

RESEARCH PUBLICATIONS:

Sl. No	Title of the paper	Authors	Journal
1	On the Quantum theory of stimulated Raman scattering	P.S.Gupta & B.K.Mohanty	Czech.J.Phys(1980) Vol.B30,p-1127-30.
2	Effect of relaxation and loss parameters on the time evolution of the gas laser equation	P.S.Gupta & B.K.Mohanty	Indian J.Phys(1980) Vol. 54B,p-190-198.
3	Effect of upper ólevel population on Quantum-statistics of stimulated Raman scattering.	P.S.Gupta & B.K.Mohanty	Indian J. Phys.(1980) Vol.54B,p-270-277.
4	Quantum theory of inhomogeneously broadened detuned multiphoton laser.	P.S.Gupta & B.K.Mohanty	Optica Acta(U.K)(1981) Vol.28, p-521-41.
5	On the quantum theory of SRS: Effect of detuning and upper-level population.	P.S.Gupta & B.K.Mohanty	Czech. J. Phys. (1981) Vol. B31,p-275-87.
6	Quantum-statistics of stimulated hyper-Raman scattering in an inhomogeneously broadened system under three photon resonance condition.	B.K.Mohanty & P.S.Gupta	Czech. J. Phys. (1981) Vol.B 31,p-857-64.
7	Quatum-statistics of stimulated hyper Raman scattering in an inhomogeneously broadened system.	B.K.Mohanty & P.S.Gupta	J.Phys. (U.K) (1981) Vol B14,p-1083-91.
8	Quantum statistics of stimulated Raman scattering in a gaseous system	B.K.Mohanty, N.Nayak & P.S.Gupta	Optica Acta(U.K)(1982) Vol.29, p-1017-26.
9	Quantum theory of coherent anti-stokes Raman scattering in inhomogeneously broadened gaseous system.	B.K.Mohanty, P.S.Gupta & M.Mohanty.	Czech J. Phys (1985) Vol.B 35 , p-41-53.
10	Study of photon-statistics and building up of some nonlinear optical phenomena by quantum mechanical approach.	M.Phil thesis of J.Dash guided by P.S.Gupta.	Indian School of Mines. Dhanbad (1988).

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| 11 | Quantum mechanical study of some multi-wave mixing nonlinear optical processes. | M.Phil thesis of M.De guided by P.S.Gupta. | Indian School of Mines, Dhanbad (1989). |
| 12 | Quantum theory of stimulated Raman scattering in an inhomogeneously broadened three-level gaseous system | P.S.Gupta & J. Dash. | Czech. J. Phys.(1990) Vol.B 40, p-432-441. |
| 13 | Quantum statistics of coherent anti-stokes hyper Raman scattering in a two-level system. | P.S.Gupta & M. De | J. Purvanchal Academy of Sciences (1990) Vol.1, p-125-140. |
| 14 | A quantum theory of any qth order optical harmonic generation with m-photon resonance. | P.S.Gupta & J. Dash. | Optics Communications (Netherlands) (1990) Vol.79,p-251-258. |
| 15 | Photon-statistics of SHRS in an inhomogeneously broadened three-level gaseous system. | P.S.Gupta & J. Dash | Proc. International Conf. on Quantum Optics |
| 16 | Quantum statistics of stimulated Raman and hyper-Raman scattering by master equation approach | P.S.Gupta & J. Dash | Indian J. of Pure & Applied Physics (1991) Vol.29, p-612-615. |
| 17 | Quantum theory of SHRS in an inhomogeneously broadened three-level gaseous system. | P.S.Gupta & J.Dash | Optics Communications (Netherlands) (1992) Vol.88, p-273-280. |
| 18 | Quantum theory of higher order optical harmonic generation | P.S.Gupta | SPIE's International Symposium on Lasers, 22-29 Jan,1992, U.S.A |
| 19 | Quantum statistics of SHRS in an inhomogeneously broadened four-level gaseous system. | P.S.Gupta | XVIII International Quantum Electronics Conf.,14 June,1992, Vienna, Austria. |
| 20 | A master equation approach to coherent anti-stokes Raman scattering. | P.S.Gupta & J.Dash | Indian J. Pure & Applied Phys.(1992) Vol.30 ,p-361-364. |

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| 21 | Quantum mechanical study of nonlinear optical processes | Ph.D thesis of J.Dash guided by P.S.Gupta | Indian School of Mines, Dhanbad (1993) |
| 22 | Photon statistics of stimulated hyper Raman scattering in an inhomogeneously broadened three-level gaseous system | P.S.Gupta & J. Dash | Recent developments in Quantum Optics, Edited by R. Inguva, Plenum Press(1993) p-495-503. |
| 23 | Quantum statistics of SHRS in an inhomogeneously broadened four-level gaseous system. | P.S.Gupta & J.Dash | Proc.81 st Indian Science Congress (1994). |
| 24 | Quantum theory of CARS in three-level system | P.S.Gupta & J.Dash | International Conf. on OE/LASE 94, 22-29 Jan 1994,U.S.A. |
| 25 | Quantum theory of coherent anti-stokes Raman scattering in three level system. | P.S.Gupta & J.Dash | Proc.SPIE-Int. Soc. Opt. Engg (USA) (1994) Vol.2145, p-332-340. |
| 26 | Squeezing effects in Raman scattering | P.S.Gupta & Ashok Kumar | Proc. 82 nd Indian Science Congress(1995) |
| 27 | Short-time squeezing in spontaneous Raman and stimulated Raman scattering. | Ashok Kumar & P.S.Gupta | Quantum & Semi-classical J. of European Optical Society (U.K) (1995) Vol.7,p-835-841. |
| 28 | Higher order amplitude squeezing in hyper Raman scattering under short-time approximation. | Ashok Kumar & P.S.Gupta | Quantum & semi-classical J. of European Optical Society (U.K) (1996) Vol.8,p-1053-63 |
| 29 | Squeezing of radiation field in multi-photon processes | P.S.Gupta & Ashok Kumar | SPIE's Photonics Conf. 3-7 Nov 1996,Beijing. |
| 30 | Squeezing in hyper Raman and stimulated hyper Raman scattering | P.S.Gupta & Ashok Kumar | Proc 84 th Indian Science Congress, Jan 1997. |

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| 31 | Sum squeezing in four-wave sum frequency generation. | Ashok Kumar & P.S.Gupta | Optics Communications (Netherlands), (1997) Vol.136, p-441-446. |
| 32 | Squeezing of radiation in nonlinear optical processes. | P.S.Gupta | Proc 85 th Indian Science Congress, Jan,1998. |
| 33 | Difference squeezing in four-wave difference frequency generation | Ashok Kumar & P.S.Gupta | Quantum & semi-classical J.of European Optical Society (U.K) (1998)Vol.10,p-485-492 |
| 34 | Difference squeezing in multi-mode optical processes. | Ashok Kumar & P.S.Gupta | National seminar in Applied Physics, 25-26 March,1998, I.S.M., Dhanbad. |
| 35 | Squeezing of radiation in multi-wave mixing processes : use in high quality telecommunication. | P.S.Gupta | International Conf. Photonics China (1998) Beijing,16-19 Sept,1998 |
| 36 | Nonclassical property of squeezing of radiation in some nonlinear optical processes. | P.S.Gupta | Proc 86 th Indian Science Congress, Jan,1999. |
| 37 | Quantum mechanical study of squeezing properties of radiation in coherent antistokes Raman scattering and coherent antistokes hyper Raman scattering | M.Phil thesis of Samiran Kumar guided by P.S.Gupta. | Indian School of Mines Dhanbad (2000) |
| 38 | Difference squeezing in multi-mode optical processes. | Ashok Kumar & P.S.Gupta | Indian J. of Phys.(2000) Vol.74A,p-107-109. |
| 39. | Squeezing in CARS under short-time approximation | P.S.Gupta & S.Kumar | Asian J. of Phys.(2000) Vol.9,no.2 p-237-241. |
| 40 | Squeezing in C.A.H.R.S | P.S.Gupta | National Seminar in Physico-chemical study of solids including minerals and coal 21-22 Dec 2000, I.S.M., Dhanbad |

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| 41 | Squeezing in coherent antistokes hyper Raman scattering under short-time approximation. | P.S.Gupta & S.Kumar | Indian J. of Phys. (2000) Vol.74B,p-471-473. |
| 42 | Higher order amplitude squeezing in four-wave mixing process | P.S.Gupta & Ashok Kumar | Proc. International Conf. on Fibre Optics and Photonics (2000) Allied Publishers Vol.II,p-667-669. |
| 43 | Squeezing of radiation in six-wave mixing processes | P.S.Gupta | National Conference on Laser & Spectroscopy, 28-31 Dec., Meerut, 2001 |
| 44 | Study of squeezing properties of radiation in multiwave mixing processes | M.Phil thesis of D. K. Giri guided by P.S.Gupta. | Indian School of Mines Dhanbad (2002) |
| 45 | Quantum Squeezing of radiation in nonlinear optical processes | P.S.Gupta | Asian J. Physics, Vol. 11, p. 263 (2002). |
| 46 | Fourth order squeezing effects in spontaneous and stimulated four-wave mixing process under short-time approximation | P.S.Gupta & D. K. Giri | Proc. 6 th International Conf. on Photonics, Bombay, p.219 (2002). |
| 47 | n^{th} - order squeezing effects in six-wave mixing process as a generalization of the higher order squeezing. | P.S.Gupta & D. K. Giri | Proceeding 90 th Indian Science Congress, 3-7 January 2003, p.20, Bangalore. |
| 48 | Higher order squeezing in nondegenerate multi-wave mixing process. | D. K. Giri & P. S. Gupta | Proc. National Conference on Lasers & Spectroscopy, Meerut, p.38, 2003. |
| 49 | Squeezing of radiation in multi-wave mixing processes : use in high quality telecommunication. | P. S. Gupta & D. K. Giri | National Symposium on Engineering Optics, 6-7 th April, Meerut, 2003. |
| 50 | Short-time squeezing effects in spontaneous and stimulated four-wave mixing process. | D. K. Giri & P. S. Gupta | Asian J. Physics, Vol. 12, p.109-116 (2003). |

51	Short-time fourth-order squeezing effects in spontaneous and stimulated four and wave mixing processes.	D. K. Giri & P. S. Gupta	J. Opt. B: Quantum Semiclassical Optics, Vol. 5, p.158-163 (2003).
52	Short-time squeezing effects in spontaneous and stimulated six-wave mixing process.	D. K. Giri & P. S. Gupta	Optics Communications, Vol. 221, p. 135-143 (2003).
53	Higher-order squeezing in Raman scattering	D. K. Giri & P. S. Gupta	Indian J. of Pure & Applied Physics, Vol. 41, p. 946-949 (2003).
54	Squeezing properties of radiation in six-wave mixing process	P. S. Gupta & D. K. Giri	Proc. of Intl. Conf. On Laser Applications and Optical Metrology, p. 642-646 (2003).
55.	Squeezing properties of radiation in four and six-wave mixing processes	D. K. Giri & P. S. Gupta	Proc. National Conf. On Nonlinear System & Dynamics, p. 193-196 (2003).
56	The squeezing of radiation in four-wave mixing processes	D. K. Giri & P. S. Gupta	J. Opt. B: Quantum Semiclassical Optics, Vol. 6 p 91-96 (2004).
57	Higher order amplitude squeezing effects of radiation in Raman process	D. K. Giri & P. S. Gupta	National Conference on Emerging Areas in Applied Physics(2004) I.S.M, Dhanbad
58	Quantum squeezing effects of radiation in Stokes and anti-Stokes modes in coherent anti-Stokes Raman scattering and coherent anti-stokes hyper-Raman scattering	D.K.Giri & P.S.Gupta	Journal of Modern Optics, Vol. 51, p. 1705-1715 (2004).
59	Squeezing effects of radiation in stokes mode in CARS and CAHRS	D.K.Giri & P.S.Gupta	91 st Indian Science Congress (2004)
60	Squeezing of radiation in multiwave mixing processes: use in high quality telecommunication	P.S.Gupta & D.K.Giri	National Symposium on perspectives in Modern Optics and Spectroscopy, Meerut,5-7 April,2004.

61	Generalisation of higher order squeezing in Raman process	D.K.Giri & P.S.Gupta	7 th International Conference on Opto-electronics, Fibre Optics and Photonics, 9-11 Dec, 2004, Cochin Univ. of Sc. And Technology.
62	Nth order squeezing of quantum field as a generalization of the higher order squeezing in four wave mixing processes.	D.K.Giri & P.S.Gupta	92 nd Indian Sc. Congress, Ahmedabad, 3-7 January, 2005.
63	Higher-order squeezing of the electromagnetic field in spontaneous and stimulated Raman process	D. K. Giri & P. S. Gupta	Journal of Modern Optics, UK Vol.52, p.1769-1781(2005)
64	n th order amplitude-squeezing effects of radiation in Raman process as a generalization of the higher-order squeezing	D. K. Giri & P. S. Gupta	International Journal of Modern Physics B, Singapore Vol.19, p.1943-1953 (2005)
65	The squeezing of the electromagnetic field in multi-photon processes	D. K. Giri & P. S. Gupta	International Conference on Optics and Optoelectronics, Dehradun, 12-15 Dec, 2005.
66	Squeezing effects in the sum and difference of the field amplitude in the Raman process	D. K. Giri & P. S. Gupta	Modern Physics Letters B Vol.19(2005) p1261-1276.
67	Nth order Amplitude Squeezing effects of radiation in Multiphoton processes	D. K. Giri & P. S. Gupta	International Journal of Modern Physics B Vol.20, No.16 p2265-2281(2006).
68	Difference squeezing of the field amplitude in Raman process	D. K. Giri & P. S. Gupta	93 rd Indian Science Congress, Hyderabad, 3-7 January(2006)
69	Generation of squeezed laser using sum and difference frequency Raman processes	D. K. Giri & P. S. Gupta	Progress on Tunable Lasers for Ultrafast Processes and applications(PTLUPA6) IIT Madras(2006) p-54-55.

70	Generation of squeezed laser by sum and difference frequency Raman processes	P.S.Gupta	International Conference Photonics North at Ottawa, Canada during June3-7,2007.
71	The amplitude squeezing effects of the electromagnetic field in six-wave interaction model	D. K. Giri & P. S. Gupta	Modern Physics Letters B, Singapore 22 (2008) 219-230
72	ZnO thin film and its switching behaviour	Nanda Shakti & P.S.Gupta	FECIT (2008) ISMU, Dhanbad, p-409-410
73	Alumina nanofluids:Synthesis and properties	J.Mukherjee, S.Chakraborty & P.S.Gupta	National Seminar on Recent Advances in Material Sciences 15-17 Feb,2008 I.S.M.U,Dhanbad
74	Tin Oxide based gas sensor based On solgel method	S.Dutta, S.Ray &P.S.Gupta	National Seminar on Recent Advances in Material Sciences15-17 Feb I.S.M.U,Dhanbad(2008)
75	Squeezing of radiation in two photon Absorption processes	D. K. Giri & P. S. Gupta	National Seminar on Recent Advances in Material Sciences 15-17 Feb,2008 I.S.M.U, Dhanbad
76	Studies on the electrical properties of SnO ₂ thin film and its use as LPG Gas sensor	S.Ray, P.S.Gupta & G.Singh	FECIT (2008) ISMU, Dhanbad, p-409-410
77.	Study of Conductivity, Carrier conc. And mobility with multilayer ZnO film	Nanda Shakti & P.S.Gupta	Processing and fabrication of Advanced materials XVII Voll(2008) p-346-348

