

**CV: Dr. R. Biswas**

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Academic Qualification		M.Sc., Ph.D.	
Period of Service		P.K.College	Rammohan College
		12-04-2004 to 28-01-2021	29-01-2021 to present
Designation		Associate Professor (from 12.04.2016)	
Experience	Teaching	UG	PG
		18 yrs	15 yrs
	Administration	Joint PG coordinator (2006-2008)	Head of the Department (2014-2017)
Date of Award of the Ph.D degree (University)		13.05.1998 (Jadavpur University)	
Title of the Thesis		Studies on some atomic and ionic collisional problems	
Specialization in M. Sc.		Particle Physics	
Area of Research Interest		Theoretical Physics (Atomic collision and Condense Matter Physics)	
Research Experience other than Ph.D		17 yrs	
No. of Publications (attach copies with details)		International Journals	National Journals
		37	NA
Research Project		Minor Research Project (PI) (Completed) San. No.: F. PSW-147/09-10(ERO) Date of Implementation: 03.11.2009	
Other research activities		Supervisor	Adjudicator
		NA	a). Editorial Board Member: Physics Express (for 3 years) b). Reviewer: i) Journal of Applied Physics (AIP) ii) Physica E (Science Direct) iii) Physica B iv) Physics Lett. A v) J. Phys. Cond. Matt.
Involved in other academic societies		Life member: I.A.C.S, Kolkata. Life member: Indian Physical Society (IPS)	

### List of Publications of Dr. Rajat Biswas:

1. Quenching effect of oscillating potential on anisotropic resonant transmission through a phosphorene electrostatic barrier, R. Biswas and C. Sinha, **Scientific Reports** 11 (2021) 2881.
2. Transmission and conductance for a driven vector barrier in phosphorene, R. Biswas, R. Dey and C. Sinha, **Superlattices and Microstructures** 133 (2019) 106175.
3. Revival of cloaking effect in a driven bilayer graphene vector barrier, S. Maiti, A. Panigrahi, R. Biswas and C. Sinha, **Physica E: Low Dimensional Systems and Nanostructures**, 99 (2018) 330.
4. Tunneling of Dirac Fermions through graphene magnetic barriers under oscillating electrostatic potentials, R. Biswas, S. Maiti, S. Mukhopadhyay and C. Sinha, **Phys. Lett. A** **381** (2017) 1582.
5. Beating oscillation and Fano resonance in the laser assisted electron transmission through graphene  $\delta$ -function magnetic barriers, R. Biswas, S. Maity and C. Sinha, **Physica E: Low Dimensional Systems and Nanostructures**, 84 (2016) 235.
6. Spin orbit splitting of the photon induced Fano resonance in an oscillating graphene electrostatic barrier, R. Biswas and C. Sinha, **J. Appl. Phys.** 115 (2014) 133704.
7. Photon induced tunneling of electron through a graphene electrostatic barrier, R. Biswas and C. Sinha, **J. Appl. Phys.** 114 (2013) 183706.
8. Laser assisted bound-free transition of a polaron bound to an impurity center, C. Sinha, R. Biswas and S. Mukhopadhyay, **J. Phys. and Chem. of Solids** 74 (2013) 1823.
9. Transmission of electron through monolayer graphene laser barrier, C. Sinha and R. Biswas, **Appl. Phys. Lett.** 100, (2012) 183107.
10. Ballistic transmission through quasi-periodic shape barrier resonant tunneling structures, S. Mukhopadhyay, R. Biswas and C. Sinha, **Phys.Lett.A** 376 (2012) 1306-1313.
11. Unconventional ballistic transport through bilayer graphene electrostatic barriers, C. Sinha and R. Biswas, **Phys. Rev. B** 84 (2011) 155439.
12. Tunable Fano resonances in the ballistic transmission and tunneling lifetime in a biased bilayer graphene nanostructure, S. Mukhopadhyay, R. Biswas and C. Sinha, **Phys.Lett.A**, 375 (2011) 2921.
13. Signature of quantum interference and the Fano resonances in the transmission spectrum of bilayer graphene nanostructure, S. Mukhopadhyay, R. Biswas and C. Sinha, **J. Appl. Phys.** 110 (2011) 014306.
14. Influence of Al-concentration on the current density in GaAs/Al<sub>c</sub>Ga<sub>1-c</sub>As Generalized Thue–Morse superlattices, S. Mukhopadhyay, P. Panchadhyayee, R. Biswas and C. Sinha, **Eur. Phys. J: B** 80 (2011) 477.
15. Ballistic transport through electric field modulated graphene periodic magnetic barriers, R. Biswas, A. Biswas, N. Hui and C. Sinha, **J. Appl. Phys.** 108 (2010) 043708.
16. Tunneling escape rate in dc-biased periodic multibarrier semiconductor heterostructures, R. Biswas, C. Sinha, P.Panchadhyayee and P.K.Mahapatra, **Physica B** 405 (2010) 3409.

17. Biased driven resonant tunneling through a double barrier graphene based structure, R. Biswas, S. Mukhopadhyay and C. Sinha, **Physica E** 42 (2010) 1781.
18. Resonant tunneling in a Fibonacci bilayer graphene superlattice, S. Mukhopadhyay, R. Biswas and C. Sinha, **Phys. Stat. Sol.** (b) 247 (2010) 242.
19. The effect of quasi-periodicity on the resonant tunneling lifetimes of states in electrically biased semiconductor superlattices, P.Panchadhyayee, R. Biswas, C. Sinha and P.K.Mahapatra, **J. Phys.:Cond. Matt.** 20 (2008) 445229.
20. Electric-field-induced resonant tunneling lifetime in semiconductor multibarrier systems, P.Panchadhyayee, R. Biswas, A. Khan and P.K.Mahapatra, **J. Appl. Phys.** 104 (2008) 084517.
21. Current density in Fibonacci Superlattices under uniform electric field, P.Panchadhyayee, R. Biswas, A. Khan and P.K.Mahapatra, **J. Phys.:Cond. Matt.** 20 (2008) 275243.
22. Formation of negative Hydrogen ion in the positronium – Hydrogen atom collision, S. Roy, R.Biswas and C. Sinha, **Phys. Rev. A** 71 (2005) 044701.
23. Double ionization of Li<sup>+</sup> by fast electron impact, B.Nath, R.Biswas and C.Sinha, **Phy. Rev. A** 59(1999) 455.
24. Inner shell ionization of Carbon atom by electron impact, B.Nath, R.Biswas and C.Sinha, **Z.Phys.D** 42(1997) 157.
25. Electron impact ionization of a Helium ion from its ground(1S), metastable (2S) and excited(2P) states, R.Biswas and C.Sinha, **J.Phys.B** 30 (1997) 375.
26. Simultaneous ionization and excitation of Helium atom by electron impact, B.Nath, R.Biswas and C.Sinha, **J.Phys.B** 29(1996) 5909.
27. Triple differential crosssections for electron impact ionization of alkali like ion Mg<sup>+</sup>, R.Biswas, B.Nath and C.Sinha, **Chem.Phys.Lett.** 263(1996) 495.
28. Single differential and total ionization cross sections of the He-atom by positron impact, R.Biswas and C.Sinha, **Phy.Lett.A** 220(1996) 331.
29. Double and single differential and total ionization crosssections for electron impact ionization of He-atom, R.Biswas and C.Sinha, **Phy. Rev. A** 54 (1996) 2944.
30. Triple and double differential cross sections for positron impact ionization of lithium atom, R.Biswas and C.Sinha, **Phys.Lett.A** 206(1995) 225.
31. Formation of anti-Hydrogen in the ground state and n=2 level, -S.Tripathy, R.Biswas and C.Sinha, **Phy. Rev. A** 51(1995) 3584.
32. Triple differential cross sections for ionization of a helium like ion by electron impact, R.Biswas and C.Sinha, **J. Phys. B** 28 (1995) 1311.
33. Double and triple differential cross sections for electron impact ionization of helium, R.Biswas and C.Sinha, **Phys. Rev. A** 51 (1995) 3766.
34. Ionization of Metastable H(2S) Atom by electron and positron impact, R.Biswas and C.Sinha, **IL Nuovo Cimento D** 16 (1994) 571.
35. Double differential cross sections for electron and positron impact ionization of helium, R.Biswas and C.Sinha, **Phys. Lett. A** 194 (1994) 197.
36. Electron impact ionization of a hydrogenic ion, R.Biswas and C.Sinha, **Phys. Rev. A** 50 (1994) 354.
37. Positron impact ionization of the He- atom, C.Sinha and R.Biswas, **Hyperfine Interactions**, 89 (1994) 453.