भारतीय प्रौद्योगिकी संस्थान खड़गपुर
INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR, INDIA-721302

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1. NAME IN FULL: PRASANTA KUMAR DATTA	**Date of Birth:**	27 March 1965
Designation: Professor (HAG) **Address** : Department of Physics, IIT-Kharagpur, West Midnapore, WB-721302, INDIA **Telephone**:+91-3222-283860**, FAX**: +91-3222-255303 **Email**: pkdatta@phy.iitkgp.ernet.in Mobile: 9474069825	**Nationality:**	Indian
	Passport No. J6109790, **Issued from:** Kolkata **Validity:**11.03.2011-10.03-2021	

2. EDUCATIONAL QUALIFICATIONS:

Degree / Examination	University / Institution	Year	Specialization	Division / Class
Ph.D.	University of Burdwan	1994	Laser Physics/Nonlinear Optics	Awarded
National Exam for Research Fellowship	University Grants Commission & Council for Sci. & Indust. Research	1987	Physics	Qualified
M.Sc.	The University of Calcutta / Presidency College, Kolkata	1987	Physics	1st Class
B.Sc.	The University of Calcutta / Ramakrishna Mission Vidyamandira, Belurmath	1985	Physics(Hons.), Chem(P), Math(P), English	1st Class & 1st Div.

3. EXPERIENCE (Please indicate the latest first)

University / Organization	Designation	From	To	Total Period	Nature of Experience
Dept. of Physics & Met. IIT-Kharagpur	Professor (HAG)	23.08.2011	Continuing	3 years 10 months	Teaching for UG & PG & sponsored research work
Michigan University, USA INRS, Montreal, Canada UCSC, Brescia, Italy	Sabbatical Visiting Professor	01.07.2015	15.06.2016	11 Months 15 days Sabbatical	Teaching & Research
Dept. of Physics & Met. IIT-Kharagpur	Associate Professor	11.04.2007	23.08.2011	4 years & 4 months	Teaching for UG & PG & sponsored research work
Dept. of Physics & Met. IIT-Kharagpur	Assistant Professor	30.10.2000	11.04.2007	7 years & 6 months	Teaching for UG & PG & sponsored research work
Heriot-Watt University, UK & CNIT, Scuola Superiore Sant'Anna, Pisa, Italy	Sabbatical Visiting Professor	01.02.2008	31.12.2008	11 months sabbatical leave from IIT Kharagpur	Teaching for M.Sc in Photonics (European Union) & Research work (Collaboration)
Physical Research Laboratory, (Dept. of Space) Ahmedabad	Scientist-D	09.07.1999	25.10.2000	1 year 4 months	Research work on Quantum Optics with partial teaching
Dept. of Pure & Applied Chemistry, University of Strathclyde, Glasgow, UK	Academic visitor	14.12.1998	30.6.1999	6 months	Research work on nonlinear optical crystals
Department of Electronics, University of Pavia, Italy (Funded by ICTP, Trieste & INFM Italy)	ICTP-TRIL Fellow & INFM fellow	02.10.1996	01.12.1998	2 years & 2 months	Research work on cascaded second order nonlinear optical processes
Institute of Armament Technology (DRDO), Pune	Scientist-C	16.10.1995	30.09.1996	1 year	Teaching for M.Tech (Lasers & Electro-optics)
Raja Ramanna Centre for Advanced Technology(DAE), Indore	Visiting Scientist	16.05.1994	15.8.1995	1 year & 3 months	Research work on nonlinear optical crystals grown in RRCAT

4. TEACHING INTEREST (Subjects taught / teaching): At the undergraduate level: Physics-I, Optics, Nonlinear Optics, Mathematical Methods in Physics, Experimental Methods in Physics, Atomic & molecular Phys, At the postgraduate level: Physics of Photonic devices, Nonlinear Optics, Modern Optics, Analytical Techniques

5.	Academic or Professional Awards (Honours)	Regular Associate of International Centre for Theoretical Physics (ICTP), 2003-2011, Trieste, Italy

6.	Publications ++	Number completed	Number under review
(a)	Publication in refereed journals	75	2
(b)	Publications in proceedings of seminars / conferences	120	0
(c)	Books and Monographs	01	01
(d)	Patent / Copyright obtained / filed	-	-
++ Please attached a copy of the updated list of publications			
7.	Research Guidance*	Number completed	Number in progress
(a)	Guidance at doctoral level	11	05
(b)	Guidance at masters level	70	5

Title of awarded Ph.D theses	1. "Development and stability study of nonlinear mirror mode-locked laser" – Sourabh Mukhopadhyay (IIT Kharagpur 2007) 2."Studies on nonlinear optical materials & processes for efficient photonic devices" - Susanta Kumar Das (IIT Kharagpur 2007) 3. "Development and characterization of diode-pumped Nd:YAG laser emitting around 1.3 micron and its frequency conversion" – Ardhendu Saha (IIT Kharagpur 2007) 4. "Modeling and investigation of active and passive semiconductor devices for all-optical communication" – Kamal Hussain (IIT Kharagpur 2014) 5. "Optical Characterization of a Reflective Vertical Cavity Semiconductor Saturable Absorber and Its Applications in All-Optical Signal Processing" – Lokanath Mishra (IIT Kharagpur 2015) 6. "Investigation on Cascaded Second Order Nonlinear Optical Processes for Device Applications" – Shyamal Mondal (IIT Kharagpur 2016) 7. "Tunable MID-IR Fiber Parametric and Supercontinuum Sources" – Satya Pratap Singh (IIT Kharagpur 2016) 8. "Modeling of Vertical Cavity Semiconductor Saturable Absorber for All-Optical Device Applications" – Rajib Pradhan (Vidyasagar University 2018) 9. " Efficient Second harmonic generation with 1D ZnO nanostructures and their application for realization of ultrafast laser diagnostic system" – Rudrashish Panda (KIIT University 2018) 10. "Study of Spin Wave Dynamics on Magnetic Thin Films and Binary Magnonic Crystals" – Nikita Porwal (IIT Kharagpur 2019) 11. "Ultrafast Nonlinear Optics and Time Resolved Spectroscopy of Carbon Based 2D Materials and Semiconductor" – Sayantan Bhattacharya (IIT Kharagpur 2019)

8. SPONSORED RESEARCH AND CONSULTANCY UNDERTAKEN

(A) Sponsored Research

Sl. No.	Project Title	SRIC Code	Sponsor	Duration	Rs. in Lakhs
1	Development of all solid state high repetition rate pico- second laser source tunable in wavelength and in pulse duration for nonlinear optical study	DAH	DST	09.10.2002 – 08.04.2006	58.58
2	Experimental quadratic cascading for their application in photonic devices	OPD	DRDO	20.4.2001 – 19.04.2004	23.02
3	Generation of coherent mid-infrared radiation at 16mm through nonlinear optical difference frequency process for application in molecular spectroscopy	GMR	BRNS	30.07.2003 – 09.07.2006	40.00
4.	Development of efficient UV laser source for laser induced fluorescence study of malignant tissues	SMT	MHRD	01.05.2003 – 30.05.2005	10.00
5.	Development of optical parametric oscillator tunable in wide range for detection of chemical and biological warfare agents	BWA	DRDO	10.06.2007 – 09.06.2010	74.00
6.	Z-scan determination of third order optical nonlinearity	ISIRD	ISIRD	13.09.2001 – 2.09.2003	2.00

7.	Generation of tunable mid-infrared coherent radiation in the range of 12.7-17um for strategic spectroscopic application	CTR	BRNS	31.01.2011-30.01.2013	22.57
8.	Studies on Ultrafast Processes for Electronic, Spintronic, Magnonic and Photonic Applications	UPM	SGDRI IITKGP	2014-2017	250.00
9.	Real time detection of face/core debond initiation and interfacial delamination propagation morphology in sandwich composite panels using fiber-optic Bragg grating sensors	GIC	ISRO	2014-2016	50.00
10.	Femtosecond laser facility to investigate confined media, biological assemblies. room temperature ionic liquids and nano-materials	TCL	DST	2015-2020	247.00
11.	Asynchronous Optical Scanning based THz time-domain spectroscopy for de-lamination study of space shuttle materials		MHRD	2017-2020	226.00

(B) Sponsored International Collaboration projects

1	Analysis, Modelling and Design of Semiconductor Optical Amplifier (SOA) based Photonic Components for Lightwave Systems and Networks	SOA	JSPS, Japan	K Yasumoto Kyushu University	2006 – 2009	12 Visits
2	Second order cascaded nonlinear optical processes for all-optical photonic devices	NLP	DST India	S M Saltiel Sofia Univ,	2007 – 2010	0.762
3	Realization of packet switched node with optoelectronic and photonic technologies for ultra broadband communication systems and networks		Italy	G Prati CNIT, Pisa	2007 – 2009	Long term Exch
4.	Development of Picosecond Laser and its stability study	ICTP-VS	ICTP, Italy	Antonio Agnesi Pavia Univ	2001 – 2004	0.225
5.	Development of Femtosecond Laser and its stability study	ICTP-VS	ICTP, Italy	VDegiorgio Pavia Univ	2004 - 2007	0.270
6.	Highly efficient laser-driven Compton gamma-ray source		SGRIP	Pabna Univ Rajshahi Univ	2019-2020	2.00
7.	ICTP Visiting Scholar Program		ICTP	UCSC, Italy	2018-2020	3.00

(C) Consultancy work

1	(i)UV Opacity Evaluation in the samples of cold and anti sun burn cream (ii) Measurement of optical nolinearities of different organic and polymeric samples	OPA	DRDO	DRDO	2007	0.125

9. ANY OTHER INFORMATION WHICH YOU WISH TO BRING TO THE NOTICE OF THE COMMITTEE

(i) Represented in the National Core Committee of Photonics under the Chairmanship of the Principal Scientific Adviser of Govt. of India.
(i) Starting from scratch, a state-of-the-art laboratory to some extent is developed for study of ultrafast nonlinear optics where most of the lasers and measurement set-ups are developed in the laboratory.
(ii) Organized 5 events on Photonics (Symposium, workshop, seminar & short term course) as convener at IIT-Kharagpur in 2003, 2005, 2007 and 2009 and 2013, 2014 and 2017
(iii) Organized a Theme meeting on Optical Parametric Oscillators at BARC, Mumbai as convener in 2009.
(iii) Presented oral papers in conferences of highest scientific merits home and abroad with sponsorship of International Professional bodies and IIT-Kharagpur.
(iv) Ph.D. students received Royal Society fellowship in Oxford University, fellowship from Max Born Institute, Berlin, Rutherford Fellowship and fellowship from Sheffield University for post doctoral work.
(v) One Ph.D. student has been trained for one year at Pavia University, Italy under a collaboration project funded by Italian Education Ministry.
(vi) Five Ph.D students have been trained for one year at Scuola Superiore Santanna, Pisa, Italy under a collaboration project funded by the Ministry of Science, Italy under the MoU with IIT Kharagpur.
(vii) Vice-Chairman GATE-JAM : 2018-2019, 2019-2020

Date: 05 May 2020

Prasanta Kumar Datta

Signature of the Candidate

Publications in Refereed International Journals:

1. **IEEE Journal of Photovoltaics**, **10(3), 803-810,** (**2020**), "Long Carrier Diffusion Length and Slow Hot Carrier Cooling in Thin Film Mixed Halide Perovskite." -Kamlesh Kumar Chauhan, Sayan Prodhan, Dibyendu Ghosh, Pradney Waghale, Sayan Bhattacharyya, Pranab Kumar Dutta and Prasanta Kumar Datta
2. **Journal of Physical Chemistry C 124, 13, 7039-7047 (2020)**, ""Charge Transfer and Ultrafast Nonlinear Optical Properties above Percolation Threshold in Graphene Induced ZnTTBPc Heterojunction " - Sarkar, Atri; Rahaman, Abdulla; Singha, Tara; Chakraborty, Koushik; Prodhan, Sayan; Pal, Tanusri; Ghosh, Surajit; Datta, Prasanta Kumar; Banerjee, Debamalya
3. **Nanoscale Advances (RSC) 2**, 1573-1582 **(2020)** "rGO - Metal Chalcogenide Ensembles: Ultrafast Nonlinear Optical Response, Temperature Dependent Electrical Transport Properties and Photocurrent Generation"- Abdulla Bin Rahamanz, Atri Sarkarz, Tara Singha, Koushik Chakraborty, Tanusri Pal, Surajit Ghosh, Prasanta K. Datta, and Debamalya Banerjee
4. **Journal of Applied Physics 127(5),053105 (2020),** "Plasmon charge transfer dynamics in layered Au-ZnO nanocomposites", - N Gogurla, R.K Chowdhury,.S Battacharya, P.K Datta and S.K Ray
5. **Journal of Magnetism and Magnetic Materials, 501, 166378-85, (2020)** "Observation of spectral narrowing and mode conversion in two-dimensional binary magnonic crystal" Nikita Porwal, Koustuv Dutta, Sucheta Mondal, Samiran Choudhury, Jaivardhan Sinha, Anjan Barman, Prasanta Kumar Datta.
6. **Journal of Physical Chemistry Letters (ACS) 11, 591-600 (2020)**, "Core/shell Nanocrystal Tailored Carrier Dynamics in Hysteresis-less Perovskite Solar Cell with ~20% Efficiency and Long Operational Stability" - Anima Ghosh, Dhirendra Chaudhary, Sayan Prodhan, Kamalesh Kumar Chauhan, Saket Vihari, Govind Gupta, Prasanta K Datta and Sayan Bhattacharyya.
7. **OPTIK (Elsevier) 204, 164194 (2020), "**Phase-Bistability and phase-locking patterns with cavity soliton in Vertical-cavity-based fast semiconductor saturable absorber" R. Pradhan, A. Choudhary, S.K. Samanta , S. Jana , P.K. Datta.
8. **Journal of Applied Physics (AIP) 126, 233101 (2020)**, "Enhancement of ultrafast nonlinear optical response of zinc selenide nanoparticle decorated reduced graphene oxide sheets", - Abdulla Bin Rahaman, Sayantan Bhattacharya, Atri Sarkar, Tara Singha, Debamalya Banerjee, and Prasanta K. Datta.
9. **Phys. Chem. Chem. Phys., 22(8), 4731-4740 (2020)**, "Is the origin of green fluorescence in unsymmetrical four-ring bent-core liquid crystals single or double proton transfer?", Venkatesh Gude, Manobina Karmakar, Avishek Dey, Prasanta Kumar Datta and Kumar Biradha P; https://doi.org/10.1039/C9CP06307B
10. **Chemistry - A European Journal 26(2), 396-400 (2020),** "Photoinduced Bending of Single Crystals of a Linear Bis-Olefin via Water-Templated Solid-State [2+2] Photopolymerization Reaction" - R.Mandal, , A Garai,., S. Peli, , P.K. Datta and K Biradha,.
11. **Advanced Optical Materials (In Press 2020),** "Ultrafast Investigation of Individual Bright Exciton–Plasmon Polaritons in Size-Tunable Metal–WS2 Hybrid Nanostructures" - R.K. Chowdhury, P.K. Datta, S.N.B Bhaktha and S.K.Ray
12. **Journal of Sandwich Structures and Materials 22(1), 40-54 (2020), "**Interfacial delamination in glass-fiber/polymer-foam-core sandwich composites using singlemode–multimode–singlemode optical fiber sensors: Identification based on experimental investigation", - N. Mitra, A.K Patra,., S.P Singh, P.K. Datta and S.K Varshney,.
13. **Chemical Science (Royal Society of chemistry), 2019, Advance Article** "All-inorganic quantum dot assisted enhanced charge extraction across the interfaces of bulk organo-halide perovskites for efficient and stable pin-hole free perovskite solar cells" - D. Ghosh, D. Chaudhary, Md. Ali, K. K. Chauhan, S. Prodhan, S. Bhattacharya, B. Ghosh, P. K. Datta, S. C. Ray and S. Bhattacharyya

14. **Scientific Reports (Nature), 12138 (2019),** 'Observation of angle-dependent mode conversion and mode hopping in 2D annular antidot lattice' – N. Porwal, A. De, S. Mondal, K. Dutta, S. Choudhury, J. Sinha, A. Barman &, P. K. Datta.
15. **Journal of Photochemistry & Photobiology A: Chemistry (Elsevier) 377 (2019) 298–308,** "Unveiling the interaction between carbon nanodot and IR light emitting fluorescent dyes inside the confined micellar environment"- Rupam Dutta, Sayantan Bhattacharya, Arghajit Pyne, Prasanta Kumar Datta, Nilmoni Sarkar
16. **Journal of Molecular Structure (Elsevier) 1184 (2019) 114-122,** "Terahertz spectroscopy of diglycidylether of bisphenol A: Experimental investigations and density functional theory based simulations"- P. Suma Sindhu, Dipak Prasad, Simone Peli, Nilanjan Mitra, P. K. Datta.
17. **AIP Advances 9, 015008-13 (2019); "**Effects of nanodots shape and lattice constants on the spin wave dynamics of patterned permalloy dots " Datta P. K., Porwal N. , Sinha J.; https://doi.org/10.1063/1.5066268
18. **Chemistry SELECT (Wiley) 4, 8568-73 (2019)**, "Ultrafast Photoinduced Electron Transfer from Cyclometalated Rhodium and Iridium Complexes to Cyan Emitting Copper Nanoclusters: Footsteps toward Light Harvesting"- Soumyadip Bhunia, Sourav Kanti Seth, Parna Gupta, Manobina Karmakar, Prasanta Kumar Datta and Pradipta Purkayastha
19. **2D Materials (IOP) 6, 015011 (2019)**, "Ultrafast time-resolved investigations of excitons and biexcitons at room temperature in layered WS2" - R. K. Chowdhury, S. Nandy, S. Bhattacharya, M. Karmakar, B. N. S. Bhaktha, P. K. Datta, A. Taraphder, S. K. Ray.
20. **ChemComm (RSC) 55, 13140 (2019), "**Stepwise dual stimuli triggered dual drug release by a single naphthalene based two-photon chromophore to reverse MDR for alkylating agents with dual surveillance in uncaging steps",- Biswajit Roy, Moumita Kundu, Amit Kumar Singh, Tara Singha, Sayantan Bhattacharya, Prasanta Datta, Mahitosh Mandal, N D Pradeep Singh
21. **Applied Optics (OSA), 58 (33), 9163 (2019), "**Third Order Optical Nonlinearity of CuCo0.5Ti0.5O2 Nanostructure under 120 fs Laser Irradiation", - N Bose, S Bhattacharya, P K Datta and M Basu.
22. **Journal of Applied Physics (AIP), (2019), "**Enhancement of ultrafast nonlinear optical response of zinc selenide nanoparticle decorated reduced graphene oxide sheets", - Abdulla Bin Rahaman, Sayantan Bhattacharya, Atri Sarkar, Tara Singha, Debamalya Banerjee, and Prasanta K. Datta
23. **Carbon (Elsevier)134, 80-91 (2018)**,"A comprehensive dual beam approach for broadband control of ultrafast optical nonlinearity in reduced graphene oxide" - S. Bhattacharya, A. Ghorai, S. Raval, M. Karmakar, A. Midya, S. Kumar Ray and P. K. Datta,
24. **J. Phys. D: Appl. Phys.(AIP) 51 055004 (2018)**, "All optical detection of picosecond spinwave dynamics in 2D annular antidot lattice"- N Porwal, S Mondal, S Choudhury, A De, J Sinha, A Barman and P K Datta
25. **ACS Omega 3 (1), 383-392 (2018)**, "Anomalous Dynamics in tert-Butyl Alcohol (TBA)-Water and Trimethylamine N-Oxide (TMAO)-Water Binary Mixtures: A Femtosecond Transient Absorption Study"- D. Banik, S. Bhattacharya, P. K. Datta, N. Sarkar.
26. **Organic letters (ACS) 20 (8), 2241-2244 (2018)**, "One and Two-Photon Uncaging: Carbazole containing inbuilt o-HydroxycinnamatePhotoremovable Protecting Group for Dual (Similar or Different) Release of Alcohols with Real-Time Monitoring"- Y. Venkatesh, H. K. Srivastava, S. Bhattachraya, Muneshwar, P. K. Datta, S. Bandyopadhyay, and N. D. Pradeep Singh
27. **Nanoscale (Royal Society), 10, 15273-15284 (2018)**, "Highly stable Photoelectrochemical Cells for Hydrogen Production using SnO_2-TiO_2/Quantum Dots HeterostructuredPhotoanode" - K. Basu, H. Zhang, H. Zhao, S. Bhattacharya, P. K. Datta, L. Jin, S. Shuhui, F. Vetrone, F. Rosei
28. **Optik 154, 320–324 (2018)** "Femtosecond laser excited second harmonic and multiphoton absorption induced UV luminescence generation behaviour of ZnO nanofibers",-R. Panda, A. Singh, R. Samal, S. Bhattacharya, P. K. Sahoo, P. K. Datta, S. K. Das
29. **The Journal of Physical Chemistry C (ACS), 121 (39), 21591-21599 (2017)**, "A Facile One Pot Synthesis of Highly Stable Graphene-Ag0 Hybrid Nanostructures with Enhanced Optical Properties" - R. Maiti, T. Sinha, S. Bhattacharya, P. K. Datta, S. K Ray
30. **Journal of Optics (IOP)**, 19 (4), 045401 (2017) "Dielectric Response to Magnetic Field of Electromagnetic Radiation" - S Mukherjee, S Mukhopadhyay and P K Datta
31. Journal of Sandwich Structures and Materials 0(00), 1–15 (2017) "Interfacial delamination in glass-fiber/polymer-foam-core sandwich composites using singlemode–multimode–singlemode optical fiber sensors:

Identification based on experimental investigation" N Mitra, A K. Patra, S P Singh, S Mondal, P K Datta and S K Varshney

32. **IEEE Journal of Selected Topics in Quantum Electronics** 23 (4), 1-7 (2017). "Identification of Combination Phonon Modes in Pure and Doped-GaSe Crystals by THz-Spectroscopy"- Amit C. Das, S. Bhattacharya, M. Jewariya, S. Prabhu, K. C. Mandal, T. Ozaki and P. K. Datta
33. **Journal of Applied Physics (AIP) 120, 013101 (2016),** ,"Efficient control of ultrafast optical nonlinearity of reduced graphene oxide by infrared reduction" - S. Bhattacharya ; R. Maiti ; S. Saha ; A. C. Das ; S. Mondal ; S. K. Ray ; S. B. N. Bhaktha ; P. K. Datta
34. **Optics Express (OSA) 24, 15274 (2016)**,"Stability Analysis of Cascaded Second-Order Mode-locked Laser Considering Dynamic Gain Aperturing for Picosecond Pulse Generation"-S Mondal, S Mukherjee, S P Singh, and P K Datta
35. **Proc. SPIE 9884, Nanophotonics VI,** 98842L (2016),"Infrared reduction, an efficient method to control the non-linear optical property of graphene oxide in femtosecond regime"- S. Bhattacharya ; R. Maiti ; S. Saha ; A. C. Das ; S. Mondal ; S. K. Ray ; S. B. N. Bhaktha ; P. K. Datta
36. ***Proc. SPIE* 9894, Nonlinear Optics and its Applications IV**, 98941E (2016), "Dielectric response of pure and doped-GaSe crystals studied by an indigenously developed broadband THz-TDS system", - Amit C. Das ; S. Bhattacharya ; K. C. Mandal ; S. Mondal ; M. Jewariya ; T. Ozaki ; S. N. B. Bhaktha ; P. K. Datta
37. **Journal of Nonlinear Optical Physics & Materials (World Scientific)** 25(3), 1650029 (2016), "Second harmonic generation of femtosecond pulses using ZnO nanorods grown by chemical bath deposition with drop casted seed layer" -R. Panda, S. Bhattacharya, R. Samal, A. Singh, P. K. Sahoo, P. K. Datta and S. K. Das
38. **IEEE Journal of Quantum Electronics (IEEE) 51(1), 9000105 (2015),** "Widely Tunable Intracavity Phasematched Cascaded Second-order Interaction for Generation of Multi-color Radiation" – S Mondal, S P Singh, S Mukherjee, S Mukhopadhyay and **P K Datta**
39. **Journal of Lightwave Technology (IEEE), 33(1), 55 (2015),** "Dispersion Engineered Capillary-Assisted Chalcogenide Optical Fiber based Mid-IR Parametric Sources" – S P Singh, V Mishra, **P K Datta** and S K Varshney
40. **Journal of Optical Society of America- B (OSA), 31, 2956-2964 (2014**), "Reflective vertical cavity quantum-well saturable absorber as an all-optical nonlinear phase-shifting element" R. Pradhan, S. Saha and **P. K. Datta**
41. **Optics Communications (Elsevier) 331, 267–271 (2014),** "Modeling of two wavelength switching using a reflective vertical cavity semiconductor saturable absorber" – L Mishra, R Pradhan and **P K Datta**
42. **Optics & Laser Technology (Elsevier) 60, 41–48, (2014),** "Generation of 415W of p-polarized output power in long pulse operation of Nd:YAG laser using z-fold resonator geometry" - Ambar Choubey, Shyamal Mondal, Ravindra Singh, B.N.Upadhyaya, **P.K.Datta**, S.M. Oak
43. **Optics Communications (Elsevier) 308, 197-203 (2013),** "Effect of Input Signal and Filter Parameters on Patterning Effect in a Semiconductor Optical Amplifier"- K Hussain, S P Singh, **P K Datta**
44. **Applied Optics (OSA) 52 (29), 7171-7177 (2013),** "Effect of including intraband phenomena in the semiconductor optical amplifier model for propagating short pulses" - K Hussain and **P K Datta**
45. **Optics Express (OSA), 21 (1), 454-462 (14 January. 2013),** "Dual colour cw mode-locking through soft aperture based on second order cascaded nonlinearity" – S Mukhopadhyay, S Mondal, S P Singh, A Date, K Hussain and **P K Datta**
46. **Journal of Optical Communication and Networking (OSA & IEEE) 5, 457-463 (2013**),"Complete Modeling of All-Optical 2R Regeneration with Enhancement of Extinction Ratio in a Reflective Vertical Cavity Quantum-Wells Saturable Absorber" - R. Pradhan, L. Mishra, K. Hussain, S. Saha, and **P. K. Datta**
47. **Optics Communications (Elsevier) 297, 203-209 (2013),** "Dispersive Bi-stability in a Vertical Microcavity-based Saturable Absorber due to Photo-thermal Effect and Initial Phase-detuning" - R Pradhan, S Saha and **P K Datta**
48. **Optics and Laser Technology (Elsevier) 45, 154-159 (2013),** "Efficient depolarization-loss-compensation of solid state lasers using only a Glan-Taylor polarizer", - S. Mondal, S.P. Singh, K. Hussain, A. Choubey, B.N. Upadhyay, **P.K. Datta**
49. **European J Applied Physics** 58, 10201-6 **(2012),** "Etching, micro hardness and laser damage threshold studies of a nonlinear optical material L-valine"- M. Anbuchezhiyan, S. Ponnusamy, C. Muthamizhchelvan, C.C. Kanagam, S P Singh, P K Pal and **P.K. Datta**
50. **Optics Communications (Elsevier)** 284, 3416-3421 (2011), "Reflective Vertical Cavity Semiconductor Saturable Absorber for Functional Operations with Thermal Limitations and Saturable Index Change"-R Pradhan, K Hussain and **P K Datta**
51. **IET-Optoelectronics (formerly IEE Journal) 5,** 77-82 (2011), "Effect of saturable index change on all-optical logic operation in passive vertical cavity semiconductor saturable absorber",- **P. K. Datta** and R Pradhan
52. **Defence Science Journal 61**, 377-382 (2011), "Development of optical parametric oscillator tunable in the range 970-1460nm" -S.P. Singh, S Mondal, K. Hussain and **P.K. Datta**

53. **Proc. SPIE 7934**, 79340E (2011), "Phase response characterization of semiconductor saturable absorber for applications in nonlinear optical signal processing and phase-modulated signals regeneration",-L Mishra, An Nguyen, Claudio Porzi, **P K. Datta**, A Bogoni, and L Potì
54. **Proc. SPIE 7912**, 79122F (2011),"Efficient compensation of thermal birefringence of a flash-lamp pumped Nd:YAG laser by a simple but novel method"- S. Mondal, S. Datta, S. Dey, S. Bera, S. P. Singh and **P. K. Datta**
55. **Optics and Quantum Electronics (Springer) 42**, 29-43 (2010)"Patterning Characteristics and its Alleviation in High Bit Rate Application of Bulk Semiconductor Optical Amplifier" -K. Hussain, Rajib Pradhan, and **P. K. Datta**
56. **Pramana – Journal of Physics 75**(5), 1011-1016 (2010) "Intraband Effects on Ultrafast Pulse Propagation in Semiconductor Optical Amplifier" - K. Hussain, S. K. Varshney, and **P. K. Datta**
57. **Materials Chemistry and Physics (Elsevier) 120, 361–370 (2010)** "Preparation, characterization and optical properties of a novel azo-based chitosan biopolymer"- Santosh Kumar, Nidhi Nigam, T. Ghosh, Pradip K. Dutta,, S.P. Singh,**P K. Datta**, Lijia An, Tong Fei Shi
58. **Crystal Research Technology (Wiley-VCH) 45(5), 497 – 502 (2010)** "Effect of strontium chloride on the optical and mechanical properties of γ–glycine crystals" - M. Anbuchezhiyan1, S. Ponnusamy, S. P. Singh, P. K. Pal, **P. K. Datta**, and C. Muthamizhchelvan
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BOOK publication

1. Title: **Mode-locking of Lasers with Cascaded Quadratic Nonlinearity**
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