Curriculum Vitae

Partha RoyChaudhuri

Professor, Department of Physics, IIT Kharagpur
Email: roycp@phy.iitkgp.ac.in

Specialisation:

- Fiber & Integrated Optics
- Optoelectronics
- Experimental Photonics

Current Research Interest:

- Optical Fiber Components/Devices: *Nonlinear Fiber Devices, Supercontinuum Sources, Amplifiers, Lasers, Fiber Sensors, Experiments and Instrumentation*
- Photonic Crystal Waveguides/Fiber: *Designing, Experimental Characterization*
- Optical Imaging: *Anisotropic/ Imaging Experiments, Low-Coherence, Angle Resolved and Differential Interferometry*

Academics

Ph.D., Physics, 2001, awarded by **Indian Institute of Technology Delhi**

Doctoral Thesis

Technology and modeling of fused single-mode fiber coupler components

Technical Know-How/Developments

Fused coupler based all-fiber components: Process Technology
MCVD Fabrication Technology of Optical Fibers, Photonics Crystal Fiber

Software Copyright

PULLSIG© (*Computer generated pulling signature for fabricating Fused Biconical Tapered couplers*)

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Patent Granted

Title: **METHOD AND SYSTEM FOR RECONSTRUCTION OF MOVING VOIDS**

Patent Application No.: **201631003910** dated February 03, 2016, **Patent No: 393589 on March 30, 2022**

In the Name of: INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

Ref: IIT/SRIC/IPR/201, Patent Office Ref: PEE06035

Professional Society Membership

Optical Society of India (OSI, *Life Member*)

Optical Society of America (OSA, *Regular*)

Institute of Electronics & Telecommunication Engineers (IETE, *Life Member*)

Indian Science Congress Association (ISCA, *Life Member*)

KIT International Exchange Club (Regular)

Research Positions/Employment

(March 2018 – to-date)
Professor: Department of Physics, Indian Institute of Technology Kharagpur

(June 2011 – March 2018)
Associate Professor: Department of Physics, Indian Institute of Technology Kharagpur

(June 2005 – June 2011)
Assistant Professor: Department of Physics, Indian Institute of Technology Kharagpur

(May 2004 –June 2005)
Visiting Faculty: Department of Physics, Indian Institute of Technology Kharagpur

(June 2002– April 2004)
Research Scientist G3: Lightwave Department, Institute for Infocomm Research, Singapore

(Oct 2000 – March 2002)
Postdoctoral Researcher: Dept. of Electronics & Info. Sc., Kyoto Institute of Technology, Japan

(May 1995 – Sept 2000)
Ph.D. Student: Department of Physics, Indian Institute of Technology Delhi

Scientific Visits/Collaboration

(Oct – Nov 1998): International Center for Theoretical Physics Trieste, Italy
(V^{th} College on Microprocessor Applications)

(October 2003): Shanghai Institute of Sc. & Technology Shanghai, PR China
(Optoelectronics @ OECC'2003)

(June – July 2011): University of Padova, Italy
(Scientific Collaboration)

(June – July 2014): IOFFEE Institute, Saint Pitersburg, Russia
(Indo-Russia Joint Project & Nanostructure 2014)

(April 2015): City University London, UK
(Scientific Collaboration & OWTMN 2015)

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Theses Guidance

Ph.D. Theses: 8 awarded & **4** ongoing (all single-guidance)

- *Sourabh Roy* (April 2010): ***awarded***

  Thesis Title: ***Studies on Light Propagation in Optical Waveguides and Microstructured Optical Fibers and Devices***

- *Pijus Samanta* (August 2011): ***awarded***

  Thesis Title: ***Zno Nanostructures: Synthesis and Characterizations towards Nanophotonic Applications***

- *Kajol Mondal* **(**March 2014): ***awarded***

  Thesis Title: ***Light Propagation in Micro-Structured Holey Optical Fibers and Designing New Fibers and In-Line Active Devices***

- *Partha Sona Maji* (August 2015): ***awarded***

  Thesis Title: ***Dispersion Engineered Photonic Crystal Fibers for Active and Passive Device Applications***

- *Sudip Kr. Chatterjee* (July 2016): ***awarded***

  Thesis Title: ***Light Propagation in Multilayered Specialty Optical Fibers and Designing Nonlinear Fiber Devices and Photonic Sensors***

- *Saba Nashreen Khan*: (February 2017) ***awarded***

  Thesis Title: ***Technology and Modeling of Few-mode Fibers and Devices towards Spatial Beam generation and Multi-parameter Sensing***

- *Somarpita Prodhan*: (June 2019) ***awarded***

  Thesis Title: ***Design, Fabrication and Experimental Studies on Low Magnetic Field Detection/ Sensing using Fiber Cantilever-Beam Deflection Magnetometers***

- *Isha Sharma*: ***ongoing***

  Thesis Title: ***Experimental investigation on Electric Field measurement and Sensing using Optical Fiber's Beam Deflection Configuration***

- *Protik Roy*: ***ongoing***

  Thesis Title: ***Experimental Photonics (exact title not decided)***

- *Mitali Sahu*: ***ongoing***

  Thesis Title: ***Experimental Photonics (exact title not decided)***

- *Abhisek Roy*: ***ongoing***

  Thesis Title: ***Experimental Photonics (exact title not decided)***

M.Sc./M.Tech. Theses- 26 + 1 (completed, ongoing)

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Courses Teaching/Taught

Theory & Tutorials

- PH19001 **PHYSICS-I** : Theory & Tutorial (1st year Physics)
- PH43004 **MODERN OPTICS**: Theory (M.Sc. Core)
- PH21001 **ELECTRODYNAMICS-1:** Theory (2nd year M.Sc. Core)
- PH20003 **PHYSICS-II** : Tutorial (2nd year Physics)
- PH63001 **PHYSICS OF MEDICINE & BIOLOGY**: (1st year SMST)
- PH60052 **PHYSICS & TECHNOLOGY OF OPTICAL FIBER** : (M.Tech/M.Sc./Ph.D Elective)
- PH58009 **SEMICONDUCTOR & OPTOELECTRONIC DEVICES**: (M.Tech/M.Sc Elective)

Laboratory Courses

- PH19001 **PHYSICS-I** (1st year Physics)
- PH49005 **EM & OPTICS LAB-A** (2nd year Physics)
- PH39005 **ELECTROMAGNETISM & OPTICS LAB – II** (2nd year Physics)
- PH59008 **MODERN PHYSICS LAB** (1st year Physics)
- PH43004 **SOLID STATE TECHNOLOGY LAB** (M.Tech SST)
- PH43004 **MODERN OPTICS LAB** (3rd year Physics)
- PH63001 **MMST LAB** (1st yr MMST)

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Sponsored Projects/Research Grants

Ongoing

- **Project Title** : Very high efficiency CMOS compatible Si/Ge Thz waveguides for defence and Security applications

  Sponsor: **MHRD under IMPRINT Program**: Defence Research and Development **(DRDO)**, Govt. of India (Rs. 268.56 Lakhs)

- **Project Title** : Technology and modeling of chemically etched silica fiber based components and devices

  Sponsor: Department of Science & Technology **(DST)**, Govt. of India (Rs 31.5 Lakhs)

Completed

- **Project Title** : Detection/measurement of low magnetic field through phase modulation of optical fiber/photonic crystal fiber coated with ceramic magnetostrictive material

  Sponsor: Board of Research in Nuclear Sciences **(BRNS)**, Department of Atomic Energy, Govt. of India (Rs. 15.67 Lakhs)

- **Project Title** : Proposal for developing an advanced electromagnetic modeling platform for complex arbitrary microstructured fiber and designing inline active and nonlinear devices

  Sponsor: Department of Science & Technology **(DST)**, Govt. of India, (Rs. 11.8 Lakhs)

- **Project Title** : Development of Fluorescent Whole Cell Optical Fibre Biosensor for Heavy Metal Pollutants

  Sponsor: Department of Biotechnology **(DBT)**, Govt. of India, (Rs. 31.79 Lakhs)

- **Project Title** : Studies on Laser-Optical Fiber-Based Micro-Imaging Techniques in the Analysis of Tissue Structure and Detection of Abnormalities

  Sponsor: Sponsored Research and Industrial Consultancy Division **(ISRD)**, IIT (Rs. 5.00 Lakhs)

- **Project Title** : Technology Development and Research with Photonic Crystal Fibers and components for Advanced Photonic Sensor System

  Sponsor: Defence Research and Development **(DRDO)**, Govt. of India (Rs. 62.84 Lakhs)

- **Project Title** : R&D in Photonic Crystal Fibers: Design, Fabrication and Experimental Characterization for Applications in Optical Communications and Sensors

  Sponsor: Department of Science & Technology **(DST)**, Govt. of India (Rs. 35.38 Lakhs)

Other Projects as CO-PI

- **Project Title**: Terahertz Emission of Si/SiG Structures Doped with Shallow Acceptors

  Sponsor: Department of Science & Technology **(DST)**, Govt. of India (Rs. 9.63 Lakhs)

- **Project Title**: Fabrication of Doped Single-Mode Optical Fibers for Investigation of Bragg Grating Characteristics

  Sponsor: Defence research and Development **(DRDO)**, Govt. of India (Rs. 24.70 Lakhs)

- **Project Title**: Development of Preform for High Power Fiber Laser

  Sponsor: Board of Research in Nuclear Sciences **(BRNS)**, Department of Atomic Energy, Govt. of India (Rs. 24.69 Lakhs)

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Summary of Publication

Citations: https://scholar.google.com/citations?hl=en&user=QYmLn_oAAAAJ

Citation Indices	All	Chapters in Books/Edited Conference Volume	**6**
Citations	1405	International/ Refereed Journal Articles	**> 90**
h-Index	20	International Conference/Workshops	**> 100**
i10-Index	38	National Conference/Symposia/Workshops	**> 30**

Chapter Contribution in Books

(1) **Partha Roy Chaudhuri** and Somarpita Prodhan, Chapter titled *All-Optical Fiber-Cantilever Beam-Deflection Magnetometer: Detection of Low Magnetic Field and Magnetization Measurement* in **Advances in Optical Science and Engineering** by Indrani Bhattacharya et al. (Eds), **Springer in Physics 194**, ISBN: 978-981-10-3907-2, ***2017, Chapter 15, pages 127-140.***

(2) **Partha Roy Chaudhuri** and Kajol Mondal, Chapter titled *Light Propagation in Microstructured Optical Fibers and Designing High Gain Fiber Amplifier* in **Advances in Optical Science and Engineering** by V. Lakshminarayanan and Indrani Bhattacharya (Eds), **Springer in Physics 166**, ***2015, Chapter 7, pages 47-54.***

(3) B.P. Pal, **Partha Roy Chaudhuri**, M.R. Shenoy and Naveen Kumar, Chapter titled *Fused Fiber Coupler Components: Theory and Technology* in **Guided Wave Optical Components and Devices** by B. P. Pal (Ed.), **Elsevier Publishers**, Science and Technology Books, **Burlington, USA, *2004*, *Chapter 13, Pages 205-223***.

(4) B.P. Pal**,** M.R. Shenoy, **Partha Roy Chaudhuri**, and Naveen Kumar, Chapter titled *Fused Fiber Coupler Technology*: *A Versatile Platform for Fabrication of All-fiber Components*, **Recent Trends in Engineering Optics** by K. Singh and V.K. Rastogi (Eds.), ***Anita Publishers, New Delhi, 2003***.

(5) **Partha Roy Chaudhuri**, Chapter entitled *Optical Fiber Sensors and Devices: Physics & Technology*, in the Proceedings of **Advanced Opto-electronic Materials and Devices** (AOMD-2007)**,** Published by Dept of Electronics Engineering, IT-BHU, 2007.

(6) **Partha Roy Chaudhuri**, Chapter entitled *Some Passive All-Fiber Components for Optical Fiber Communication Systems: Physics & Technology*, in the Proceedings of **Advanced Opto-electronic Materials and Devices** (AOMD-2008), Published by Dept of Electronics Engineering, IT-BHU, 2008.

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International/ Refereed Journals

Recent Submissions

(1) Aayush Ranjan Keshava and Partha Roy Chaudhuri, "**Analogy of Image Method in Electrostatics with Image Formation in Geometric Optics: Exact Formulations**", *Journal of Electrostatics*, (*Elsevier*), *2022 under review*.

Published (latest first)

(2) Protik Roy and Partha Roy Chaudhuri, **Characteristics of Cladding Mode based Refractive Index Sensor using MMF-SMF-MMF Configuration,** Journal of Optics, Springer, ***Accepted*** May 2022 ***(In Press)***

(3) Jeeban Kumar Nayak, Partha Roy Chaudhuri, and Pankaj Kumar Sahoo,"**Stable hybrid plasmonic directional coupler based on an embedded silver nanostructure waveguide**", *Applied Optics* (OSA), Vol. 60 (25), **2021**, Pages.7603-7610. **https://doi.org/10.1364/AO.431598**

(4) Isha Sharma and Partha Roy Chaudhuri, "**A new approach to sensing low electric field using optical fibers' beam-deflection configuration with BiFe0.9Co0.1O3 nanoparticles as probe and determination of polarization**", *Optical Fiber Technology* (*Elsevier*), Academic Press, Vol. 62, March **2021**, Pages.102472. **https://doi.org/10.1016/j.yofte.2021.102472**

(5) Protik Roy and Partha Roy Chaudhuri, "**Analytical description of etched clad single-mode optical fiber based refractive index sensor for temperature sensing",** *A. Journal of Physics, A. P.*, Vol. 30, No. 6, June **2021**, Pages. 1-12.

(6) Partha Roy Chaudhuri, Isha Sharma, "**Determination of polarization properties of piezoelectric nanocomposite particles (BiFe0.9Co0.1O3) using fiber-optic cantilever beam deflection approach**", *Journal of Optics* (*Springer*), Vol. 50, Issue 4, 18 July **2021**, Pages.611-620. **https://link.springer.com/article/10.1007/s12596-021-00741-8**

(7) Moumita Dewan, Partha Roy Chaudhuri, Subhasish Basu Majumder and Isha Sharma, "**Performance of cobalt modified bismuth ferrite nanocomposite as probe transducer in weak magnetic field detection using fiber deflection configuration and control of sensitivity",** *A. Journal of Physics, A. P.*, Vol. 30, No. 5, May **2021**, Pages. 801-808.

(8) Sudip K Chatterjee, Saba N Khan, and Partha Roy Chaudhuri, "**Smooth Supercontinuum Generation in a Dispersion-Flattened Nonlinear Sub-wavelength Size High-index Core Bragg Fiber**", *A. Journal of Physics, A. P.*, Vol. 30, No. 8, August **2021**, Pages. 1-8.

(9) Partha Roy Chaudhuri and Somarpita Pradhan, "**Fiber cantilever deflection magnetometer in Fabry-Perot multi-mirror host for detection of mT field: Experimental demonstration and modeling**," *Optik* (*Elsevier*) - *International Journal for Light and Electron Optics*, Vol. 186, June **2019**, Pages. 99-109. **https://doi.org/10.1016/j.ijleo.2019.04.033**

(10) Partha Roy Chaudhuri, Saba N Khan and Sudip K Chatterjee, "**Manipulation of vector beams produced in optical fiber and an application as strain sensor**" *A. Journal of Physics, A. P.*, Vol. 28, Nos 7-9, July-September **2019**, Pages. 605-620.

(11) Kajal Mondal and Partha Roy Chaudhuri, "**Dispersion Tailoring in Circular Photonic Crystal Fibers for Ultraflattened Dispersion**", *IEEE Photonics Technology Letters*, Vol. 30, No. 10, May 15, **2018**, Pages. 951-954. **https://doi:/org/10.1109/LPT.2018.2824539**

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(12) Partha Roy Chaudhuri and Somarpita Pradhan, "**Demonstration of gain multiplication by series assembly of fiberoptic cantilever beam deflection: Measurement of low magnetic field and magnetization of probe samples**," *Optik* (*Elsevier*)- *International Journal for Light and Electron Optics*, Vol. 172, July **2018**, Pages. 412–423. **https://doi.org/10.1016/j.ijleo.2018.07.033**

(13) Saba N. Khan and Partha Roy Chaudhuri, "S**elective excitation of higher order modes in etched gelatin coated few-mode fiber and demonstration of high humidity measurement**", *Journal of Optical Society of America A, OSA*, Vol. 34, No. 1, January **2017**, Pages.122-132. **https://doi.org/10.1364/JOSAA.34.000122**

(14) Shazia Asif, Aparna Chaudhari, Gireesh-Babu P., Partha Roy Chaudhuri and Ramkrishna Sen, "**Immobilization of fluorescent whole cell biosensors for the improved detection of heavy metal pollutants present in aquatic environment**", *Materials Today: Proceedings3, Elsevier,* Vol. 3, December **2016**, Pages 3492-3497. **https://doi.org/10.1016/j.matpr.2016.10.032**

(15) Sudip K. Chatterjee, Saba N. Khan, and Partha Roy Chaudhuri, "**Control of evanescent field using a dynamic waveguide composed of gelatin coated few-layer fiber**", *Applied Optics,* Vol. 55, No. 19 / July 1, **2016** Pages 4985 – 4994. **http://dx.doi.org/10.1364/AO.99.099999**

(16) Shubhankar Chakraborty, Partha Roy Chaudhuri, and Prasanta Das, "**Reconstruction of elongated bubbles fusing the information from multiple optical probes through a Bayesian Inference Technique**", *Review of Scientific Instruments, AIP*, Feb **2016**, Vol. 87, Pages 075109-1 – 10. **http://dx.doi.org/10.1063/1.4955470**

(17) Sudip K. Chatterjee, Saba N. Khan, and Partha Roy Chaudhuri, "**Multi-order Dispersion Engineering in Binary Multi-clad Microstructured Fiber towards designing nonlinear devices**", *Optical and Quantum Electronics*, Vol. 48, 112, Issue-2, Feb **2016,** Pages 1-20. **https://link.springer.com/content/pdf/10.1007%2Fs11082-015-0350-8.pdf**

(18) Saba N. Khan, Sudip K. Chatterjee and Partha Roy Chaudhuri, "**Single all-optical platform for measurement of twist and transverse-stress using polarization modulation in a distinct dual-mode fiber placed in Sagnac loop**", *Journal of Optical Society of America A, OSA*, Vol. 33, No.1, **2016**, Pages 131-140. **https://doi.org/10.1364/JOSAA.33.000131**

(19) Partha Sona Maji and Partha Roy Chaudhuri, "**Studies of the modal properties of circularly photonic crystal fiber (C-PCF) for high power applications**", *Photonics and Nanostructures-Fundamentals and Applications (Elsevier)*, Vol. 19, January **2016**, Pages.12–23. **http://dx.doi.org/10.1016/j.photonics.2016.01.004**

(20) Partha Sona Maji and Partha Roy Chaudhuri, "**Square-lattice Photonic Crystal Fiber: Application to ultra wide-band near zero ultra-flat dispersion and its Supercontinuum Generation (SCG)**," *Optik* (*Elsevier*), *International Journal of Light and Electro Optics (IJLEO)***, 2016**.

(21) Partha Sona Maji and Partha Roy Chaudhuri, "**A new design methodology of obtaining wide band high gain broadband parametric source for IR wavelength applications**," *Journal of Applied Physics (AIP)*, Vol.119, Issue 11, 21 March **2016**, Pages 113102-1 – 113102-7; **http://dx.doi.org/10.1063/1.4943641**

(22) Partha Sona Maji and Partha Roy Chaudhuri, "**Designing broad band dispersion compensation with square lattice PCF and applications to ASE suppression with ultra-negative dispersion**", *Optik* (*Elsevier*), *International Journal of Light and Electron Optics (IJLEO)* Vol. 127, **2016**, pp. 2603–2607. **http://dx.doi.org/10.1016/j.ijleo.2015.11.185**

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(23) Partha Sona Maji and Partha Roy Chaudhuri, "**ASE suppression in Er3+ doped dual-core triangular lattice Photonic Crystal Fibers (PCFs) for narrowband and broadband dispersion compensation for communication wavelength**", *Optik, International Journal of Light and Electro Optics (IJLEO), Elsevier,* Vol. 127, Issue 1, January **2016**, Pages 292–298. **Doi:10.1016/j.ijleo.2015.10.070**

(24) Partha Sona Maji and Partha Roy Chaudhuri, "**Design analysis of large mode area fiber based on chalcogenide glass with microstructured core**", *Journal of Optical and Quantum Electronics (OQEL), Springer,* Published Online, Vol. 47, No.8, 16 May **2015,** Pages 3009-3021. **Doi: 10.1007/s11082-015-0187-1.**

(25) Partha Sona Maji and Partha Roy Chaudhuri, "**Tunable parametric amplifier for mid-IR application based on highly nonlinear chalcogenide material**," *Journal of Applied Physics (AIP),* Vol. 117, Issue 24, 25 June **2015**, Pages 243103-1 – 243103-10. **http://dx.doi.org/10.1063/1.4923046**

(26) Partha Sona Maji and Partha Roy Chaudhuri, "**Tunable fiber optic parametric amplifier based on near-zero ultraflat dispersion PCF for communication wavelength**," *IEEE Photonics Journal,* Vol. 7, No. 3, **2015**, Pages 1-13, ID. 1400311. **Doi: 10.1109/JPHOT.2015.2438432**

(27) Partha Sona Maji and Partha Roy Chaudhuri, "**Design of all-normal dispersion based on multi-material photonic crystal fiber in IR region for broadband supercontinuum generation**", *Applied Optics, OSA,* Vol. 54, Issue 13, pp. 4042-4048, **2015**. **Doi: 10.1364/AO.54.004042**

(28) Partha Sona Maji and Partha Roy Chaudhuri, "**Gain and bandwidth investigation in a near zero ultra-flat dispersion PCF for optical parametric amplification around the communication wavelength**", *Applied Optics, OSA,* Vol. 54, No. 11, **2015**, Pages 3263-3272. **https://doi.org/10.1364/AO.54.003263**

(29) Sudip K. Chatterjee , Saba N. Khan, and Partha Roy Chaudhuri, "**Designing a two-octave spanning flat-top supercontinuum source by control of nonlinear dynamics through multi-order dispersion engineering in binary multi-clad microstructured fiber**", *Journal of Optical Society of America B, OSA,* Vol. 32, No. 7, **2015**, Pages 1499-1509. **https://doi.org/10.1364/JOSAB.32.001499**

(30) Saba N. Khan, Sudip K. Chatterjee, and Partha Roy Chaudhuri, "**Polarization and Propagation Characteristics of Switchable First-order Azimuthally-asymmetric Beam Generated in Dual-mode-fiber**," *Applied Optics, OSA,* Vol. 54, Issue 6, **2015**, Pages 1528 - 1542. **https://doi.org/10.1364/AO.54.001528**

(31) Somarpita Pradhan and Partha Roy Chaudhuri, "**Experimental demonstration of all-optical weak magnetic field detection using beam-deflection of single-mode fiber coated with cobalt-doped nickel ferrite nanoparticles**", *Applied Optics,* Vol. 54, No. 20, July **2015**, Pages 6269-6276. **https://doi.org/10.1364/AO.54.006269**

(32) Sudip K. Chatterjee and Partha Roy Chaudhuri, "**Some Unique Propagation Characteristics of Linearly Graded Multilayered Planar Optical Waveguides**", *Journal of Basic and Applied Physics (JBAP), World Academic Publishing,* Vol. 3, Issue 1, Feb **2014**, Pages 1-9. **https://www.researchgate.net/publication**

(33) Sudip K. Chatterjee, Saba N. Khan and Partha Roy Chaudhuri, "**Two-Octave Spanning Single Pump Parametric Amplification at 1550 nm in a Host Lead-silicate Binary Multi-clad**

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Microstructure Fiber: Influence of Multi-order Dispersion Engineering", *Optics Communications, Elsevier,* Vol. 332, July 17, Dec **2014**, Pages 244–256. **https://doi.org/10.1016/j.optcom.2014.07.021**

(34) Partha Sona Maji and Partha Roy Chaudhuri, "**Supercontinuum generation in ultra-flat near zero dispersion PCF with selective liquid infiltration**," *Optik, International Journal of Light and Electron Optics (IJLEO),* Vol. 125, Issue 20, **2014**, Pages 5986-5992. **https://doi.org/10.1016/j.ijleo.2014.07.026**

(35) Partha Sona Maji and Partha Roy Chaudhuri, "**Design of ultra large negative dispersion PCF with selectively tunable liquid infiltration for dispersion compensation**," *Optics Communications, Elsevier,* Vol. 325, August 30, **2014**, Pages 134-143. **https://doi.org/10.1016/j.optcom.2014.03.048**

(36) Partha Sona Maji and Partha Roy Chaudhuri, "**Near-elliptic core triangular-lattice and square-lattice PCFs: a comparison of birefringence, cut-off and GVD characteristics towards fiber device application**", *Journal of Optical Society of Korea, (JOSK), OSA,* Vol.18, No. 3, **2014**, Pages 207-216. **http://dx.doi.org/10.3807/JOSK.2014.18.3.207**

(37) Partha Sona Maji and Partha Roy Chaudhuri, "**A new design for all-normal near zero dispersion photonic crystal fiber with selective liquid infiltration for broadband supercontinuum generation at 1.55 μm**," *Journal of Photonics,* Vol. 2014, 9 pages, **2014**. Article ID 728592. **Doi:10.1155/2014/728592**

(38) Partha Sona Maji and Partha Roy Chaudhuri, "**350 nm Broadband Supercontinuum Generation Using Dispersion Engineered Near Zero Ultraflat Square-Lattice PCF around 1.55 μm and Fabrication Tolerance Analysis**", *Hindwai, International Scholarly Research Notices,* Vol. 2014 (**2014**), Article ID 276082, 8 pages. **http://dx.doi.org/10.1155/2014/276082**

(39) Partha Sona Maji and Partha Roy Chaudhuri, "N**ear zero ultra-flat dispersion PCF: properties and generation of broadband supercontinuum**," *Journal of Photonics and Optoelectronics (P&O),* Vol. 3, **2014**, Pages 51-58. **doi:10.14355/jpo.2014.03.006**

(40) Partha Sona Maji and Partha Roy Chaudhuri, "**Tunable Selective Liquid Infiltration: Applications to low loss birefringent photonic Crystal Fibers (PCF) and its Single mode realization**," *Journal of Photonics and Optoelectronics (P&O),* Vol. 3, April **2014**, Pages 26-36. **Doi: 10.14355/jpo.2014.0302.01**

(41) Partha Sona Maji and Partha Roy Chaudhuri, "D**esigning an ultra-negative dispersion photonic crystal fiber with square-lattice geometry**," *International Scholarly Research Notices, ISRN Optics,* Vol. 2014, 7 pages, Article ID 545961, **2014**. **doi:10.1155/2014/545961**

(42) Partha Sona Maji and Partha Roy Chaudhuri, "**Dispersion properties of the square-lattice elliptical-core PCFs**", *American Journal of Optics and Photonics (AJOP),* Vol. 2, No. 1, **2014**, Pages 1-6. **Doi: 10.11648/j.ajop.20140201.11**.

(43) Saba N. Khan, Sudip K. Chatterjee, Kajal Mondal and Partha Roy Chaudhuri, "**Characteristics of Transverse-Stress Induced Phase Change through a Distinct Dual-Mode Fiber in Sagnac Loop**," *Journal of Optical Society of America A, OSA,* Vol. 30, No. 5, May **2013**, Pages 1013–1020. **https://doi.org/10.1364/JOSAA.30.001013**

(44) Partha Sona Maji and Partha Roy Chaudhuri, "**Geometrical parameters dependence towards ultra-flat dispersion square-lattice PCF with selective liquid infiltration**," *American Journal of Optics and Photonics (AJOP),* Vol. 1, No. 5, December 10, **2013**, Pages 28-32.

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http://www.sciencepublishinggroup.com/journal/paperinfo.aspx?journalid=127&doi=10.11648/j.ajop.20130105.11

(45) Partha Sona Maji and Partha Roy Chaudhuri, "**Circular photonic crystal fibers: numerical analysis of chromatic dispersion and losses**," *International Scholarly Research Notices, ISRN Optics*, Vol. 2013, 9 pages, Article ID, 986924, **2013**. **doi:10.1155/2013/986924.**

(46) Partha Sona Maji and Partha Roy Chaudhuri, "**A New Design of Ultra-Flattened Near-zero Dispersion PCF Using Selectively Liquid Infiltration**," *Journal of Photonics and Optoelectronics (P&O)*, Vol. 2, Issue 2, April **2013**, Pages 25-32. **https://archive.org/details/JPO10072/mode/2up**

(47) Kajol Mondal and Partha Roy Chaudhuri, "**Investigation of structural dependence of host erbium doped triangular-lattice PCF on lasing properties and designing high performance laser**", *Journal of Modern Optics, Taylor & Francis*, Vol. 60, Issue 15, **2013**, Pages 1247-1257. **https://doi.org/10.1080/09500340.2013.833314**

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