **Shivakiran Bhaktha B. N.**, "Effect of structural evolution of ZnO/HfO_2 nanocrystals on Eu^{2+}/Eu^{3+} emission in glass-ceramic waveguides for photonic applications," *Nanotechnology* **29**, 225202 (2018).
30. Anirban Sarkar, N. N. Subhashree Ojha, and **Shivakiran Bhaktha B. N.**, "Effect of Photonic Stop-band on the Modes of a Weakly Scattering DCM-PVA Waveguide Random Laser," *Appl. Phys. Lett.* **110**, 251104 (2017).
31. Apurba Maity, Anirban Sarkar, Amit Sil, **Shivakiran Bhaktha B. N.**, Sanjib K. Patra, "Synthesis, Photophysical and Concentration Dependent Tunable Lasing Behavior of 2,6-Diacetynyl Functionalized BODIPY Dyes," *New Journal of Chemistry* **41**, 2296 (2017).
32. Anna Lukowiak, Lidia Zur, Thi Ngoc Lam Tran, Marcello Meneghetti, Simone Berneschi, Gualtiero Nunzi Conti, Stefano Pelli, Cosimo Trono, **B.N. Shivakiran Bhaktha**, Daniele Zonta, Stefano Taccheo, Giancarlo C. Righini and Maurizio Ferrari, "Sol–gel-derived glass-ceramic photorefractive films for photonic structures," *Crystals*, **7** 61 (2017)**.**
33. Subhabrata Ghosh, K. Uma Mahendra Kumar, and **Shivakiran Bhaktha B. N.**, "Heat-treatment controlled structural and optical properties of sol-gel fabricated Eu:ZnO thin films," *Optical Materials* **64**, 288 (2017).
34. Subhabrata Ghosh, Sreeramulu Valligatla, Anna Lukowiak, Alessandro Chiasera, Maurizio Ferrari, **B.N. Shivakiran Bhaktha**, "Time-resolved photoluminescence studies in Eu-doped SiO_2 – HfO_2 – ZnO glass-ceramic waveguides," *Ceramics International* **43**, 1145 (2017).
35. Anirban Sarkar, **Shivakiran Bhaktha B. N.**, Sugata Pratik Khastgir, "Optofluidic 2-D grating volume refractive index sensor," *Applied Optics* **55**, 7247 (2016).
36. S. Bhattachraya, R. Maiti, A. C. Das, S. Saha, S. Mondal, S. K. Ray, **S. N. B. Bhaktha**, and P. K. Datta, "Efficient control of ultrafast optical nonlinearity of reduced graphene oxide by infrared reduction," *J. Appl. Phys.* **120**, 013101 (2016) (doi: 10.1063/1.4955140)
37. Arijit Sarkar, Narendar Gogurla, **B N Shivakiran Bhaktha**, and Samit K Ray, "Plasmonic enhanced optical characteristics of Ag nanostructured ZnO thin films," *Materials Research Express* **3,** 046403 (2016).
38. Subhabrata Ghosh and **Shivakiran Bhaktha B. N.**, "Eu-doped ZnO-HfO_2 hybrid nanocrystal-embedded low-loss glass-ceramic waveguides," *Nanotechnology* **27**, 105202 (2016).
39. Pratyusha Das, Rishi Maiti, Prahalad K. Barman, Samit K. Ray and **Shivakiran Bhaktha B.N.**, "Mono- to few-layered graphene oxide embedded randomness assisted microcavity amplified spontaneous emission source," *Nanotechnology* **27**, 055201 (2016).
40. Sreeramulu Valligatla, Alessandro Chiasera, Stefano Varas, Pratyusha Das, **B.N. Shivakiran Bhaktha**, Anna Łukowiak, Francesco Scotognella, D. Narayana Rao, Roberta Ramponi, Giancarlo C. Righini, Maurizio Ferrari, "Optical field enhanced nonlinear absorption and optical limiting properties of 1-D dielectric photonic crystal with ZnO defect," *Optical Materials* **50,** 229 (2015).
41. Anirban Sarkar, **Shivakiran Bhaktha B. N.**, "Signatures of periodicity and randomness in the angular emission profile of a 2-D on-average periodic optofluidic random laser," *Optics Letters* **40**, 4951 (2015).
42. Pratyusha Das, Rishi Maiti, Samit K Ray and **Shivakiran Bhaktha B. N.**, "Increased photon density of states at defect-mode frequencies led enhancement of tunability of spontaneous emission from $Eu^{2+,3+}$ doped SiO_2 / SnO_2 one-dimensional photonic crystals," *Materials Research Express* **2**, 036201 (2015). (DOI: 10.1088/2053-1591/2/3/036201)
43. Jonathan Andreasen, Nicolas Bachelard, **Shivakiran Bhaktha B. N.**, Hui Cao, Patrick Sebbah, Christian Vanneste, "Partially pumped random lasers," *Review article: International Journal of Modern Physics B.* **28,** 1430001 (2014).

44. Kumara Raja Kandula, Anirban Sarkar, and **B. N. Shivakiran Bhaktha,** "Sol-gel fabrication and characterization of ZnO and Zn_2SiO_4 nanoparticles embedded silica glass-ceramic waveguides," *Optical Materials Express* **3**, 2078-2085 (2013).
45. **Shivakiran Bhaktha**, Nicolas Bachelard, Xavier Noblin, and Patrick Sebbah, "Random Laser Emission in Innovative Structured Optofluidic Channel," *CLEO:QELS 2012, 6-11 May 2012, San Jose*, (2012).
46. Antoine Monmayrant, Olivier Gauthier-Lafaye, Sophie Bonnefont, **Shivakiran Bhaktha**, Christian Vanneste, Nicolas Bachelard, Patrick Sebbah, and Françoise Lozes-Dupuy, "Random laser in totally disordered 2D GaAs/AlGaAs heterostructures," *CLEO:QELS 2012, 6-11 May 2012, San Jose*, (2012).
47. **Shivakiran Bhaktha B.N.**, Nicolas Bachelard, Xavier Noblin, Patrick Sebbah, "Optofluidic random laser," *Appl. Phys. Lett.* **101**, 151101 (2012). (DOI: 10.1063/1.4757872).
This paper has been selected as an update in Physics Today (October 11, 2012):
"An optofluidic random laser" by Richard Fitzgerald
This paper received a highlight covering in Nature Photonics (January 2013):
"Optofluidics Laser in Random form", by Rachel Won
48. Wilfried Blanc, Valérie Mauroy, Luan Nguyen, **Shivakiran Bhaktha B.N.**, Patrick Sebbah, Bishnu P. Pal, and Bernard Dussardier, "Rare Earth-Doped Transparent Glass Ceramic Optical Fibers Prepared by Modified Chemical Vapor Deposition," *J. Am. Ceram. Soc.*, **94,** 2315 (2011).
49. S. Berneschi, S. Soria, G.C. Righini, G. Alombert-Goget, A. Chiappini, A. Chiasera, Y. Jestin, M. Ferrari, S. Guddala, E. Moser, **S.N.B. Bhaktha**, B. Boulard, C. Duverger Arfuso, S. Turrell, "Rare-earth-activated glass–ceramic waveguides", *Optical Materials* **32**, 1644 (2010).
50. T. Van Tran, S. Turrell, M. Eddafi, B. Capoen, M. Bouazaoui, P. Roussel, S. Berneschi, G. Righini, M. Ferrari, **S.N.B. Bhaktha**, O. Cristini, C. Kinowski, "Investigations of the effects of the growth of SnO_2 nanoparticles on the structural properties of glass-ceramic planar waveguides using Raman and FTIR spectroscopies", *J. Mol. Struct.* **976**, 314 (2010).
51. **Shivakiran Bhaktha B.N.**, Simone Berneschi, Gualtiero Nunzi Conti, Giancarlo C. Righini, Andrea Chiappini, Alessandro Chiasera, Maurizio Ferrari, Sylvia Turrell, "Spatially localized UV-induced crystallization of SnO_2 in photorefractive SiO_2-SnO_2 thin film", *SPIE Proc.*, **7719**, (2010). (DOI: 10.1117/12.854894)
52. M. Clara Gonçalves, Luis M. Fortes, Rui M. Almeida, Alessandro Chiasera, Andrea Chiappini, Maurizio Ferrari, **Shivakiran Bhaktha**, "Photoluminescence in Er^{3+}/Yb^{3+}-doped silica-titania inverse opal structures", *J. Sol-Gel Sci. Technol.* **55**, 52 (2010). (DOI: 10.1007/s10971-010-2212-y)
53. S. Berneschi, **S.N.B. Bhaktha**, A. Chiappini, A. Chiasera, M. Ferrari, C. Kinowski, S. Turrell, C. Trono, M. Brenci, I. Cacciari, G. Nunzi Conti, S. Pelli, G. C. Righini, "Highly photorefractive Eu^{3+} activated sol-gel SiO_2 – SnO_2 thin film waveguides", *SPIE Proc*., 7604, 76040Z-1 (2010). (DOI: 10.1117/12.843210)
54. G. Alombert-Goget, C. Armellini, **S.N.B. Bhaktha**, B. Boulard, A. Chiappini, A. Chiasera, C. Duverger-Arfuso, P. Féron, M. Ferrari, R.R. Gonçalves, Y. Jestin, L. Minati, A. Monteil, E. Moser, G. Nunzi Conti, R. Osellame, S. Pelli, A. Quandt, R. Ramponi, D. N. Rao, G.C. Righini, G. Speranza, K.C. Vishnubhatla, "Silica-hafnia-based photonic systems", *The Mediterranean Journal of Electronics and Communications* **6**, 8-17 (2010).
55. **B.N. Shivakiran Bhaktha**, Christophe Kinowski, Mohamed Bouazaoui, Bruno Capoen, Odile Robbe-Cristini, Franck Beclin, Pascal Roussel, Maurizio Ferrari, and Sylvia Turrell, "Controlled growth of SnO_2 nanocrystals in Eu^{3+} doped SiO_2-SnO_2 planar-waveguides: a spectroscopic investigation", *J. Phys. Chem. C* **113**, 21555-21559 (2009). (DOI: 10.1021/jp907764p)
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Recent Conferences (International / National):

1. Bhargavi Veeraghattam, Renu Yadav, Prasantha Kumar Guha, **Shivakiran Bhaktha B. N.**, "Dye doped polymer inverse opal random laser for refractive index sensing," *DAE-BRNS National Laser Symposium NLS-31*, 3-6 December, 2022, IIT Kharagpur, India.
2. R. Yadav, S. Pal, S. Jana, S. K. Ray, M. M. Brundavanam and **S. Bhaktha B. N.**, "Plasmonic and polarization effects in a strongly scattering random laser," *DAE-BRNS National Laser Symposium NLS-31*, 3-6 December, 2022, IIT Kharagpur, India.
3. Sarbojit Mukherjee, Somnath Pandit, R Hemant Kumar, Khanindra Pathak, **Shivakiran Bhaktha B.N.**, "Laser micromachined Moiré pattern strain sensors on polymer membrane," *DAE-BRNS National Laser Symposium NLS-31*, 3-6 December, 2022, IIT Kharagpur, India.
4. Subhajit Jana, Sourabh Pal, **Shivakiran Bhaktha B. N.**, and Samit K. Ray, "Plasmonic Au-Nanoislands Mediated Enhanced Photoresponse of 2D $MoSe_2$ Nanoflakes/1D ZnO Nanorods Mixed-Dimensional Heterostructure," *DAE-BRNS National Laser Symposium NLS-31*, 3-6 December, 2022, IIT Kharagpur, India.
5. Sudha Maria L S, S. Pandit, S. Patra, S. Dutta, D. Banerjee, and **S. Bhaktha B N**, "Random Laser Emission in One-Dimensional Photonic Crystal Super Tamm Structure," *DAE-BRNS National Laser Symposium NLS-31*, 3-6 December, 2022, IIT Kharagpur, India.
6. Invited Talk: Priyanka S. Choubey, Renu Yadav, Anirban Sarkar, **Shivakiran Bhaktha B.N**., "Random Laser Spectroscopy," *COPaQ-2022, Conference on Optics, Photonics and Quantum optics*, November 10-13, 2022, IIT Roorkee, India.
7. Renu Yadav, Maruthi M. Brundavanam and **Shivakiran Bhaktha B. N.**, "Studies on the Polarization Properties of the Modes of Optofluidic Random Laser," *COPaQ-2022, Conference on Optics, Photonics and Quantum optics*, November 10-13, 2022, IIT Roorkee, India.
8. Rina Mudi, **Shivakiran Bhaktha B.N.**, Kapil Debnath, "Mechanical tunability of three-dimensional photonic crystal inverse opal based structures," *COPaQ-2022, Conference on Optics, Photonics and Quantum optics*, November 10-13, 2022, IIT Roorkee, India.

9. Sarbojit Mukherjee, Khanindra Pathak, **Shivakiran Bhaktha B.N.**, "Optical crack monitoring in mines using three different optical strain detection technique," *COPaQ-2022, Conference on Optics, Photonics and Quantum optics*, November 10-13, 2022, IIT Roorkee, India.
10. Subhajit Dutta, **Shivakiran Bhaktha B. N.**, "Fabrication of dye doped polymer micro disc resonators using electron beam lithography," *COPaQ-2022, Conference on Optics, Photonics and Quantum optics*, November 10-13, 2022, IIT Roorkee, India.
11. Sudha Maria Lis S, Somnath Pandit, Someprosad Patra, Debamalya Banerjee, and **Shivakiran Bhaktha B N**, "Spectral Narrowing of Amplified Spontaneous Emission in One-Dimensional Photonic Crystal Super Tamm Structure," *COPaQ-2022, Conference on Optics, Photonics and Quantum optics*, November 10-13, 2022, IIT Roorkee, India.
12. Rina Mudi, **Shivakiran Bhaktha B.N.**, Kapil Debnath, "Tamm state in three-dimensional opal based photonic crystal" *Frontiers in Optics: The OSA Annual Meeting and Exhibit/Laser Science*, October 17 – 20, 2022, Rochester, United States.
13. Priyanka S. Choubey, Shailendra K. Varshney and **Shivakiran Bhaktha B. N**., "Effect of Whispering-Gallery Modes on Random Lasing from Dye Doped Polymer Bottle Resonator," *PHOTONICS 2018, 14th International Conference on Fiber Optics and Photonics*, December 12-15, 2018, IIT Delhi, India.
14. Romala Sattibabu, **Shivakiran Bhaktha B N**, and Pranabendu Ganguly, "Spectral analysis technique for determination of fiber-waveguide coupling loss and waveguide propagation loss," *PHOTONICS 2018, 14th International Conference on Fiber Optics and Photonics*, December 12-15, 2018, IIT Delhi, India.
15. Romala Sattibabu, **Shivakiran Bhaktha B N**, and Pranabendu Ganguly, "Design of reversible Feynman gate using directional couplers," *PHOTONICS 2018, 14th International Conference on Fiber Optics and Photonics*, December 12-15, 2018, IIT Delhi, India.
16. Pratyusha Das, Meher Wan, Subhrajit Mukherjee, Samit K Ray and **Shivakiran Bhaktha B N**, "Carbon-dots Embedded Glass Based Inverse Micropillar Structures by Two-photon Polymerization Process," *Frontiers in Optics: The OSA Annual Meeting and Exhibit/Laser Science*, September 16 – 20, 2018, Washington DC, United States.
17. Priyanka S.Choubey, Shailendra K. Varshney and **Shivakiran Bhaktha B. N.**, "Fabrication of Active Microdisc Resonators using Solvent Immersion Imprint Lithography," *Frontiers in Optics: The OSA Annual Meeting and Exhibit/Laser Science*, September 16 – 20, 2018, Washington DC, United States.
18. Subhabrata Ghosh, **Shivakiran N. B. Bhaktha**, "Effect of ZnO-HfO_2 hybrid nanocrystals on amplified spontaneous emission in Eu-doped ternary glass-ceramic waveguides," *SPIE Photonics Europe 2018*, 22nd-26th April 2018, Strasbourg, France.
19. Sudha Maria Lis S., Meher Wan, Pratyusha Das, **Shivakiran N. B. Bhaktha,** "Studies on coupling between guided modes and tamm states in one-dimensional photonic crystals," *SPIE Photonics Europe 2018*, 22nd-26th April 2018, Strasbourg, France.
20. Priyanka S. Choubey, Shailendra K. Varshney, **Shivakiran Bhaktha B. N.**, "Whispering gallery mode-assisted random lasing in dye-doped PVA coated silica microsphere," *SPIE Photonics Europe 2018*, 22nd-26th April 2018, Strasbourg, France.
21. Oral Presentation: Pratyusha Das, Subhrajit Mukherjee, Meher Wan, Samit K. Ray, **Shivakiran N. B. Bhaktha**, "Studies on carbon dots embedded Tamm plasmon polariton structures," *SPIE Photonics Europe 2018*, 22nd-26th April 2018, Strasbourg, France.
22. Invited Talk: **Shivakiran Bhaktha B. N.**, "Mirrorless Microlasers," *Short Term Course on Fundamentals of Nanomaterials for Applications in Photonics (FNAP-2018)*, 9-13 April, 2018, Dept. of Physics, NIT Durgapur.
23. Invited talk: Anirban Sarkar, Pratyusha Das, N. N. Subhashree Ojha, **Shivakiran Bhaktha B. N**., "Effect of Photonic Crystals on Emitters in Random Media," *Symposium on "30 years of Photonic Crystals – the Indian Research Scenario,"* September 21-23, 2017, IIT Kanpur.
24. Invited talk: Anirban Sarkar, Jonathan Andreasen, **Shivakiran Bhaktha B. N.**, "Modes of an Optofluidic Random Laser," *International Conference on Complex Photonics*, January 22-24, 2017, TIFR, Mumbai.
25. Anirban Sarkar, Jonathan Andreasen, **Shivakiran Bhaktha B. N**, "Spatial Distribution of Lasing Modes in an Optofluidic Random Laser Mapped by a Pump-Probe Technique," *International Conference on Complex Photonics*, January 22-24, 2017, TIFR, Mumbai.
26. Anirban Sarkar, N. N. Subhashree Ojha, and **Shivakiran Bhaktha B. N.**, "Effect of Opal Based Resonating Cavity on Random Laser Emission from a Dye Doped Polymer Waveguide," *PHOTONICS 2016, 13th International Conference on Fiber Optics and Photonics*, December 4-8, 2016, IIT Kanpur, India.
27. Pratyusha Das, Subhrajit Mukherjee, Samit K. Ray, **Shivakiran Bhaktha B. N.**, "Optical Tamm States aided Random Laser Emission in Dye-Doped Polymer films deposited on One-dimensional Photonic Crystals," *PHOTONICS 2016, 13th International Conference on Fiber Optics and Photonics*, December 4-8, 2016, IIT Kanpur, India.
28. S. Bhattacharya, A. Ghorai, S. Saha, A. C. Das, R. Maiti, A. Midya, S.K. Ray, **S. N. B. Bhaktha** and P. K. Datta, "Tunability of Ultrafast Transient Optical Response from IR Induced Reduction of Graphene Oxide Under Time Resolved Pump Probe Spectroscopy," *PHOTONICS 2016, 13th International Conference on Fiber Optics and Photonics*, December 4-8, 2016, IIT Kanpur, India.
29. Anirban Sarkar, Jonathan Andreasen, and **Shivakiran Bhaktha B. N.**, "Boundary-concentrated Modes of a 2-D Optofluidic Random Laser Mapped Using a Pump-probe Technique," *Frontiers in Optics: The 100th OSA Annual Meeting and Exhibit/Laser Science XXXII*, October 17 – 21, 2016, Rochester, New York, United States.
30. Subhabrata Ghosh and **Shivakiran Bhaktha B. N.**, "Eu-doped ZnO-HfO_2 hybrid nanocrystals embedded glass-ceramic waveguides as blue-light emitting source," *Frontiers in Optics: The 100th OSA Annual Meeting and Exhibit/Laser Science XXXII*, October 17 – 21, 2016, Rochester, New York, United States.

31. Invited talk: **Shivakiran Bhaktha B. N.**, "Modes in an Optofluidic Random Laser," *Recent Advances in Optical Sciences-II (RAOS-II)*, May 6-7, 2016, University of Hyderabad, Hyderabad.
32. Subhabrata Ghosh and **Shivakiran Bhaktha B.N.**, "Low-loss glass-ceramic channel waveguides composed of ZnO-HfO_2 hybrid nanocrystals," *Recent Advances in Optical Sciences-II (RAOS-II)*, May 6-7, 2016, University of Hyderabad, Hyderabad.
33. Anirban Sarkar and **Shivakiran Bhaktha B. N**., "Spatial Mapping of Lasing Modes in a 2-D Optofluidic Random Laser," *Recent Advances in Optical Sciences-II (RAOS-II)*, May 6-7, 2016, University of Hyderabad, Hyderabad.
34. S. Bhattachraya, R. Maiti, S. Saha, A.C.Das, S. Mondal, S. K. Ray, **S. B. N. Bhaktha** and P. K. Datta, "Infrared reduction, an efficient method to control the non-linear optical property of graphene oxide in femtosecond regime," *SPIE Photonics Europe 2016*, April 3-7, 2016, Brussels, Belgium.
35. Pratyusha Das, Rishi Maiti, Camilla Baratto, Giorgio Sberveglieri, **Bhaktha B N Shivakiran** and Samit K Ray, "Few-layered graphene oxide embedded 1DPhC microcavity for amplified spontaneous emission source," *Graphene 2016*, 19-22 April, 2016, Genova, Italy.
36. Anirban Sarkar, **Shivakiran Bhaktha B. N.**, S. P. Khastgir, "Optofluidic 2-D grating refractive index sensor," *National Workshop on Advances in Photonics*, 13-14 November, 2015, IIT Kharagpur.
37. Pratyusha Das, Rishi Maiti, Prahalad K Barman, Samit K Ray and **S N B Bhaktha,** "Graphene Oxide Incorporated Low-threshold Micro-cavity Tunable Laser," *National Workshop on Advances in Photonics*, 13-14 November, 2015, IIT Kharagpur.
38. Subhabrata Ghosh, and **Shivakiran Bhaktha B.N.**, "Eu-doped SiO_2–HfO_2–ZnO ternary waveguides: A hybrid glass-ceramics," *National Workshop on Advances in Photonics*, 13-14 November, 2015, IIT Kharagpur.
39. Romala Sattibabu, Priyanka S. Choubey, Rishi Maiti, S.K. Ray, S.K. Varshney, **B.N. Shivakiran Bhaktha**, "Fabrication of mono- to few-layered graphene oxide coated microspheres," *National Workshop on Advances in Photonics*, 13-14 November, 2015, IIT Kharagpur.
40. Anirban Sarkar, **Shivakiran Bhaktha B. N.**, "Angular Distribution of the Emission of a 2-D Optofluidic Random Laser," *Frontiers in Optics: The 99th OSA Annual Meeting and Exhibit/Laser Science XXXI*, October 18-22, 2015, Fairmont San Jose, California, USA.
41. Invited talk: Anirban Sarkar, Anuj Pratim Lara, Subhabrata Ghosh, Pratyusha Das, Romala Sattibabu, and **Shivakiran Bhaktha B. N.**, "From periodic structures to random photonic structures," *Summer School on Optics & Photonics 2015*, June 2-12, 2015, St. Xavier's College, Kolkata, India.
42. Subhabrata Ghosh and **Shivakiran Bhaktha B.N.**, "Energy transfer studies in ZnO nanoparticles embedded SiO_2-HfO_2:Eu^{3+} glass-ceramic waveguides" *1st International Conference on Alumina and other Functional Ceramics (AOFC-2015)*, 11-13 March, 2015, CSIR-Central Glass & Ceramic Research Institute, Kolkata, India.
43. Invited talk: Pratyusha Das, Subhabrata Ghosh, Anirban Sarkar, Prahalad Kanti Barman, **B. N. Shivakiran Bhaktha**, "Nanostructured sol-gel thinfilms for nanophotonic applications," *2nd International Conference on Frontiers of Nanoscience, Technology and Applications FINSTA'14*, December 20-22, 2014, Prasanthinilayam, A.P. India.
44. Anirban Sarkar and **Shivakiran Bhaktha B. N.**, "Experimental Investigations of the Emission from a 2D Optofluidic Random Laser," *PHOTONICS 2014, 12th International Conference on Fiber Optics and Photonics*, December 13-16, 2014, IIT Kharagpur, India.
45. Arijit Sarkar, Narendar Gogurla, **B. N. Shivakiran Bhaktha** and Samit Kumar Ray, "Plasmonic Ag-ZnO nanostructure thin films for optoelectronic devices," *12th International Conference on Fiber Optics and Photonics*, December 13-16, 2014, IIT Kharagpur, India.
46. Pratyusha Das, Rishi Maiti, Prahalad K. Barman, Samit K. Ray, **Shivakiran Bhaktha B. N.**, "Spectral Management of $Eu^{2+,3+}$ Emission in Sol-Gel Fabricated One-dimensional Photonic Crystals," *12th International Conference on Fiber Optics and Photonics*, December 13-16, 2014, IIT Kharagpur, India.
47. Subhabrata Ghosh, **Shivakiran Bhaktha B.N.**, "Sol-gel fabrication of active SiO2-ZnO glass-ceramic planar waveguides on silica-on-silicon substrates," *12th International Conference on Fiber Optics and Photonics*, December 13-16, 2014, IIT Kharagpur, India.
48. Anirban Sarkar and **Shivakiran Bhaktha B. N.**, "Effect of Spatial Distribution of the Pump Energy on Random Lasing from a Structured 2D Optofluidic Reservoir," *DAE-BRNS National Laser Symposium (NLS-23)*, December 3-6, 2014, S.V. University, A.P., India.
49. Subhabrata Ghosh and **Shivakiran Bhaktha B.N.**, "Fabry-Perot interference characteristics in Sol-Gel fabricated SiO2-ZnO glass-ceramic planar waveguide," *DAE-BRNS National Laser Symposium (NLS-23)*, December 3-6, 2014, S.V. University, A.P., India.
50. Arijit Sarkar, Narendar Gogurla, **B. N. Shivakiran Bhaktha** and Samit K Ray, "Plasmonic enhancement of optical properties of ZnO-Ag nanostructured thin films for photonic applications," *International Conference on optics and optoelectronics (ICOL-2014)*, March 5-8, 2014, IRDE, Dehradun, India.
51. O. Gauthier-Lafaye, J. Campos, A. Monmayrant, F. Lozes-Dupuy, S. N. B. Bhaktha, P. Sebbah, and C. Vanneste, "Random laser on planar GaAs waveguides," *SPIE Photonics West* 2014, February 1-6, 2014, San Francisco, USA.
52. N. Bachelard, Shivakiran Bhaktha, X. Noblin, S. Gigan, P. Sebbah, "Active control of the emission of an optofluidic random laser," *2nd EOS Conference on Optofluidics (EOSOF 2013)*, May 13 – 15, 2013, Munich, Germany.
53. Arindam Nag, Kumara Raja Kandula, Anirban Sarkar, Shivakiran Bhaktha B.N., "Controlled growth of 3D photonic crystals by Langmuir-Blodgett technique," *India-Singapore Joint Physics Symposium 2013*, February 25-27, 2013, IIT Kharagpur, India.

54. **Shivakiran Bhaktha B.N.**, Anirban Sarkar, Kumara Raja Kandula, Xavier Noblin, Nicolas Bachelard, Patrick Sebbah, "Experimental Investigations of Random Laser Emission in a Microfluidic Channel," *PHOTONICS 2012, The International Conference on Fiber Optics and Photonics*, December 9-12, 2012, IIT Madras, India.
55. S. Guddala, **S. N. B. Bhaktha**, C. Armellini, A. Chiappini, S. Turrel, G. C. Righini, M. Ferrari, and D. Narayana Rao, "Low-Loss Erbium Activated Silica-Tin oxide Planar Waveguides," *PHOTONICS 2012, The International Conference on Fiber Optics and Photonics*, December 9-12, 2012, IIT Madras, India.
56. Antoine Monmayrant, Olivier Gauthier-Lafaye, Sophie Bonnefont, **Shivakiran Bhaktha**, Christian Vanneste, Nicolas Bachelard, Patrick Sebbah, and Françoise Lozes-Dupuy, "Random laser in totally disordered 2D GaAs/AlGaAs heterostructures," *CLEO:QELS 2012*, 6-11 May 2012, San Jose Convention Center, San Jose, CA, USA. (Oral Presentation by Antoine M.)
57. **Shivakiran Bhaktha**, Nicolas Bachelard, Xavier Noblin, and Patrick Sebbah, "Random Laser Emission in Innovative Structured Optofluidic Channel," *CLEO:QELS 2012*, 6-11 May 2012, San Jose Convention Center, San Jose, CA, USA.
58. **Shivakiran N. Bhaktha Bantwal Narasimha**, X. Noblin, Nicolas Bachelard, and Patrick Sebbah, "Random Laser Emission in Innovative Structured Optofluidic Channel," *META'12, the 3rd International Conference on Metamaterials, Photonic Crystals and Plasmonics*, 19-22 April 2012, Paris, France. (Oral Presentation by Patrick Sebbah)
59. Antoine Monmayrant, Olivier Gauthier-Lafaye, Sophie Bonnefont, **Shivakiran Bhaktha**, Christian Vanneste, Nicolas Bachelard, Patrick Sebbah, and Françoise Lozes-Dupuy, "Random laser in totally disordered 2D GaAs/AlGaAs heterostructures," *META'12, The 3rd International Conference on Metamaterials, Photonic Crystals and Plasmonics*, 19-22 April 2012, Paris, France. (Oral Presentation by Antoine M.)
60. **Shivakiran N. Bhaktha Bantwal Narasimha**, X. Noblin, Nicolas Bachelard, and Patrick Sebbah, "Random Laser Emission in Innovative Structured Optofluidic Channel," *SPIE Photonics Europe*, 16-19 April 2012, Square Brussels Meeting Centre, Brussels, Belgium.
61. Antoine Monmayrant, Olivier Gauthier-Lafaye, Sophie Bonnefont, **Shivakiran Bhaktha**, Christian Vanneste, Nicolas Bachelard, Patrick Sebbah, and Françoise Lozes-Dupuy, "Random laser in totally disordered 2D GaAs/AlGaAs heterostructures," *SPIE Photonics Europe*, 16-19 April 2012, Square Brussels Meeting Centre, Brussels, Belgium.
62. Invited talk: **Shivakiran Bhaktha B.N.**, Xavier Noblin, Olivier Gauthier-Lafaye, Sophie Bonnefont, Antoine Monmayrant, Françoise Lozes-Dupuy, Christian Vanneste, and Patrick Sebbah, "Exploring random-lasing in structured optofluidic channel and randomly perforated GaAs membranes," *Workshop on Recent Trends in Nanophotonics*, 30th Sept - 1st Oct, 2011, IIT Delhi.
63. Oral Presentation **Shivakiran Bhaktha B.N.**, Olivier Gauthier-Lafaye, Sophie Bonnefont, Antoine Monmayrant, Françoise Lozes-Dupuy, Christian Vanneste, Patrick Sebbah, "Light Diffusion in Active Disordered 2-D GaAs Membranes," *PHOTONICS 2010, The International Conference on Fiber Optics and Photonics*, December 11-15, 2010, IIT Guwahati, India.
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