

Name of the Department: Physics & Nanoscience & Technology
List of publications in last three years: 2011,2012 and 2013, 2014, 2015.

Sl. No.	Author (Including Co-author)	Title of the Paper	Detail of Paper (including Vol., Issue, Pg. No.	Nature of Paper (Journal/Conference/Book Chapter)	National/International	ISBN No/ISSN No.	Journal Impact factor/SCI Index No.	Year of Publication
1	S.Singha Roy and P.bandyopadhyaya	Entropy Driven Denaturation and Bubble Nucleation in DNA Melting	Europhysics Letters,EPL, 109 , February 2015,48002.	<u>International Journal</u>		48002.		2015
2	S.Singha Roy	A Simple Theoretical Approach to the Fermi Energy Under Size Quantization with Quantum Mathematical Modelling in Nanostructured Materials.	pp 299-305	International Conference Proceedings Volume 146 of the series Springer Proceedings in Mathematics & Statistics, 14 October 2015		ISBN: 978-81-322-2546-1		2015
3	S.Singha Roy	The Einstein's theories in dimensional quantum mathematical model		International Conference Proceedings MSAT 2015, IMBIC , 21-23 December 2015		ISBN:		2015
4	Swagata Bhattacharjee and Subhasri Dutta	A simulation Study of Nanoscale Ultrathin-body InAsSb-on-Insulator MOSFETs	Proceeding of ICAME 2015	International Conference	International	ISBN: 978-81-322-2255-2		2015

5	Swagata Bhattacharjee and Abhijit Biswas	Study of low frequency noise in InAsSb channel MOSFETs	Proceeding of CODEC 2015	International Conference	International	ISBN: 978-1-4673-9513		2015
1	S. Sen and S. Chakrabarti	In silico design of a tunable molecular spin filter using chromium-carbon-chromium chains	Chemical Physics Vol: 428, Page No. 34-42 Year: 2014	International Journal:	International Journal:	ISSN: 0301-0104	Journal Impact factor: 1.957	2014
2	S. Sen and S. Chakrabarti	Graphitic silicon nitride: a metal free ferromagnet with charge and spin current rectification	Chem Phys Chem Vol.: 15, Page No. 2756 – 2761 Year: 2014,	International Journal:	International Journal:	ISSN: 1439-7641	Journal Impact factor: 3.349	2014
3	M.Chattopadhyaya, S. Sen , M. M. Alam, and S. Chakrabarti	On site Coulomb repulsion dominates over the non-local Hartree-Fock exchange in determining the band gap of polymers	International Journal: Journal of Physics & Chemistry of Solids Accepted September 2013 <u>Journal Impact factor: 1.527</u>	<u>International Journal</u>	<u>International</u>	ISSN: 0022-3697	1.527	2014
4	Abhijit Biswas and Swagata Bhattacharjee	Temperature dependency of threshold voltage and subthreshold slope of strained –Si channel MOSFET's with polysilicon gates	vol. 54, page 1527-1533,2014	Journal	International	ISBN: 0026-2714	1.44	2014
5	Swagata Bhattacharjee and Abhijit Biswas	Analog circuit performance of high ultrathin-body InAsSb-on-insulator MOSFETs	Proceeding of TechSymp 2014	International conference	International	ISBN : 978-4799-2608-4/14/2014 IEEE		
6	S.Singha Roy	Quantum Geometry of Fermi Energy Under Size Quantization in Indirect Band Gap Semiconductors	pp-36.2014	International Conference Proceedings: Geometry and its				2014

				applications, The Tensor Society & J.U, pp-36.2014				
7	S.Singha Roy	"Theoretic approach to the Fermi energy under size quantization with Quantum Mathematical Modelling in Nanomaterials"	PP-283-288.	International Conference Proceedings: Springer, Vol.7 ,PP-283-288.				2014
8	S.Singha Roy	A number of mathematical analysis of conduction band tail in heavily doped semiconductor,	PP-21	International Conference Proceedings: Calcutta Mathematical Society, ICCDMMS-2014, Dec 19-21,				2014
1	S. Sen and S. Chakrabarti	In silico design of a tunable molecular spin filter using chromium-carbon-chromium chains.	International Journal Chem. Phys. <u>Journal Impact factor: 1.957</u> Revised October 2013 Chemical Physics Man Id: CHEMPHYS-D-13-00413.	<u>International Journal</u>	<u>International</u>	ISSN: 0301-0104	<u>1.957</u>	2013
2	S.Singha Roy	The simple theoretical analysis of quantum well wires superlattice (QWSL) of communication technology	8773,6 DoI:10.1117/12.2019051	SPIE Proceedings, Photon Counting Applications IV; and Quantum Optics and Quantum Information Transfer and Processing	International Conference	ISBN: 9780819495754		2013

3	S.Singha Roy	Theoretic Approach to the Fermi energy under size quantization with Quantum Mathematical Modelling in Nano-materials	Pp.30	ICFMSA-2012 Bulletin of Calcutta Mathematical Society	International Conference	0008- 0659		2013
5	S.Singha Roy and P.bandyopad hya	“Torsion and entropy driven denaturation of DNA”	Phs. Lett A.,377,2884-2889, 2013.	International Journal:		2884- 2889		2013
6	S.Singha Roy and P.bandyopad hya	DNA and Heisenberg Spin System”,	Physica A, Revised, PHYSA-13-1218R2 , status Date : 11 Feb 2016	International Journal: (communicated)				2016
7	S.Singha Roy	“ A Simple Statistical analysis of entropy ambitious denaturation of Deoxyribonucleic	pp.17,	International Conference Proceedings: Biomathematical Society of India & J.U, pp.17, 2014				2014
8	S.Singha Roy	Quantum Geometry of Fermi Energy Under Size Quantization in Indirect Band Gap Semiconductors	pp-36.2014	International Conference Proceedings: Geometry and its applications, The Tensor Society &J.U,pp- 36.2014				2014

9	S.Singha Roy	"Theoretic approach to the Fermi energy under size quantization with Quantum Mathematical Modelling in Nanomaterials"	PP-283-288.	International Conference Proceedings: Springer, Vol.7 ,PP-283-288.				2014
10	S.Singha Roy	A number of mathematical analysis of conduction band tail in heavily doped semiconductor,	PP-21	International Conference Proceedings: Calcutta Mathematical Society, ICCDMMS-2014, Dec 19-21,				2014
11	S.Singha Roy	A Simple Theoretical Approach to the Fermi Energy Under Size Quantization with Quantum Mathematical Modelling in Nanostructured Materials.	pp 299-305	International Conference Proceedings Volume 146 of the series Springer Proceedings in Mathematics & Statistics, 14 October 2015		ISBN: 978-81-322-2546-1		2015
12	S.Singha Roy	The Einstein's theories in dimensional quantum mathematical model		International Conference Proceedings MSAT 2015, IMBIC , 21-23 December 2015		ISBN:		2015
Sl. No.	Author (Including Co-author)	Title of the Paper	Detail of Paper (including Vol., Issue, Pg. No.	Nature of Paper (Journal/Conference/Book Chapter)	National/International	ISBN No/ISSN No.	Journal Impact factor/SCI Index No.	Year of Publication
4	Abhijit Biswas and Swagata	Accurate modeling of the influence of back gate bias	vol. 53, page 363-370	Journal	International	ISBN: 0026-	1.14	2013

	Bhattacharjee	and interface roughness on the threshold voltage of nanoscale DG MOSFETs				2714		
1	M.Chattopadhyaya, M. M. Alam, S. Sen, and S. Chakrabarti	Electrostatic Spin Crossover and Concomitant Electrically Operated Spin Switch Action in a Ti-Based Endohedral Metallofullerene Polymer	International Journal: Physical Review Letters Phys. Rev. Lett. 109, 257204 (2012) <u>Journal Impact factor: 7.943</u>	<u>International Journal</u>	International	ISSN 1079-7114 (online) 0031-9007 (print).	7.943	<u>2012</u>
2	M.Chattopadhyaya, S. Sen, M. M. Alam, and S. Chakrabarti	The role of relativity and non-local exchange on the band gap of thiophene, selenophene and tellurophene oligomers	International Journal: THE JOURNAL OF CHEMICAL PHYSICS J. Chem. Phys.136, 094904 (2012). <u>Journal Impact factor: 3.164</u>	<u>International Journal</u>	International	ISSN: 0021-9606 E-ISSN: 1089-7690		<u>2012</u>
3	S.Singha Roy	A Simple Theoretical analysis of quantum transport of 3-dimensional photoelectric effect	pp.1-3 DoI-10.1364	IEEE PHOTONICS	International	987-1-4773-4718-1		2012
4	S.Singha Roy	Determination of the density –of states function in highly degenerate semiconductors in the existence of electric field strength	8542H PP.8 DOI: 10.1117/12.970544	SPIE Electro-Optical Remote sensing	International	ISBN:8780819492838		2012
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1	S.Singha Roy	A simple theoretical analysis of the Einstein	8093, 22	SPIE Nanomaterials	International	ISBN:97808194		2011

		relation for the DMR (diffusivity-mobility ratio) in Nono compounds on the basis of k.p formalism				87032		
2	S.Singha Roy	The theoretical study of field emission from quantum wire SLs f	PP 1-4/ DOI: 10.1109/INEC.2011.5991663	IEEE INEC 2011	International Conference	ISSN:2159-3523/ E-ISBN 978-1-4577-0377-5		2011
3	S.Singha Roy	The simple theoretical analysis of the specific heat capacity in nano materials	Pp 1-4/DOI: 10.1109/INEC.2011.5991778	IEEE INEC 2011	International Conference	ISSN: 2159-3523 / E-ISBN: 978-1-4577-0379-9		2011
4	Swagata Bhattacharjee and Abhijit Biswas	A continuous drain current model for long Ge channel double gate (DG) p MOSFETs with high-k gate dielectrics and estimation of analog circuit parameters	vol- 51, page 1105-1112	Journal	International	ISBN: 0026-2714	1.14	2011
5	Swagata Bhattacharjee and Abhijit Biswas	Effects of hot carriers on threshold voltage and subthreshold slope of MOS devices with different gate architectures	vol. 2 No 1, page 70 – 82	Journal	International	ISSN: 0974-9527		2011

Sabyasachi Sen, Head, Department of Physics

