

List of Publications

Summary: Patents – 1 Granted, 1 Filed; SCI Journals - 25; Book Chapters - 2

Patents:

1. A process of fabrication of silica-based index-guided nonlinear microstructured optical fibers with optimized suspension of air holes.
S.K. Bhadra, **Debashri Ghosh**, M. Pal, M.C. Paul.
Patent No. 309650, Application No. 1560/DEL/2013, Filed on 24.5.2013, Sealed on 22.3.2019, Country of filing: India
2. A process of fabrication of ytterbium-doped cladding-pumped air-clad fiber for use as a highly efficient high power laser source in the infra-red wavelength region.
S.K. Bhadra, **Debashri Ghosh**, M. Pal, M.C. Paul, S. Das.
No. 3814/DEL/2013, Filed on 30.12.2013, Country of filing: India

Journals:

1. Manipulation of infrared dispersive waves in customized microstructured optical fibers for 1.7 and 2.0 μm light sources
S. Bose, P.H. Reddy, J. Fan, A. Demircan, A. Ruehl, U. Morgner, S. Roy, M. Pal, S.K. Bhadra and **Debashri Ghosh**
Applied Optics, vol. 59 (28), 9015-9022 (2020).
2. Suspended core microstructured optical fibers with diverse arrangements of gold-filled holes: study of the polarization characteristics and resonance strength
Rajat K. Basak and **Debashri Ghosh**
J of Optical Society of America B, vol. 36,12, 3364-3371 (2019).
3. Polarization properties of selectively gold-filled suspended core microstructured optical fibers
Rajat K. Basak and **Debashri Ghosh**
Plasmonics, vol. 14, 6, 1505-1517 (2019).
4. Nonlinear Optics and its Manifestation as Supercontinuum Generation in Microstructure Optical Fibers
Debashri Ghosh and S.K. Bhadra
Indian Journal of Theoretical Physics, vol. 63, 3&4 (2017).
5. Design and fabrication of microstructured optical fibers with optimized core suspension for enhanced supercontinuum generation
Debashri Ghosh, S. Bose, S. Roy and S.K. Bhadra
Journal of Lightwave Technology, vol. 33, 4156-4162 (2015).
6. Efficient supercontinuum sources based on suspended core microstructured fibers
Debashri Ghosh, S. Roy and S.K. Bhadra
IEEE Journal of Selected Topics in Quantum Electronics, vol. 20, 7600108 (2014).
7. Ultra low-loss hypocycloid-core kagome hollow-core photonic crystal fiber for green spectral-range applications
B. Debord, M. Alharbi, A. Benoit, **Debashri Ghosh**, M. Dontabactouny, L. Vincetti, J.-M. Blondy, F. Gerome and F. Benabid

Optics Letters, vol. 39, 6245-6248 (2014).

8. Efficient spectral broadening in the 100-W average power regime using gas filled kagome HC-PCF and pulse compression
F. Emaury, C.J. Saraceno, B. Debord, **Debashri Ghosh**, A. Diebold, F. Gerome, T. Südmeyer, F. Benabid and U. Keller
Optics Letters, vol. 39, 6843-6846 (2014).
9. Hypocycloid-shaped hollow-core photonic crystal fiber Part II: Cladding effect on confinement and bend loss
M. Alharbi, T. Bradley, B. Debord, C. Fourcade-Dutin, **Debashri Ghosh**, L. Vincetti, F. Gerome and F. Benabid
Optics Express, vol. 21, 28609-28616 (2013).
10. 1.9 μm lasing with $\text{Tm}^{3+}/\text{Yb}^{3+}$ co-doped air-clad fiber and 931 nm pumping
N. Saidin, A. Halder, **Debashri Ghosh**, M. Pal, M.C. Paul, S.K. Bhadra, S.M.M. Ali, S.S.A. Damanhuri, H. Ahmad and S.W. Harun
Microwave and Optical Technology Letters, vol. 55, 1124-1126 (2013).
11. Design and fabrication of large-mode area air-clad leakage channel fiber with superior bending characteristics
M. Pal, K. Saitoh, M.C. Paul, **Debashri Ghosh** and S.K. Bhadra
Photonics Technology Letters, vol. 24, 1650-1652 (2012).
12. Blue-extended sub-nanosecond supercontinuum generation in simply designed nonlinear microstructured optical fibers
Debashri Ghosh, S. Roy, M. Pal, P. Leproux, P. Viale, V. Tombelaine and S.K. Bhadra
Journal of Lightwave Technology, vol. 29, 146-152 (2011).
13. Fabrication of air-clad fibers for near-IR laser applications
Debashri Ghosh, A. Halder, M. Pal, M.C. Paul, H. Bookey, S.K. Bhadra and A.K. Kar
Applied Optics, vol. 50, E1-E6 (2011).
14. Strong infra-red radiation through passive dispersive wave generation and its control
S. Roy, **Debashri Ghosh**, S.K. Bhadra, K. Saitoh and M. Koshiba
Applied Optics, vol. 50, 3475-3485 (2011).
15. Limitation on effective area of bent large-mode-area leakage channel fibers
K. Saitoh, S. Varshney, K. Sasaki, L. Rosa, M. Pal, M.C. Paul, **Debashri Ghosh**, S.K. Bhadra and M. Koshiba
Journal of Lightwave Technology, vol. 29, no. 17, 2609-2615 (2011).
16. Determination of modal effective indices and dispersion of microstructured fibers with different configurations: a variational approach
Debashri Ghosh, S. Roy and S.K. Bhadra
Journal of Modern Optics, vol. 57, 607-620 (2010).
17. Supercontinuum generation in nonlinear microstructured fiber and recent advances
Debashri Ghosh, S. Roy, M. Pal and S.K. Bhadra
International Journal of Microwave and Optical Technology, vol. 5, 464-473 (2010).
18. Role of dispersion profile in controlling emission of dispersive waves by solitons in supercontinuum generation
S. Roy, **Debashri Ghosh**, S.K. Bhadra and G.P. Agrawal
Optics Communications, vol. 283, 3081-3088 (2010).

19. Picosecond fiber MOPA pumped supercontinuum source with 39 W output power
K.K. Chen, S. Alam, J.H.V. Price, J.R. Hayes, D. Lin, A. Malinowski, C. Codemard,
Debashri Ghosh, M. Pal, S.K. Bhadra and D.J. Richardson
Optics Express, vol. 18, 5426-5432 (2010).
20. Supercontinuum generation in microstructured silica optical fibers: the formation of artificial white light
S. Roy, **Debashri Ghosh** and S.K. Bhadra
Transactions of the Indian Ceramic Society, vol. 69, 65-73 (2010).
21. Modeling of microstructured non-zero dispersion shifted optical fiber with ultra-low dispersion slope
Debashri Ghosh, S. Roy, M. Pal, S. Bandyopadhyay and S.K. Bhadra
Journal of Optical Society of America B, vol. 26, 337-345 (2009).
22. Generation of supercontinuum and its theoretical study in three-ring silica microstructured optical fibers
Debashri Ghosh, S. Roy, M. Pal, A. Pal, S.K. Bhadra, J. McCarthy, H. Bookey and A.K. Kar
Applied Optics, vol. 48, G12-G20 (2009).
23. Design of all-solid leakage channel fibers with large mode area and low bending loss
K. Saitoh, Y. Tsuchida, L. Rosa, M. Koshihara, F. Poli, A. Cucinotta, S. Selleri, M. Pal, M. Paul, **Debashri Ghosh** and S. Bhadra
Optics Express, vol. 17, 4913-4919 (2009).
24. Index-Guided Photonic Crystal Fibers: Study of Fiber Drawing Parameters
Debashri Ghosh, S. Roy, M. Pal, A. Pal and S.K. Bhadra
Journal of Optics, vol. 37, 72-77 (2008).
25. Designing a graded index depressed clad non-zero dispersion shifted optical fiber for wide band transmission system
D. Ghosh, **Debashri Ghosh** and M. Basu
Optik, 119, 63-68 (2008).

Book chapters:

1. Photonic crystal fibre: Basic principles of light guidance, fabrication process and applications
S. Roy, **Debashri Ghosh** and S.K. Bhadra
Guided Wave Optics and Photonic Devices (Chapter 15),
Eds: S.K. Bhadra and A.K. Ghatak, CRC Press, Taylor and Francis Group, 2013.
2. Suspended core photonic crystal fibers and generation of dual radiation
S. Roy, **Debashri Ghosh** and S.K. Bhadra
Odyssey of Light in Nonlinear Optical Fibers: Theory and Applications (Chapter 13),
Eds: K. Porsezian and R. Ganapathy, CRC Press, Taylor and Francis Group, 2015.