CURRICULUM VITAE

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Nationality: Indian

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Date of Birth: September 07, 1977

Sex: Male

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Academic Qualifications:

Examinations	Name of the Board/University	Year of Passing	Percentage of marks obtained	Division/Class	Subject(s)
Madhyamik	WBBSE	1994	87%	1st	Usual
Higher Secondary	WBCHSE	1996	79%	1st	Bengali, English, Physics, Chemistry, Mathematics, Statistics
B.Sc.	Jadavpur University	1999	69%	1st	Chemistry (Hons.), Physics, Mathematics (Subsidiary)

M.Sc.	Jadavpur University	2001	65%	1st	Chemistry (Physical Chemistry Specialization)
Ph. D	Jadavpur University	2008 (Date of Award: 06.08.2008)	NA	NA	Theoretical Physical Chemistry

Details of Research Career:

Research Place: Department of Physical Chemistry, Indian Association for the Cultivation of Science

Junior Research Fellow (September, 2002 - August, 2004)

Senior Research Fellow (September, 2004 - January, 2006)

Thesis Title:*On some Aspects of Electronic Structure and Dynamics of Quantum Dots*

PhD Supervisor: Prof. Shankar Prasad Bhattacharyya, Department of Physical Chemistry, Raman Centre for Atomic, Molecular and Optical Sciences, Indian Association for the Cultivation of Science.

Field of Research: Chemical Physics of Low-dimensional Nanostructures: Electronic, Electrical, Magnetic, Optical, Dynamical and Thermodynamic properties.

List of Publications

1. "A linear variational route to the polarizability of 2-D artificial atoms: effects of anharmonicity in the confinement potential" -**Manas Ghosh**, Ram Kuntal Hazra and S. P. Bhattacharyya; Chemical Physics Letters 388 (2004) 337.

2. "Non-linear optical response of single carrier 2-D anharmonic Quantum dots"-**Manas Ghosh**, Ram Kuntal Hazra and S. P. Bhattacharyya; Chemical Physics Letters 397 (2004) 258.

3. "Maximizing second hyperpolarizability of single carrier 2D quantum dots: Interplay of strengths of confining potential, magnetic field and anharmonicity"-**Manas Ghosh**, Ram Kuntal Hazra and S. P. Bhattacharyya; Chemical Physics Letters 405 (2005) 410.

4. "Response of energy levels and wave functions of 2-d artificial atoms to changes in parameters in the Hamiltonian"-**Manas Ghosh**, Ram Kuntal Hazra and S. P. Bhattacharyya; Journal of Theoretical and Computational Chemistry 5 (2006) 25.

5. "Linear and Non-linear optical response properties of singlet 2-electron quantum dots"-**Manas Ghosh**, Ram Kuntal Hazra and S. P. Bhattacharyya; Chemical Physics Letters 434 (2007) 56.

6. "Response properties of 2-electron 2-D Quantum Dots: Triplet versus Singlet"-**Manas Ghosh**, Ram Kuntal Hazra and S. P. Bhattacharyya; Computing Letters 3 (2007) 183 (Prof. A. D. Buckingham special issue).

7. "Target Excitation in 2-D Quantum Dots by Optimized Chirped Pulses"-**Manas Ghosh**, Rahul Sharma and S. P. Bhattacharyya; Chemical Physics Letters 449 (2007) 165.

8. "Linear and Non-linear response of 2-D single carrier dots: Role of impurity perturbations"-Ram Kuntal Hazra, **Manas Ghosh** and S. P. Bhattacharyya; Chemical Physics 333 (2007) 18.

9. "Response dynamics of 2-D Quantum Dots in the presence of time-varying Fields: Anharmonicity and Pulse shape effects"-**Manas Ghosh**, Ram Kuntal Hazra and S. P. Bhattacharyya; Chemical Physics 345 (2008) 103.

10."Size-dependent linear and non-linear optical response of single carrier 2- dimensional quantum dots"-**Manas Ghosh** and S. P. Bhattacharyya; Journal of Physics and Chemistry of Solids 69 (2008) 981.

11."Quantum adiabatic switching route to the impurity modulated states of 2-dquantum dots with different switching functions"- Ram Kuntal Hazra, **Manas Ghosh**and S. P. Bhattacharyya; International Journal of Quantum Chemistry 108 (2008) 719.

12."Modulation of the electronic states of 2-d single carrier quantum dots due to presence of hole doped impurity perturbations"-Ram Kuntal Hazra, **Manas Ghosh** andS. P. Bhattacharyya; Chemical Physics 344 (2008) 61.

13. "Information entropy and level spacing distribution based signatures of quantumchaos in electron doped 2D single carrier quantum dots"- Ram Kuntal Hazra, **Manas Ghosh**and S. P. Bhattacharyya; Chemical Physics Letters 460 (2008) 209.

14."Frequency dependent linear and non-linear response properties of single carrier quantum dots: Role of effective mass and anharmonicity in the confinement potential"-Parikshit Mandal and **Manas Ghosh**; Physica B 403 (2008) 2967.

15. "Influence of effective mass in modulating size-dependent linear and non-linear polarization of single carrier 2-dimensional anharmonic quantum dots"-Parikshit Mandaland **Manas Ghosh**; Physica E 41 (2008) 110.

16."Modulation of energy levels, wave functions and dynamics of 2-d one electron quantum Dots: influence of size"-Parikshit Mandal and **Manas Ghosh**; Chemical Physics353 (2008) 37.

17. "Role of effective mass in modulating linear and non-linear response propertiesof single carrier quantum dots: Interplay with system parameters"- **Manas Ghosh**,Parikshit Mandal and S. P. Bhattacharyya; Journal of Physics and Chemistry of Solids 69(2008) 2864.

18."Metastable impurity perturbed states of 2d single carrier quantum dots"- RamKuntal Hazra, **ManasGhosh** and S. P. Bhattacharyya; Chemical Physics Letters 468(2009) 216.

19."Dynamics of 2-d one electron quantum dots in pulsed field: Influence of size"-Parikshit Mandal and **Manas Ghosh**; Journal of Physics and Chemistry of Solids 70 (2009)680.

20."Dynamics of 2-d one electron quantum dots in periodically fluctuating confinement potential: Influence of size and anharmonicity"-Parikshit Mandal and **ManasGhosh**; Journal of Luminescence 129 (2009) 1249.

21. "Dynamics of 2-d one electron quantum dots in time-dependent magnetic field: Influence of size"-Parikshit Mandal and **Manas Ghosh**; Physica B 404 (2009) 3830.

22."Frequency dependent linear and non-linear response properties of electron impurity doped quantum dots: Influence of impurity location"-Kanchan Sarkar, Nirmal KrDatta and **Manas Ghosh**; Physica E 42 (2010) 1659.

23."Tunneling in 2-d quantum dots via quantum adiabatic switching route"-**ManasGhosh**, Subhasree Ghosh and S. P. Bhattacharyya; Journal of Physics and Chemistry ofSolids 71 (2010) 745.

24."Oscillatory impurity potential induced dynamics of doped quantum dots: Analysis based on coupled influence of impurity coordinate and impurity influenced domain"-Nirmal Kr Datta and **Manas Ghosh**; Chemical Physics 372 (2010) 82.

25."2-d quantum dots in polychromatic radiation fields: Effects of frequency mixing, phase and anharmonicity on the freezing of dynamics"-Subhasree Ghosh, Parikshit Mandaland **Manas Ghosh**; Journal of Theoretical and Computational Chemistry 9(2010) 293.

26."Repulsive impurity doped quantum dot subjected to oscillatory confinement potential: Role of dopant strength and dopant location on time-evolution"-Nirmal KrDatta and **Manas Ghosh**; Solid State Sciences 12 (2010) 1620.

27."Role of impurity strength and impurity domain on excitation of doped quantum dot induced by discontinuously reversing pulsed field"-Nirmal Kr Datta, Subhasree Ghoshand **Manas Ghosh**; Journal of Applied Physics 108 (2010) 104305.

28."Dynamics of electron impurity doped quantum dots in the presence of time-varying fields: Influence of impurity location"-Kanchan Sarkar, Nirmal Kr Datta and**Manas Ghosh**; Physica E 43 (2010) 345.

29."Excitations in doped quantum dot driven by discontinuously and randomly reversing electric field: Influence of impurity"-Nirmal Kr Datta, Subhasree Ghosh and**Manas Ghosh**; Chemical Physics 378 (2010) 66.

30."Impurity modulated excitation profile of doped quantum dot subject to oscillatory magnetic field"-Nirmal Kr Datta and **Manas Ghosh**; Materials Chemistry andPhysics 126 (2011) 693.

31."Role of impurity influenced domain on excitation profile of doped quantum dot subject to oscillatory confinement potential"-Nirmal Kr Datta and **Manas Ghosh**;Journal of Luminescence 131(2011) 795.

32. "Excitations in doped quantum dot induced by randomly fluctuating magnetic field:influence of impurity"-Nirmal Kr Datta and **Manas Ghosh**; European Physical Journal B80 (2011) 95.

33. "Excitations in doped quantum dot driven by periodically fluctuating impuritydomain"-Kashinath Chatterjee, Nirmal Kumar Datta and **Manas Ghosh**; Journal of Applied Physics 109 (2011) 104310.

34. "Excitations in doped quantum dot insisted by time-dependent sluggish enhancementin dot-impurity overlap"-Nirmal Kr Datta and **Manas Ghosh**; Chemical Physics Letters509 (2011) 37.

35. "Interplay between size and impurity position of doped quantum dot"-KanchanSarkar, Nirmal Kr Datta and **Manas Ghosh**; Superlattices and Microstructures 50 (2011)69.

36."Excitations in doped quantum dot induced by randomly fluctuating confinement potential: Influence of impurity"-Nirmal Kr Datta and **Manas Ghosh**; Current AppliedPhysics 11 (2011) 1222.

37. "Impurity strength and impurity domain modulated frequency-dependent linear andsecond non-linear response properties of doped quantum dots"-Nirmal Kr Datta and **ManasGhosh**; Physica Status Solidi B 248 (2011) 1941.

38. "Excitations in doped quantum dot driven by linear and non-linear drift of impurity"-Nirmal Kr Datta and **Manas Ghosh**; Solid State Science 13 (2011) 1531.

39. "Excitations in doped quantum dot induced by accelerating impurity center"-NirmalKr Datta and **Manas Ghosh**; Journal of Applied Physics 110(2011) 054314.

40. "Impurity controlled excitations in doped quantum dot exposed to periodic external perturbation"- Nirmal Kr Datta, Debashis Konar and **Manas Ghosh**; MicroelectronicEngineering 88 (2011) 3306.

41. "Excitations in doped quantum dot insisted by discontinuous reversals of staticelectric field: interplay between pulse and dopant site"- Nirmal Kr Datta, Subhasree Ghoshand **Manas Ghosh**; Superlattices and Microstructures 51 (2012) 163.

42. "The randomly fluctuating impurity strength initiated excitation in doped quantumdots"- Nirmal Kr Datta and **Manas Ghosh**; Superlattices and Microstructures 51 (2012)690.

43. "Influence of relative confinement oscillation and concomitant oscillatory impuritydomain on excitation profile of doped quantum dots"-Nirmal Kr Datta, Suvajit Pal and**Manas Ghosh**; Chemical Physics 400(2012) 44.

44. "Impurity modulated static linear and first non-linear polarizabilities of doped quantum dots"-Nirmal Kr Datta and **Manas Ghosh**; ISRN Optics Vol. 2012, Article ID 847532,8 pages (Invited Article).

45. "Influence of impurity propagation and concomitant enhancement of impurity spreadon excitation profile of doped quantum dots"-Nirmal Kr Datta, Suvajit Pal and **ManasGhosh**; Journal of Applied Physics 112 (2012) 014324.

46. "Rabi type oscillations in damped single electron 2d-quantum dots"- MadhuryMukhopadhyay, Ram Kuntal Hazra, **Manas Ghosh**, Samaresh Mukherjee and S. P. Bhattacharyya; Central European Journal of Physics 10 (2012) 983 (Invited Article).

47. "Impurity controlled excitations in doped quantum dot induced by rectified sinusoidal field"- Suvajit Pal, Nirmal Kr Datta and **Manas Ghosh**; Micro and Nanosystems 4 (2012)314. (Invited Article).

48. "Influence of Gaussian and Saw-tooth pulses in modulating excitation kinetics ofimpurity doped quantum dots"-Suvajit Pal and **Manas Ghosh**; CCAAS CheM Journal 2 (2012) 52 (Invited Article).

49. "Influence of periodically propagating impurity and accompanying time-variationof impurity spread on excitation profile of doped quantum dots"-Suvajit Pal and **ManasGhosh**; Journal of Theoretical and Applied Physics 6 (2012)42 (Invited Article).

50. "Influence of pulse shape in modulating excitation kinetics of impurity doped quantum dots"- Suvajit Pal and **Manas Ghosh**; Superlattices and Microstructures 55 (2013)118.

51. "Influence of oscillatory impurity potential and concurrent gasping of impurity spreadon excitation profile of doped quantum dots"-Suvajit Pal and **Manas Ghosh**; Journal ofMaterials 2013 (2013) Article ID 795450, 7 pages (Invited Article).

52. "Influence of external field and consequent impurity breathing on excitation profileof doped quantum dots"-Suvajit Pal and **Manas Ghosh**; Journal of Luminescence 138(2013) 48.

53. "Excitation kinetics of impurity doped quantum dot triggered by Gaussian whitenoise"-Suvajit Pal, Sudarson Sekhar Sinha, Jayanta Ganguly and **Manas Ghosh**; ISRNCondensed Matter Physics Vol. 2013, Article ID 798153, 6 pages (Invited Article).

54. "Excitation kinetics of quantum dot induced by damped propagation of dopant: Roleof confinement potential and magnetic field"-Suvajit Pal and **Manas Ghosh**; ChemicalPhysics 423 (2013) 15.

55. "Influence of damped propagation of dopant on the excitation kinetics of doped quantum dots"-Suvajit Pal, Nirmal Kr Datta and **Manas Ghosh**; Journal of PhysicalChemistry C 117 (2013) 14435-14440.

56. "Modulation of excitation kinetics of impurity doped quantum dots by the interplaybetween confinement sources and multiplicative Gaussian white noise"-Jayanta Ganguly,Suvajit Pal and **Manas Ghosh**; Superlattices and Microstructures 63 (2013) 110-120.

57. "Additive Gaussian white noise modulated excitation kinetics of impurity dopedquantum dots: Role of confinement sources"-Jayanta Ganguly, Suvajit Pal and **ManasGhosh**; Superlattices and Microstructures 63 (2013) 215-227.

58. "Excitation kinetics of impurity doped quantum dot driven by Gaussian white noise:Interplay with external field"-Suvajit Pal, Sudarson Sekhar Sinha, Jayanta Ganguly and**Manas Ghosh**; Chemical Physics 426 (2013) 54-58.

59. "Coupled influence of damped propagation of dopant and oscillatory confinementsources on excitation kinetics of doped quantum dot"-Suvajit Pal and **Manas Ghosh**;European Physical Journal B 86 (2013) 498 (7 pages).

60. "Coupled influence of damped propagation of dopant and external oscillatory field onexcitation kinetics of doped quantum dot"-Suvajit Pal and **Manas Ghosh**; Physica StatusSolidi B 251 (2014) 462-468.

61. "Influence of noise shape on excitation kinetics of impurity doped quantum dots"-Suvajit Pal, Sudarson Sekhar Sinha, Jayanta Ganguly and **Manas Ghosh**; Manufacturing Review 1 (2014) 1-8 (Invited Article).

62. "Influence of Gaussian white noise on the frequency-dependent first nonlinear polarizability of doped quantum dot"-Jayanta Ganguly and **Manas Ghosh**; Journal of AppliedPhysics 115 (2014) 174313 (10 pages).

63. "Influence of Gaussian white noise on the frequency-dependent linear polarizabilityof doped quantum dot"-Jayanta Ganguly and **Manas Ghosh**; Chemical Physics 438 (2014)75-82.

64. "Coupled influence of noise and damped propagation of impurity on excitationkinetics of doped quantum dots"- Jayanta Ganguly, Suvajit Pal and **Manas Ghosh**, Journalof Advanced Physics 3 (2014) 1-11.

65. "Influence of damping on the frequency-dependent polarizabilities of doped quantumdot"-Suvajit Pal and **Manas Ghosh**; Superlattices and Microstructures 73 (2014) 239-255.

66. "Influence of damped propagation of dopant on the static and frequency-dependentthird nonlinear polarizability of quantum dot"-Suvajit Pal and **Manas Ghosh**; ChemicalPhysics Letters 608 (2014) 284-288.

67. "Nucleation of charged droplets; an ion-atmosphere model"-**Manas Ghosh**; RSCAdvance 4 (2014) 45275-45285.

68. "Influence of damped propagation of dopant on the off-diagonal components of staticlinear and non-linear polarizabilities of quantum dots"-Suvajit Pal, Surajit Saha, and **ManasGhosh**; Journal of Modern Physics and Applications 2014, 2014: 8 (Invited Article).

69. "Modulation of off-diagonal components of static linear and nonlinear polarizabilitiesof doped quantum dots by coupled influence of noise and damped propagation of impurity"-Jayanta Ganguly, Surajit Saha, and **Manas Ghosh**; Science Postprint 1(1): e00036 (2014) (Invited Article).

70. "Blending damped drift of impurity with noise: Impact on off-diagonal componentsof frequency-dependent linear and nonlinear polarizabilities of quantum dots"- Jayanta Ganguly, Surajit Saha, and **Manas Ghosh**; Chemical Physics Letters 619 (2015) 49-53.

71. "Coupled influence of noise and damped propagation of impurity on linear andnonlinear polarizabilities of doped quantum dots"-Jayanta Ganguly and **Manas Ghosh**;Chemical Physics 447 (2015) 54-59.

72. "Exploring static and frequency-dependent third nonlinear polarizability of dopedquantum dots driven by Gaussian white noise"-Jayanta Ganguly and **Manas Ghosh**; Physica Status Solidi B 252 (2015) 289-297.

73. "Influence of damped propagation of dopant on the static linear and nonlinearpolarizabilities of quantum dot" -Suvajit Pal and **Manas Ghosh**; Review of Applied Physics Volume 4, Issue 1, May 2015 (Invited Article).

74. "Exploring off-diagonal frequency-dependent linear and nonlinear polarizabilities ofquantum dot induced by damped drift of impurity"-Suvajit Pal, Surajit Saha and **ManasGhosh**; Science Postprint 1(2): e00043 (2015) (Invited Article).

75. "Profiles of off-diagonal components of static linear and nonlinear polarizabilities ofdoped quantum dots driven by Gaussian white noise"-Surajit Saha, Jayanta Ganguly and**Manas Ghosh**; Open Optics Journal, 9 (2015) 07-13 (Invited Article).

76. "Tuning diagonal components of static linear and first nonlinear polarizabilitiesof doped quantum dots by Gaussian white noise"-Jayanta Ganguly and **Manas Ghosh**;Journal of Physics and Chemistry of Solids 82 (2015) 76-81.

77. "Polarizabilities of impurity doped quantum dots under pulsed field: Role of additivewhite noise"-Surajit Saha and **Manas Ghosh**; Open Journal of Microphysics 05 (2015) 01-10 (Invited Article).

78. "Polarizabilities of impurity doped quantum dots under pulsed field"-Surajit Sahaand **Manas Ghosh**; Science Postprint 1(2): e00046 (2015) (Invited Article).

79. "Fabricating off-diagonal components of frequency-dependent linear and nonlinearpolarizabilities of doped quantum dots by Gaussian white noise"-Surajit Saha, Jayanta Ganguly and **Manas Ghosh**; Physica B 468-469 (2015) 25-33.

80. "Oscillator strength of impurity doped quantum dots: Influence of Gaussian whitenoise"-Suvajit Pal, Jayanta Ganguly, Surajit Saha and **Manas Ghosh**; Physica B 474(2015) 41-46.

81. "Analyzing optical absorption coefficients of impurity doped quantum dots inpresence of noise with special emphasis on electric field, magnetic field and confinementpotential"-Arkajit Mandal, Sucharita Sarkar, Arghya Pratim Ghosh and **Manas Ghosh**;Chemical Physics 463 (2015) 149-158.

82. "Exploring optical refractive index change of impurity doped quantum dots driven bywhite noise"-Surajit Saha, Suvajit Pal, Jayanta Ganguly, and **Manas Ghosh**; Superlatticesand Microstructures 88 (2015) 620-633.

83. "Influence of position-dependent effective mass on optical refractive index changeof impurity doped Quantum dots in presence of Gaussian white noise"-Suvajit Pal,Jayanta Ganguly, Surajit Saha and **Manas Ghosh**; Science Postprint 1(2): e00055.doi:10.14340/spp.2015.12A0002.

84. "Noise-driven optical absorption coefficients of impurity doped quantum dots"-Jayanta Ganguly, Surajit Saha, Suvajit Pal and **Manas Ghosh**; Physica E 75 (2016)246-256.

85. "Exploring electro-optic effect of impurity doped quantum dots in presence of Gaussian white noise"-Suvajit Pal, Jayanta Ganguly, Surajit Saha and **Manas Ghosh**; Journalof Physics and Chemistry of Solids 88 (2016) 85-95.

86. "Fabricating third-order nonlinear optical susceptibility of impurity doped quantumdots in presence of Gaussian white noise"-Jayanta Ganguly, Surajit Saha, Suvajit Pal and**Manas Ghosh**; Optics Communications 363 (2016) 47-56.

87. "Tuning third harmonic generation of impurity doped quantum dots in presence ofGaussian white noise"-Surajit Saha and **Manas Ghosh**; Journal of Physics and Chemistryof Solids 90 (2016) 69-79.

88. "Modulating nonlinear optical properties of impurity doped Quantum dots via theinterplay between anisotropy and Gaussian white noise"-Sucharita Sarkar, Arghya PratimGhosh, Arkajit Mandal and **Manas Ghosh**; Superlattices and Microstructures 90 (2016)297-307.

89. "Polarizabilities of impurity doped quantum dots under pulsed field: Role of multiplicative white noise"- Surajit Saha and **Manas Ghosh**; Brazilian Journal of Physics 46(2016) 41-49.

90. "Influence of position-dependent effective mass on third-order nonlinear optical susceptibility of impurity doped Quantum dots in presence of Gaussian white noise"-SurajitSaha, Suvajit Pal, Jayanta Ganguly and **Manas Ghosh**; Physica B 484 (2016) 109-113.

91. "Influence of position-dependent effective mass on the nonlinear optical properties ofimpurity doped quantum dots in presence of Gaussian white noise"-Arghya Pratim Ghosh,Arkajit Mandal, Sucharita Sarkar and **Manas Ghosh**; Optics Communications 367 (2016)325-334.

92. "Influence of anisotropy on the optical refractive index change of impurity doped quantum dots in presence of Gaussian white noise"-Jayanta Ganguly, Surajit Saha, SuvajitPal and **Manas Ghosh**; Current Nanomaterials 1 (2016) 69-74.

93. "Noise-driven diamagnetic susceptibility of impurity doped quantum dots: Role ofanisotropy, position-dependent effective mass and position-dependent dielectric screeningfunction"-Aindrila Bera, Surajit Saha, Jayanta Ganguly and **Manas Ghosh**; ChemicalPhysics 474 (2016) 36-43.

94. "Interplay between noise and position-dependent dielectric screening function inmodulating nonlinear optical properties of impurity doped quantum dots"-Aindrila Bera,Jayanta Ganguly, Surajit Saha, and **Manas Ghosh**; Optik 127 (2016) 6771-6778.

95. "Modulating optical second harmonic generation of impurity doped quantum dotsin presence of Gaussian white noise"-Jayanta Ganguly and **Manas Ghosh**; Physica StatusSolidi B 253 (2016) 1093-1103.

96. "Influence of anisotropy and position-dependent effective mass on electro-optic effectof impurity doped quantum dots in presence of Gaussian white noise"-Surajit Saha, JayantaGanguly, Suvajit Pal and **Manas Ghosh**; Chemical Physics Letters 658 (2016) 254-258.

97. "Tailoring nonlinear optical rectification coefficient of impurity doped quantum dotsby invoking Gaussian white noise"-Suvajit Pal and **Manas Ghosh**; Optical and QuantumElectronics 48 (2016) 372 (18 pages).

98. "Exploring diamagnetic susceptibility of impurity doped quantum dots in presence ofGaussian white noise"- Aindrila Bera, Surajit Saha, Jayanta Ganguly and **Manas Ghosh**;Journal of Physics and Chemistry of Solids 98 (2016) 190-197.

99. "Combined influence of hydrostatic pressure and temperature on interband emissionenergy of impurity doped quantum dots in presence of noise"-Aindrila Bera and **ManasGhosh**; Physica B 500 (2016) 24-31.

100. "Modulating optical rectification, second and third harmonic generation of dopedquantum dots: Interplay between hydrostatic pressure, temperature and noise"-JayantaGanguly, Surajit Sasha, Aindrila Bera and **Manas Ghosh**; Superlattices and Microstructures 98 (2016) 385-399.

101. "Influence of position-dependent effective mass, position-dependent dielectricscreening function and anisotropy on the binding energy and interband emission energy ofimpurity doped quantum dots in presence of Gaussian white noise"-Anuja Ghosh, AindrilaBera and **Manas Ghosh**; Biointerface Research in Applied Chemistry 6 (2016) 1573-1579.

102. "Simultaneous influence of hydrostatic pressure and temperature on diamagneticsusceptibility of impurity doped quantum dots under the aegis of noise"-Surajit Saha,Jayanta Ganguly, Aindrila Bera and **Manas Ghosh**; Chemical Physics 480 (2016) 17-22.

103. "Noise-modulated effects of anisotropy and position-dependent effective mass onthe oscillator strength of impurity doped quantum dots"-Sucharita Sarkar, Arghya PratimGhosh, Arkajit Mandal and **Manas Ghosh**; Journal of Advances in Nanomaterials 1 (2016)64-72.

104. "Influence of Hermanson's dielectric screening function on the nonlinear opticalProperties of impurity doped quantum dots in presence of Gaussian white noise"- AindrilaBera, Surajit Saha, Jayanta Ganguly and **Manas Ghosh**; Journal of Advanced Physics 6(2017) 87-95.

105. "Exploring optical dielectric function of impurity doped quantum dots in presence of Gaussian white noise"- Surajit Saha, Suvajit Pal, Jayanta Ganguly and **ManasGhosh**; Journal of Advanced Physics 6 (2017) 48-55.

106. "Exploring electro-optic effect and third-order nonlinear optical susceptibility ofimpurity doped quantum dots: Interplay between hydrostatic pressure, temperature andnoise"-Jayanta Ganguly, Surajit Saha, Aindrila Bera and **Manas Ghosh**; Optics Communications 387 (2017) 166-173.

107. "Exploring optical dielectric function of impurity doped quantum dots under combined influence of hydrostatic pressure and temperature and in presence of noise"-AindrilaBera and **Manas Ghosh**; Chemical Physics Letters 667 (2017) 103-107.

108. "Simultaneous influence of hydrostatic pressure and temperature on binding energyof impurity doped quantum dots in presence of noise"-Aindrila Bera and **Manas Ghosh**;Journal of Alloys and Compounds 695 (2017) 3054-3060.

109. "Optical dielectric function of impurity doped Quantum dots in presence of noise"-Anuja Ghosh, Aindrila Bera and Manas Ghosh; Advances in Nano Research 4 (2017)13-25.

110. "Role of anisotropy, spatially-varying effective mass and dielectric constant onthe self-polarization effect of doped quantum dots in presence of noise"-Anuja Ghosh and**Manas Ghosh**; Superlattices and Microstructures 104 (2017) 438-444.

111. "Influence of noise on the self-polarization effect of impurity doped quantum dots"-Anuja Ghosh and **Manas Ghosh**; Advanced Nano-Bio-Materials and Devices 1 (2017)1-13.

112. "Dipole moment and polarizability of impurity doped quantum dots driven by noise:Influence of hydrostatic pressure and temperature"-Aindrila Bera and **Manas Ghosh**; Physica B 515 (2017) 18-22.

113. "Influence of binding energy on dipole moment, polarizability and self-polarizationeffect of impurity doped quantum dots: Role of noise"-Anuja Ghosh, Aindrila Bera and**Manas Ghosh**; Chemical Physics Letters 678 (2017) 119-122.

114. "Nonlinear optical properties of doped quantum dots: Interplay between noise andcarrier density"-Aindrila Bera, Anuja Ghosh and **Manas Ghosh**; Optical Materials 69(2017) 352-357.

115. "Noise-modulated self-polarization effect of impurity doped quantum dots undersimultaneous presence of hydrostatic pressure and temperature"-Aindrila Bera and **ManasGhosh**; Journal of Physics and Chemistry of Solids 109 (2017) 26-30.

116. "Role of carrier density on the nonlinear optical properties of doped quantum dotsunder the supervision of noise"-Anuja Ghosh, Aindrila Bera and **Manas Ghosh**; Optik 142(2017) 590-597.

117. "Modulating binding energy and interband emission energy of impurity doped quantum dots in presence of Gaussian white noise"-Anuja Ghosh, Aindrila Bera and **ManasGhosh**; Current Smart Materials 2(1) (2017) 56-64.

118. "Noise-induced total optical absorption coefficient and refractive index change ofimpurity doped quantum dots under simultaneous influence of hydrostatic pressure andtemperature"-Aindrila Bera and **Manas Ghosh**; Current Physical Chemistry 7(3) (2017)243-253.

119. "Dipole moment and polarizability of impurity doped quantum dots: Role of noise"-Anuja Ghosh and **Manas Ghosh**; Recent Advances in Communications and NetworkingTechnology 6(2) (2017) 93-103.

120. "Dipole moment and polarizability of impurity doped quantum dots underanisotropy, spatially varying effective mass and dielectric screening function: Interplay withnoise"-Anuja Ghosh and **ManasGhosh**; Journal of Physics and Chemistry of Solids 112(2018) 252-257.

121. "Stark shift of impurity doped quantum dots: Role of noise"-Sk. Md. Arif, AindrilaBera, Anuja Ghosh and **Manas Ghosh**; Chemical Physics 501 (2018) 101-109.

122. "Exploring DC-Kerr effect of impurity doped quantum dots under the aegis ofnoise"-Sk. Md. Arif, Aindrila Bera, Anuja Ghosh and **Manas Ghosh**; Optical Materials76 (2018) 237-252.

123. "Exploration of dynamic dipole polarizability of impurity doped quantum dots inpresence of noise"-Anuja Ghosh, Aindrila Bera, Surajit Saha, Sk. Md. Arif and **ManasGhosh**; Superlattices and Microstructures 114 (2018) 259-273.

124. "Modulation of static dipole polarizability of impurity doped quantum dots inpresence of noise"-Aindrila Bera, Anuja Ghosh, Surajit Saha, Sk. Md. Arif and **ManasGhosh**; Journal of Alloys and Compounds 742 (2018) 142-150.

125. "Modulating electro-absorption coefficient of impurity doped quantum dots drivenby noise"-Sk. Md. Arif, Anuja Ghosh, Aindrila Bera and **Manas Ghosh**; Photonics andNanostructures 31 (2018) 08-21.

126. "Analyzing the correction factor relevant to Kerr nonlinearity in impurity dopedquantum dots for a passage from non-absorbing to absorbing media: Role of noise"-Sk. Md.Arif, Anuja Ghosh, Aindrila Bera and **Manas Ghosh**; Journal of Physics and Chemistryof Solids 121 (2018) 54-61.

127. "Tuning diamagnetic susceptibility of impurity doped quantum dots by noise-binding energy interplay"-Sk. Md. Arif, Aindrila Bera and **Manas Ghosh**; Heliyon 5(2019) e01147.

128. "Exploring the nonlinear optical properties of impurity doped quantum dots in thelight of noise-binding energy interplay"-Sk. Md. Arif, Aindrila Bera and **Manas Ghosh**;Results in Physics 13 (2019) 102139 (8 pages).

129. "Analyzing magnetic susceptibility of impurity doped quantum dots in presence ofnoise"-Aindrila Bera, Anuja Ghosh and **Manas Ghosh**; Journal of Magnetism and Magnetic Materials 484 (2019) 391-402.

130. "Influence of noise-binding energy interplay on DC-Kerr effect and electro-absorption coefficient of impurity doped quantum dots"-Anuja Ghosh, Sk. Md. Arif and**Manas Ghosh**; Heliyon 5 (2019) e01832.

131. "Influence of noise-binding energy interplay on the second and third-order nonlinearoptical properties of impurity doped quantum dots"-Anuja Ghosh, Sk. Md. Arif and **ManasGhosh**; Heliyon 5 (2019) e01785.

132. "Impurity related optical properties in tuned quantum dot/ring systems"-SuvajitPal, **Manas Ghosh** and Carlos Alberto Duque; Philosophical Magazine 99 (2019) 2457-2486.

133. "Role of noise-binding energy interplay on Stark shift and dipole polarizabilities ofimpurity doped quantum dots"-Aindrila Bera, Anuja Ghosh and **Manas Ghosh**; Journalof Optoelectronics and Advanced Materials 21 (2019) 499-504.

134. "Magnetic susceptibility of doped quantum dots: Interplay between binding energyand noise"-Anuja Ghosh, Sk. Md. Arif and **Manas Ghosh**; Biointerface Research inApplied Chemistry 10 (2020) 5376-5381.

135. "Analyzing role of relaxation time on second harmonic generation and opticaldielectric function of impurity doped quantum dots under the aegis of noise"-Sk. Md. Arif,Aindrila Bera, Anuja Ghosh and **Manas Ghosh**; Physica B 588 (2020) 412166 (07 pages).

136. "Transition kinetics of impurity doped quantum dots under time-dependent confinement potential: Role of noise"-Anuja Ghosh, Sk. Md. Arif, Aindrila Bera and **ManasGhosh**; European Physical Journal B 93 (2020) 91 (11 pages).

137. "Transition kinetics of impurity doped quantum dots under time-varying magnetic field: Role of noise"- Aindrila Bera, Anuja Ghosh, Sk. Md. Arif and **Manas Ghosh**;Superlattices and Microstructures 143 (2020) 106554 (13 pages).

138. "Transition kinetics of impurity doped quantum dots driven by sinusoidal field:Role of Gaussian white noise"-Sk. Md. Arif, Aindrila Bera, Anuja Ghosh and **ManasGhosh**; Chinese Journal of Physics 66 (2020) 112-123.

139. "Profiles of static quadrupole polarizability of impurity doped quantum dots drivenby Gaussian white noise"-Anuja Ghosh, Sk. Md. Arif, Aindrila Bera and **Manas Ghosh**;Physica Status Solidi B 257 (2020) 1900766 (09 pages).

140. "Exploring quadrupole oscillator strength of impurity doped quantum dots controlled by Gaussian white noise"-Aindrila Bera, Anuja Ghosh, Sk. Md. Arif and **ManasGhosh**; European Physical Journal D 74 (2020) 230 (08 pages).

141. "Exploring noise-effect on the intraband transition lifetime of impurity doped quantum dots"-Sk. Md. Arif, Aindrila Bera, Anuja Ghosh and **Manas Ghosh**; BiointerfaceResearch in Applied Chemistry 11 (2) (2021) 8639-8653.

142. "Adiabatic switching among quantum dot eigenstates: Role of anharmonicity andGaussian white noise"-Debi Roy, Sk. Md. Arif and **Manas Ghosh**; Physica Status Solidi B 258 (2021) 2100295 (14 pages), PSS 60th Anniversary Special Issue.

143. "Exploring quantum adiabatic switching among impurity-modulated states indoped quantum dots: Role of Gaussian white noise"-Sk. Md. Arif, Debi Roy and **Manas Ghosh**; Physica B 625 (2022) 413477 (16 pages).

144. "Analyzing group index of impurity doped quantum dots under the superintendenceof Gaussian white noise"-Sk. Md. Arif, Aindrila Bera, Debi Roy and **Manas Ghosh**; European Physical Journal B 95 (2022) 21 (18 pages).

145. "Influence of noise-anharmonicity interplay on a few physical properties of quantumdot"-Sk. Md. Arif, Debi Roy and **Manas Ghosh**; Physica Status Solidi B 259 (2022)2100497 (13 pages).

146. "Profiles of optical gain of impurity doped quantum dots under the stewardship ofGaussian white noise"- Sk. Md. Arif, Debi Roy, Aindrila Bera and **Manas Ghosh**; PhysicaStatus Solidi B 259 (2022) 2200035 (24 pages).

147. Pulsed field induced excitation in impurity doped quantum dot: Interplay withGaussian white noise"- Swarnab Datta, Sk. Md. Arif, Debi Roy and **Manas Ghosh**;Physica B 643 (2022) 414163 (18 pages).

148. "Sonogashira coupling reaction and its application in dendrimer synthesis"- PritamRoy Chowdhury, Debabrata Singha, Sudeshna Sawoo, **Manas Ghosh** and Nilasish Pal;Asian Journal of Chemistry 34 (2022) 1939-1957.

149. "Modulation of electrical and optical properties of quantum dot by noise-anharmonicity interplay"-Debi Roy, Sk. Md. Arif and **Manas Ghosh**; Brazilian Journalof Physics 52 (2022) 178 (19 pages).

150. "Excitation Dynamics among Impurity Doped Quantum Dot Eigenstates in a Polychromatic Field: Role of Gaussian White Noise"-Swarnab Datta, Sk. Md. Arif, Debi Royand **Manas Ghosh**; ChemistrySelect 07 (2022) e202202244 (10 pages).

151. "Chirped pulsed field initiated excitation dynamics in impurity doped quantum dotunder the influence of noise"-Sk. Md. Arif, Swarnab Datta, Debi Roy and **Manas Ghosh**;European Physical JournalPlus 137 (2022) 1170 (12 pages).

152. "Analyzing time-average excitation rate among quantum dot eigenstates triggeredby time-dependent noise strength"- Swarnab Datta, Sk. Md. Arif, Debi Roy and **ManasGhosh**; Physica Status Solidi B 259 (2022) 2200216 (09 pages).

153. "Tuning the nonlinear optical properties of quantum dot by noise-anharmonicityinterplay"-Debi Roy, Sk. Md. Arif, Swarnab Datta and **Manas Ghosh**; Atoms 10 (2022)122 (32 pages), Special Issue Entitled "*Quantum Dynamics of Matter in Tailored IntenseFields*".

154. "Population transfer among the quantum dot eigenstates driven by time-dependentanharmonic potential: Role of noise"-Swarnab Datta, Sk. Md. Arif, Debi Roy and **ManasGhosh**; ChemistrySelect 8 (2023) e202204212 (10 pages).

155. "External field-induced transitions in quantum dot: Role of noise-anharmonicityinterplay"-Swarnab Datta, Sk. Md. Arif, Debi Roy and **Manas Ghosh**; ChemistrySelect 8(2023) e202203839 (12 pages).

156. "Influence of impurity binding energy on the excitation dynamics of doped *GaAs*quantum dot: Role of noise"-Swarnab Datta and **Manas Ghosh**; Journal of ChemicalScience 135 (2023) 15 (10 pages), Special Issue Entitled "*Interplay of Structure andDynamics in Reaction Pathways, Chemical Reactivity and Biological Systems*".

157. "Transitions among doped GaAs quantum dot eigenstates initiated by time-varyingimpurity potential: Influence of noise"-Swarnab Datta, Sk. Md. Arif, Debi Roy and **ManasGhosh**; Biointerface Research in Applied Chemistry 13 (2023) 503 (16 pages).

158. "Role of spatial impurity spread on the transition dynamics of doped *GaAs* quantum dot in presence of noise"- Swarnab Datta, Bhaskar Bhakti and **Manas Ghosh**; PhysicaStatus Solidi B 260 (2023) 2300281 (06 pages).

159. "Population transfer dynamics in doped *GaAs* quantum dot modulated by noise:Role of impurity stretch"- Swarnab Datta, Bhaskar Bhakti and **Manas Ghosh**; Bulletin ofMaterials Science 46 (2023) 231 (10 pages).

160. “Role of anharmonicity binding energy on the transition dynamics of *GaAs* quantum dot in presence of noise"-Swarnab Datta, Bhaskar Bhakti and **Manas Ghosh**; IndianJournal of Physics 98 (2024) 1247-1258.

161. "Influence of spatial extension of impurity on the nonlinear optical properties ofdoped *GaAs* quantum dot in presence of noise"-Bhaskar Bhakti, Swarnab Datta and **ManasGhosh**; Modern Physics Letters B 38 (2024) 2350242 (14 pages).

162.“Fine-tuning a few nonlinear optical properties of doped *GaAs* quantum dot byspatial spread of impurity under the aegis of noise"-Bhaskar Bhakti, Swarnab Datta and**Manas Ghosh**; Indian Journal of Physics 98 (2024) 3219-3227 (09 pages).

163. "Harnessing the thermodynamic properties of *GaAs* quantum dot under the influence of noise-anharmonicity interplay"-Bhaskar Bhakti, Swarnab Datta and **Manas Ghosh**;European Physical Journal B 97 (2024) 24 (11 pages).

164.“Tuning the magnetocaloric effect in *GaAs* quantum dot under the aegis of noise-anharmonicity interplay"-Bhaskar Bhakti, Swarnab Datta and **Manas Ghosh**; Physica B679 (2024) 415804 (07 pages).

165. "Nonlinear optical properties of doped *GaAs* quantum dot modulated by noise:Role of impurity spread"-Swarnab Datta, Bhaskar Bhakti and **Manas Ghosh**; Journalof Nonlinear Optical Physics and Materials 33 (2024) 2340002 (18 pages), Special Issueentitled “*Nonlinear optical physics in 2D materials*".

166. “Exploring Shannon entropy and heat capacity of doped *GaAs* quantum dot underthe influence of noise"-Bhaskar Bhakti, Swarnab Datta and **Manas Ghosh**; Physica B 683(2024) 415901 (14 pages).

167. "Harnessing the Shannon entropy-based magnetocaloric effect in *GaAs* quantumdot under the influence of noise-anharmonicity interplay"-Bhaskar Bhakti, Swarnab Dattaand **Manas Ghosh**; Physica Status Solidi B 261 (2024) 2300589.

168. “Analyzing the magnetocaloric effect in doped *GaAs* quantum dot in view ofShannon entropy: Role of noise"-Bhaskar Bhakti, Swarnab Datta and **Manas Ghosh**;European Physical Journal Plus 139 (2024) 364 (13 pages).

169. "Modulation of Tsallis entropy and corresponding thermodynamic properties ofimpurity doped *GaAs* quantum dot in presence of noise"-Bhaskar Bhakti, Swarnab Dattaand **Manas Ghosh**; Next Nanotechnology 6 (2024) 100072 (18 pages).

170. "Modulation of thermodynamic properties of doped *GaAs* quantum dot under theinfluence of noise"- Bhaskar Bhakti, Swarnab Datta and **Manas Ghosh**; Physica StatusSolidi B 261 (2024) 2300569 (XX pages).

171. "Tuning the noise-driven magnetocaloric effect in doped *GaAs* quantum dot in viewof Tsallis entropy"- Bhaskar Bhakti, Swarnab Datta and **Manas Ghosh**; ChemistrySelect9 (2024) e202402759.

172."Tailoring the magnetocaloric effect in doped *GaAs* quantum dot under the influence of noise"-Bhaskar Bhakti, Swarnab Datta and **Manas Ghosh**; Materials Chemistryand Physics 328 (2024) 129942 (8 pages).

173. "Exploration of the normalized intradopant transition energy of *GaAs* quantum dotunder the influence of noise"- Bhaskar Bhakti and **Manas Ghosh**; Physica B 698 (2025)416731 (12 pages).

174. "Influence of noise-anharmonicity interplay on Shannon entropy and heat capacityof *GaAs* quantum dot"-Bhaskar Bhakti, Swarnab Datta and **Manas Ghosh**; Indian Journalof Physics 99 (2025) 943-952.

175. "Modulation of the normalized intersubband transition energy of *GaAs* quantumdot under the influence of noise and anharmonicity"-Bhaskar Bhakti and **Manas Ghosh**;Materials International 7(1) (2025) 5 (14 pages).

176. "Subtle modulation of the nonlinear optical properties of *GaAs* quantum dot bythe interplay between noise and impurity extension"-Bhaskar Bhakti, Swarnab Datta, AnujaGhosh and **Manas Ghosh**; European Physical Journal B 98 (2025) 25 (14 pages).

177. "Analysing normalized binding energy of *GaAs* quantum dot containing Gaussianimpurity: Role of noise"- Bhaskar Bhakti and **Manas Ghosh**; Physica Status Solidi B 262 (4) (2025) 2400503 (12 pages).

178. "Influence of spatial dispersion of impurity on interband emission energy and magnetic susceptibility of *GaAs* quantum dot under the aegis of noise"- Bhaskar Bhakti and **Manas Ghosh**; Chemistry Africa 8 (2025) 1687-1695.

179."Exploiting the spatial extension of impurity for regulation of a few electrical properties of *GaAs* quantum dot: Role of noise"- Bhaskar Bhakti and **Manas Ghosh**; Revista Mexicana de Fisica71 (2025) 041601 (09 pages).

180."Analyzing polarizability, dipole moment, Stark shift, self-polarization effect and diamagnetic susceptibility of GaAs quantum dot under the simultaneous influence of noise and

spatial dissemination of impurity"-Bhaskar Bhakti and **Manas Ghosh**; Philosophical Magazine (in press, 2025).

181. "Investigating Tsallis entropy and corresponding magnetocaloric effect in *GaAs* quantum dot under the aegis of noise-anharmonicity interplay"- Bhaskar Bhakti and **Manas Ghosh;** Physica Status Solidi B (in press, 2025).

h-index (Google Scholar): 17

i10-index (Google Scholar): 45

Total citation (Google Scholar): 1113

Reviewer of National/International Journals

Sl. No.	Journal Name	ISSN	Publisher
1.	*Advances in Condensed Matter Physics*	1687-8108 (Print) & 1687-8124 (Online)	Hindawi
2.	*Advanced Quantum Technologies*	2511-9044 (Online)	Wiley-VCH
3.	*Advanced Theory and Simulations*	2513-0390 (print) 2513-0390 (online)	Wiley-VCH
4.	*Canadian Journal of Physics*	1208-6045 (print) 0008-4204 (web)	NRC Research Press (Canada)
5.	*Chemical Physics*	0301-0104	Elsevier
6.	*Chemical Physics Letters*	0009-2614	Elsevier
7.	*Chinese Journal of Physics*	0577-9073	Elsevier
8.	*Computational Condensed Matter*	2352-2143	Elsevier
9.	*Current Applied Physics*	1567-1739	Elsevier
10.	*European Physical Journal B*	1434-6021 (print) & 1434-6036 (online)	Springer

11.	*European Physical Journal D*	1434-6060 (Print) 1434-6079 (Online)	Springer
12.	*European Physical Journal Plus*	2190-5444	Springer
13.	*Indian Journal of Physics*	0973-1458 (print) & 0974-9845 (online)	Springer
14.	*Indian Journal of Pure & Applied Physics*	0019-5596 (print) & 0975-1041 (online)	CSIR-NISCAIR
15.	*International Journal of Modern Physics B*	0217-9792 (print) & 1793-6578 (online)	World Scientific
16.	*International Journal of Nanoscience and Nanotechnology*	1735-7004 (print) & 2423-5911 (online)	Iranian Nano Society
17.	*Journal of Computational Electronics*	1569-8025 (print) & 1572-8137 (online)	Springer
18.	*Journal of Interfaces, Thin Films & Low-dimensional systems*	2645-4173 (Print) 2645-4181 (Online)	Alzahra University, Iran.
19.	*Journal of Low Temperature Physics*	0022-2291 (Print) 1573-7357 (Online)	Springer
20.	*Journal of Magnetism and Magnetic Materials*	0304-8853	Elsevier
21.	*Journal of Molecular Structure*	0022-2860	Elsevier

22.	*Journal of Physics & Chemistry of Solids*	0022-3697	Elsevier
23.	*Laser Physics*	1054-660X (Print) 1555-6611 (Online)	Institute of Physics (IOP), UK
24.	*Optical Materials*	0925-3467	Elsevier
25.	*Optical and Quantum Electronics*	0306-8919 (Print) 1572-817X (Online)	Springer
26.	*Optics Communications*	0030-4018	Elsevier
27.	*Optics & Laser Technology*	0030-3992	Elsevier
28.	*Optik*	0030-4026	Elsevier
29.	*Optoelectronics and Advanced Materials – Rapid Communication*	1842-6573	INOE Publishing House, Romania.
30.	*Philosophical Magazine*	1478-6435 (Print) 1478-6443 (Online)	Taylor & Francis
31.	*Physica B*	0921-4526	Elsevier
32.	*Physica E*	1386-9477	Elsevier
33.	*Physica Scripta*	0031-8949 (Print) 1402-4896 (Online)	Institute of Physics (IOP), UK
34.	*Physica Status Solidi B*	1521-3951	Wiley-VCH
35.	*Physical Science International Journal*	2348-0130	SCIENCEDOMAIN International
36.	*Physics Letters A*	0375-9601 (Print) 1873-2429 (Online)	Elsevier
37.	*RSC Advances*	2046-2069	Royal Society of

			Chemistry (UK)
38.	*Solid State Communications*	1879-2766 (Online) 0038-1098 (Print)	Elsevier
39.	*Solid State Sciences*	1293-2558	Elsevier
40.	*Superlattices and Microstructures*	0749-6036	Elsevier

Invited Lectures

1. Chemical Research Society of India (Kolkata Chapter), Symposium (IX) on Chemical Research in the First Decade of 21st Century, organized by Department of Chemistry, Visva-Bharati, August 06, 2011. Title of the talk: "*Excitations in Doped Quantum Dot Driven by Drift of Impurity".*

Poster/Oral Presentations in Conferences:

1. National Symposium on Theoretical Chemistry (NSTC-2004), Bhaba Atomic Research Centre, Mumbai, 09-12 December 2004. Poster presentation entitled: '*The Electronic Structure and Response Properties of Single Carrier Artificial Atoms".*

2. Humboldt-Kolleg on Structural Characterization and Spectroscopy of Materials Relevant to Nanotechnology, Biomedical and Geobiology (SCSMNBG-2008), Department of Physics, Faculty of Science, Banaras Hindu University, Varanasi, November 07-09, 2008. Poster presentation entitled: '*Dynamics of 2-d One Electron Quantum Dots in Oscillatory Confinement Potential: Influence of size*.

3. National Conference on New Arena in Photosciences (NCNAP-2010), Department of Chemistry and Indian Photobiology Society, Jadavpur University, August 28, 2010. Poster presentation entitled: "*Excitations in Repulsive Impurity Doped Quantum Dot Subject to Oscillatory Confinement Potential: Role of Dopant Strength and Dopant Location".*

4. National Seminar on Recent Advances in Chemistry (NSRAC-2012), under the Centre for Advanced Studies Program, UGC, organized by the Department of Chemistry, Jadavpur University, February 10-11, 2012. Poster presentation entitled: "*Excitation in Doped Quantum Dots Insisted by Propagating Impurity*".

5. Acharya P. C. Ray National Young Scientists' Conference, organized by Presidency University, Vivekananda Vijnan Mission and Calcutta University, February 17-18, 2012. Oral presentation entitled: "*Impurity Drift Induced Excitation in Doped Quantum Dots".*

6. International Symposium on "Molecular Organization and Complexity: A Chemical Perspective", organized by Department of Chemistry, University of Calcutta, February 06-08, 2013. Poster presentation entitled: "*Excitation in Impurity Doped Quantum Dots Insisted by Discontinuous Field".*

7. National Conference on Photosciences: Contemporary Challenges and Future Perspectives, organized by Indian Photobiology Society and Department of Chemistry, Jadavpur University, December 12-14, 2013. Poster presentation entitled: "*Excitation Kinetics of Impurity Doped Quantum Dots Driven by Discontinuous Field".*

8. National Seminar on Multifunctional Polymer Materials (POLY-2014), organized by Department of Chemistry, Visva-Bharati, February 14-15, 2015. Poster presentation entitled: *"Influence of Gaussian White Noise on First Nonlinear Polarizability of Doped Quantum Dots".*

9. Discussion Meeting on Perspective in Teaching and Research in Physical Chemistry-2015, organized by Indian Association for the Cultivation of Science, August 21-22, 2015. Poster presentation entitled: *"Tuning Oscillator Strength of Impurity Doped Quantum Dots in Presence of Noise".*

10. Condensed Matter Days 2015, organized by Department of Physics, Visva-Bharati, August 27-29, 2015. Poster presentation entitled: "*Oscillator Strength of Doped Quantum Dots Driven by Gaussian White Noise".*

11. National Symposium on Recent Advances in Chemistry Research, organized by Department of Chemistry, Visva-Bharati, March 04, 2016. Poster presentation entitled: *"Absorption Coefficient of Doped Quantum Dots Driven by Gaussian White Noise".*

12. National Seminar on Chemistry of Functional Materials of Current Interest, organized by the Department of Chemistry, Jadavpur University, March 16, 2016. Poster presentation entitled: "*Manufacturing Dipole-allowed Transitions of Doped Quantum Dots by Gaussian White Noise*".

13. National Seminar on Recent Advances in Chemical Science and Application, organized by the Department of Chemistry, Vidyasagar College for Women, January 06-07, 2017. Poster presentation entitled: "*Combined role of hydrostatic pressure and temperature on binding energy of doped quantum dots in presence of noise".*

14. National Conference on Chemistry: Today and Tomorrow, organized by the Department of Chemistry, University of Kalyani, July 26-27, 2018. Poster presentation entitled "*Exploring the correction factor relevant to Kerr nonlinearity in impurity doped quantum dots for a passage from non-absorbing to absorbing media in presence of Gaussian white noise*".

15. Bose-Tagore National Advanced Workshop on Recent Advances in Condensed Matter Physics: Theory and Experiment (NAWCMP-2018), organized by the Department of Physics,

Visva-Bharati, Santiniketan in association with S. N. Bose National Center for Basic Sciences, Salt Lake, Kolkata, August 03-04, 2018. Poster presentation entitled "*Exploring DC-Kerr Effect of Impurity Doped Quantum Dots Under The Aegis of Noise".*

Participation in Conferences:

1."*National Conference on Self Aggregating Systems – Recent Advances (NCSASRA-2002)*", Department of Chemistry, Jadavpur University, March 16, 2002.

2. "*International Symposium on Spectroscopy, Structure and Dynamics (ISSSD-2002)*", IndianAssociation for the Cultivation of Science, Kolkata-32, December 12-13, 2002.

3. "*Trends in Theoretical Chemistry-2002 (TTC-2002)*", Indian Association for the Cultivation of Science, Kolkata-32, January 17-19, 2003.

4. "*7th Chemical Research Society of India, National Symposium in Chemistry(NSC-2005)*", Indian Association for the Cultivation of Science, Kolkata-32, February 04-06, 2005.

5. "*National Symposium on Quantum Chemistry, Soft Computation and Optimization (NSQCSCO-2008)*", Indian Association for the Cultivation of Science, Kolkata, April 04-05, 2008.

6. "*Recent Trends in Atomic and Molecular Physics Research (RTAMPR-2010)*", Department of Physics, Ramakrishna Mission Vivekananda University, Belur, February 13, 2010.

7. "*National Seminar on Science and Nature: Tagore's Vision and its Relevance*",Siksha-Bhavana, Visva-Bharati, March 12-13, 2011.

8. "*UGC Sponsored One-Day Seminar on International Year of Chemistry: Impact of Chemistry on Our Lives*", Department of Chemistry, Visva-Bharati, March 25, 2011.

9. "*Seminar onUnderstanding Physical Chemistry: Role of Teachers and Students*" Physical Chemistry Section, Department of Chemistry, Jadavpur University, July 28, 2012.

10. Science Academies' Education Programmes, Lecture Workshop on "*Recent Developments in Chemistry*", Department of Chemistry, Visva-Bharati, Santiniketan, November 29 – December 01, 2012.

11. "*Physical Chemistry Research: Teaching and Industrial Perspectives (PCRTIP-2013)",* Department of Chemistry, Jadavpur University, September 28, 2013.

12. Science Academies' Education Program: Lecture Workshop on "*Recent Trends in Chemistry through Teaching and Research*", Department of Chemistry, Visva-Bharati, Santiniketan, March 13 – March 14, 2015.

13. World Environment Day Celebration, Visva-Bharati, Santiniketan, June 05, 2015.

14. Science Academies' Education Program: Short Duration Lecture Workshop on "*Recent Trends in Interdisciplinary Sciences*", Integrated Science Education and Research Centre (ISERC), Visva-Bharati, Santiniketan, February 12 – 14, 2018.

15. National Symposium on "*Recent Advances in Chemistry Research*", Department of Chemistry, Visva-Bharati, March 11, 2018.

Details of Professional Experience

1. Served as Assistant Professor between 21.01.2006 to 20.01.2018 in the Department of Chemistry, Visva-Bharati.

2. Served as Associate Professor between 21.01.2018 to 20.01.2021 in the Department of Chemistry, Visva-Bharati.

3. Professorship due from 21.01.2021 onwards

Courses Taught at UG and PG Levels

1. In UG level: Quantum Theory, Ionic Conductance, Colligative Properties, Statistical Thermodynamics

2. In PG level: Quantum Theory, Statistical Thermodynamics, Irreversible Thermodynamics

PhD Supervision

Sl. No.	Name of the scholar	Thesis Title	VB Registration No	Date of Award
1.	Parikshit Mandal	*Studies on some Aspects of Optical Properties and Dynamics of 2-dimensional One Electron Quantum Dots*		19.10.2012
2.	Nirmal Kr. Datta	*Investigations on some Dynamical Aspects of Impurity Doped Quantum Dots*	VB-276 of 2000-01	07.10.2013
3.	Suvajit Pal	*Investigations on Excitation Kinetics of Impurity Doped Quantum*	VB-232 of 2006-07	16.11.2015

		dots with Special Reference to Damping		
4.	Jayanta Ganguly	*Investigations on Excitation Kinetics and Polarizabilities of Impurity Doped Quantum dots Driven by Gaussian White Noise*	VB-52 of 2003-04	05.08.2016
5.	Surajit Saha	*Investigations on Nonlinear Optical Properties of Impurity Doped Quantum Dots Induced by Gaussian White Noise*	VB-657 of 2005-06	22.05.2017
6.	Anuja Ghosh	*Studies on some Electronic Structural Aspects and Optical Properties of Impurity Doped Quantum Dot Driven by Noise*	VB-190 of 2008-09	16.08.2021
7.	Aindrila Bera	*Investigation on Profiles of Noise-driven Optical and Magnetic Properties of Impurity Doped Quantum Dot with Special Reference to Hydrostatic Pressure and Temperature.*	VB-2332 of 2016-17	24.08.2021
8.	Sk. Md. Arif	*Exploration of Optical and Electrical Properties of Impurity Doped Quantum Dot under the Aegis of Noise*	VB-715 of 2015-16	20.04.2022

9.	Debi Roy	*Studies on some Nonlinear Optical Properties of Quantum Dots andAdiabatic Switching among its Eigenstates under the Supervision of Noise: Role of Impurity and Anharmonicity*	VB-4299 of 2020-21	22.07.2024
10.	Debabrata Singha	*Synthesis, X-ray Structural Characterization and Computational Studies towards Unravelling the Competition and Cooperation of various Weak Forces in Molecular Crystals*	VB-2217 of 2019-20	17.02.2025