Sitangshu Bhattacharya

List of Publications by Year
in descending order

48 papers	401 citations	13 h-index	18 g-index
59 all docs	59 docs citations	59 times ranked	368 citing authors

#	Article	IF	Citations
1	Giant Linear and Nonlinear Excitonic Responses in an Atomically Thin Indirect Semiconductor Nitrogen Phosphide. Journal of Physical Chemistry C, 2021, 125, 12738-12757.	1.5	12
2	Giant exciton-phonon coupling and zero-point renormalization in hexagonal monolayer boron nitride. Physical Review B, 2019, 99, .	1.1	16
3	Exciton-phonon coupling and band-gap renormalization in monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>WSe</mml:mi><mml:mn>2</mml:mn></mml:msub></m Physical Review B, 2018, 98, .	1.1	24
4	First Principles Calculations of Bonding and Charges at the Al₂Interface in a c-Si/SiO₂O₃Interface in a c-Si/SiO₂/am-Al₂O₃Structure Applicable for the Surface Passivation of Silicon-Based Solar Cells. IEEE Transactions on Electron Devices, 2016, 63, 544-550.	1.6	10
5	Modeling of sheet-concentration and temperature-dependent resistivity of a suspended monolayer graphene. , 2014, , .		0
6	Impact of Stone-Wales and lattice vacancy defects on the electro-thermal transport of the free standing structure of metallic ZGNR. Journal of Computational Electronics, 2014, 13, 862-871.	1.3	2
7	A Continuous Electrical Conductivity Model for Monolayer Graphene From Near Intrinsic to Far Extrinsic Region. IEEE Transactions on Electron Devices, 2014, 61, 3646-3653.	1.6	3
8	Suggestion for Experimental Determinations of 2D and 3D DSLs and Few Related Applications. Springer Tracts in Modern Physics, 2014, , 213-250.	0.1	0
9	Effective Electron Mass in Low-Dimensional Semiconductors. Springer Series in Materials Science, 2013, , .	0.4	13
10	Modeling of Temperature and Field-Dependent Electron Mobility in a Single-Layer Graphene Sheet. IEEE Transactions on Electron Devices, 2013, 60, 2695-2698.	1.6	10
11	k.p based closed form energy band gap and transport electron effective mass model for [100] and [110] relaxed and strained Silicon nanowire. Solid-State Electronics, 2013, 80, 124-134.	0.8	0
12	Physics-Based Solution for Electrical Resistance of Graphene Under Self-Heating Effect. IEEE Transactions on Electron Devices, 2013, 60, 502-505.	1.6	5
13	Thermoelectric Performance of a Single-Layer Graphene Sheet for Energy Harvesting. IEEE Transactions on Electron Devices, 2013, 60, 2064-2070.	1.6	17
14	Solution of Time Dependent Joule Heat Equation for a Graphene Sheet Under Thomson Effect. IEEE Transactions on Electron Devices, 2013, 60, 3548-3554.	1.6	2
15	A physics-based flexural phonon-dependent thermal conductivity model for single layer graphene. Semiconductor Science and Technology, 2013, 28, 015009.	1.0	10
16	Theoretical Estimation of Electromigration in Metallic Carbon Nanotubes Considering Self-Heating Effect. IEEE Transactions on Electron Devices, 2012, 59, 2476-2482.	1.6	5
17	Quantum capacitance in bilayer graphene nanoribbon. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 44, 1127-1131.	1.3	14
18	Applications and Brief Review of Experimental Results. Springer Series in Solid-state Sciences, 2012, , 281-327.	0.3	0

#	Article	IF	Citations
19	The EEM in the Presence of Intense Electric Field. Springer Series in Materials Science, 2012, , 319-363.	0.4	0
20	Electrical Resistance and Seebeck Coefficient in PbTe Nanowires. Journal of Electronic Materials, 2012, 41, 1421-1428.	1.0	0
21	On the two dimensional effective electron mass in quantum wells, inversion layers and NIPI superlattices of Kane type semiconductors in the presence of strong light waves: Simplified theory and relative comparison. Superlattices and Microstructures, 2012, 51, 203-222.	1.4	16
22	Physics-Based Band Gap Model for Relaxed and Strained [100] Silicon Nanowires. IEEE Transactions on Electron Devices, 2012, 59, 1765-1772.	1.6	1
23	Field Emission from Quantum Confined Semiconductors Under Magnetic Quantization. Springer Series in Solid-state Sciences, 2012, , 109-155.	0.3	0
24	Field Emission from Quantum Wires of Nonparabolic Semiconductors. Springer Series in Solid-state Sciences, 2012, , 3-70.	0.3	0
25	The EEM in Ultrathin Films (UFs) of Nonparabolic Semiconductors. Springer Series in Materials Science, 2012, , 3-72.	0.4	0
26	Applications and Brief Review of Experimental Results. Springer Series in Materials Science, 2012, , 365-426.	0.4	0
27	The EEM in Nonparabolic Semiconductors Under Magnetic Quantization. Springer Series in Materials Science, 2012, , 125-174.	0.4	0
28	Analytical Study of Low-Field Diffusive Transport in Highly Asymmetric Bilayer Graphene Nanoribbon. IEEE Nanotechnology Magazine, 2011, 10, 409-416.	1.1	1
29	Simple theoretical analysis of the photoemission from quantum confined effective mass superlattices of optoelectronic materials. Beilstein Journal of Nanotechnology, 2011, 2, 339-362.	1.5	12
30	Seebeck Coefficient in Bulk and Quantum Wells of Non-Parabolic Kane-Type Materials. Journal of Computational and Theoretical Nanoscience, 2011, 8, 746-756.	0.4	0
31	Analytical Solution of Joule-Heating Equation for Metallic Single-Walled Carbon Nanotube Interconnects. IEEE Transactions on Electron Devices, 2011, 58, 3991-3996.	1.6	10
32	Diffusive Thermoelectric Power in Highly Asymmetric Bilayer Graphene Nanoribbons. Journal of Electronic Materials, 2011, 40, 1181-1189.	1.0	0
33	Seebeck Coefficient in Nonparabolic Bulk Materials. Journal of Electronic Materials, 2011, 40, 1221-1232.	1.0	6
34	Electron Mean Free Path in PbTe Quantum Wires. , 2011, , .		1
35	Physics-Based Thermal Conductivity Model for Metallic Single-Walled Carbon Nanotube Interconnects. IEEE Electron Device Letters, 2011, 32, 203-205.	2.2	10
36	Negative differential conductance and effective electron mass in highly asymmetric ballistic bilayer graphene nanoribbon. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 2850-2855.	0.9	7

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37	Thermoelectric power in ultrathin films, quantum wires and carbon nanotubes under classically large magnetic field: Simplified theory and relative comparison. Physica B: Condensed Matter, 2010, 405, 472-498.	1.3	6
38	Influence of quantum confinement on the photoemission from superlattices of optoelectronic materials. Superlattices and Microstructures, 2010, 47, 377-410.	1.4	14
39	Simplified theory of carrier back-scattering in semiconducting carbon nanotubes: A Kaneâ€™s model approach. Journal of Applied Physics, 2010, 107, 094314.	1.1	2
40	Simple theoretical analysis of the Einsteinâ€™s photoemission from quantum confined superlattices. Superlattices and Microstructures, 2009, 46, 760-796.	1.4	12
41	The carrier contribution to the elastic constants in IIIâ€“V, ternary and quaternary materials in the presence of light waves: Simplified theory, relative comparison and a suggestion for experimental determination. Journal of Physics and Chemistry of Solids, 2009, 70, 122-133.	1.9	11
42	Influence of Band Non-Parabolicity on Few Ballistic Properties of IIIâ€“V Quantum Wire Field Effect Transistors Under Strong Inversion. Journal of Computational and Theoretical Nanoscience, 2009, 6, 1605-1616.	0.4	2
43	Einstein Relation in Compound Semiconductors and their Nanostructures. Springer Series in Materials Science, 2009, , .	0.4	40
44	Photoemission from Quantum Wells in Ultrathin Films, Quantum Wires, and Dots of Optoelectronic Materials. Nanostructure Science and Technology, 2009, , 247-269.	0.1	0
45	Influence of light waves on the thermoelectric power under large magnetic field in III-V, ternary and quaternary materials. Annalen Der Physik, 2008, 17, 195-220.	0.9	15
46	Influence of band non-parabolicity on the quantized gate capacitance in Î´-doped MODFED of IIIâ€“V and related materials. Journal of Applied Physics, 2008, 104, 074304.	1.1	0
47	Simple theoretical analysis of the photoemission from quantum confined non-linear optical, optoelectronic and related materials. , 2007, , .		0
48	A simple theoretical analysis of the effective electron mass in IIIâ€“V, ternary and quaternary materials in the presence of light waves. Physica Scripta, 2007, 75, 820-836.	1.2	25