Sanjay K Banerjee

List of Publications by Year
in descending order

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78 papers	3,864 citations	257450 24 h-index	123424 61 g-index
79 all docs	79 docs citations	79 times ranked	6512 citing authors

#	Article	IF	Citations
1	Application of Perovskite Quantum Dots as an Absorber in Perovskite Solar Cells. Angewandte Chemie - International Edition, 2022, 61, e202112412.	13.8	37
2	Performance Improvement of Perovskite Solar Cells by Interactions between Nanoâ€Sized Quantum Dots and Perovskite. Advanced Functional Materials, 2022, 32, .	14.9	10
3	Stability Improvement of Perovskite Solar Cells by Compositional and Interfacial Engineering. Chemistry of Materials, 2021, 33, 1540-1570.	6.7	65
4	Recent progress on measurement of spinâ€“charge interconversion in topological insulators using ferromagnetic resonance. APL Materials, 2021, 9, .	5.1	7
5	Method to enhance resonant interlayer tunneling in bilayer-graphene systems. Journal of Computational Electronics, 2021, 20, 1868-1873.	2.5	1
6	Nonpolar Resistive Switching of Multilayerâ€hBNâ€Based Memories. Advanced Electronic Materials, 2020, 6, 1900979.	5.1	42
7	Two-dimensional transport model of spin-polarized tunneling in a topological-insulator/tunnel-barrier/ferromagnetic-metal heterostructure. Physical Review B, 2020, 102, .	3.2	1
8	The microscopic origin of DMI in magnetic bilayers and prediction of giant DMI in new bilayers. Npj Computational Materials, 2020, 6, .	8.7	32
9	Rational design principles for giant spin Hall effect in 5d -transition metal oxides. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 11878-11886.	7.1	20
10	Progress in Materials Development for the Rapid Efficiency Advancement of Perovskite Solar Cells. Small, 2020, 16, e1907531.	10.0	23
11	Contact Engineering of Layered MoS₂ via Chemically Dipping Treatments. Advanced Functional Materials, 2020, 30, 2000250.	14.9	14
12	Monte Carlo Study of Si, Ge, and In_{0.53}Ga_{0.47}As n-Channel FinFET Scaling: Channel Orientation, Quantum Confinement, Doping, and Contacts. IEEE Nanotechnology Magazine, 2020, 14, 17-31.	1.3	4
13	Valence and conduction band offsets at beryllium oxide interfaces with silicon carbide and III-V nitrides. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, 041206.	1.2	2
14	Band Structure Engineering of Layered WSe₂ via One-Step Chemical Functionalization. ACS Nano, 2019, 13, 7545-7555.	14.6	21
15	Theory of spin detection on the surface of diffusive topological insulators by means of ferromagnets: Establishing Onsager reciprocity and the importance of tunnel contact. Physical Review B, 2019, 100, .	3.2	2
16	Electron redistribution and energy transfer in graphene/MoS2 heterostructure. Applied Physics Letters, 2019, 114, .	3.3	15
17	Evidence for moirÃ© excitons in van der Waals heterostructures. Nature, 2019, 567, 71-75.	27.8	933
18	Visualization of Local Conductance in MoS₂/WSe₂ Heterostructure Transistors. Nano Letters, 2019, 19, 1976-1981.	9.1	36

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19	Tunable <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi mathvariant="normal">Î“</mml:mi><mml:mo>â^'</mml:mo><mml:mi>K</mml:mi></mml:math> Valley Populations in Hole-Doped Trilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow> Physical Review Letters, 2018, 120, 107703.	7.8	23
20	Modeling all-electrical detection of the inverse Edelstein effect by spin-polarized tunneling in a topological-insulator/ferromagnetic-metal heterostructure. Physical Review B, 2018, 97, .	3.2	5
21	Accelerated carrier recombination by grain boundary/edge defects in MBE grown transition metal dichalcogenides. APL Materials, 2018, 6, .	5.1	25
22	Carrier Trapping by Oxygen Impurities in Molybdenum Diselenide. ACS Applied Materials & Interfaces, 2018, 10, 1125-1131.	8.0	37
23	Large effective mass and interaction-enhanced Zeeman splitting of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>K</mml:mi></mml:math> -valley electrons in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoSe</mml:mi><mml:mn>2</mml:mn></mml:msub><m Physical Review B, 2018, 97, .	3.2	72
24	Conversion of spin current into charge current in a topological insulator: Role of the interface. Physical Review B, 2018, 97, .	3.2	17
25	A simulation study of voltage-assisted low-energy switching of a perpendicular anisotropy ferromagnet on a topological insulator. Journal of Computational Electronics, 2017, 16, 120-126.	2.5	11
26	Detection of current induced spin polarization in epitaxial Bi2Te3 thin film. Applied Physics Letters, 2017, 110, .	3.3	3
27	Reconfigurable Complementary Monolayer MoTe₂ Field-Effect Transistors for Integrated Circuits. ACS Nano, 2017, 11, 4832-4839.	14.6	108
28	Graphene-Al2O3-silicon heterojunction solar cells on flexible silicon substrates. Journal of Applied Physics, 2017, 121, .	2.5	34
29	Bilayer Pseudospin Junction Transistor (BiSJT) for â€œBeyond-CMOSâ€•Logic. IEEE Transactions on Electron Devices, 2017, 64, 4759-4762.	3.0	4
30	Defect passivation of transition metal dichalcogenides via a charge transfer van der Waals interface. Science Advances, 2017, 3, e1701661.	10.3	95
31	A universal model for interface-type threshold switching phenomena by comprehensive study of Vanadium oxide-based selector. , 2017, , .		1
32	Versatile Large-Area Custom-Feature van der Waals Epitaxy of Topological Insulators. ACS Nano, 2017, 11, 7457-7467.	14.6	6
33	Density-Dependent Quantum Hall States and Zeeman Splitting in Monolayer and Bilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow> Physical Review Letters, 2017, 118, 247701.	7.8	72
34	ReS2-based interlayer tunnel field effect transistor. Journal of Applied Physics, 2017, 122, .	2.5	7
35	DFT simulations of inter-graphene-layer coupling with rotationally misaligned hBN tunnel barriers in graphene/hBN/graphene tunnel FETs. Journal of Applied Physics, 2016, 120, .	2.5	18
36	Localization and interaction effects of epitaxial Bi₂Se₃ bulk states in two-dimensional limit. Journal of Applied Physics, 2016, 120, 164301.	2.5	9

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37	Shubnikova€ de Haas Oscillations of High-Mobility Holes in Monolayer and Bilayer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> Landau Level Degeneracy, Effective Mass, and Negative Compressibility. Physical Review Letters, 2016, 116, 086601.	7.8	107
38	Effects of Electrode Layer Band Structure on the Performance of Multilayer Grapheneâ€“hBNâ€“Graphene Interlayer Tunnel Field Effect Transistors. Nano Letters, 2016, 16, 4975-4981.	9.1	28
39	Full-band simulations of single-particle resonant tunneling in transition metal dichalcogenide-based interlayer tunneling field-effect transistors. , 2016, , .		4
40	Effect of rotational misalignment on interlayer coupling in a graphene/hBN/graphene van der Waal's heterostructure. , 2016, , .		2
41	Large Magnetoresistance at Room Temperature in Ferromagnet/Topological Insulator Contacts. IEEE Nanotechnology Magazine, 2016, 15, 671-674.	2.0	5
42	van der Waals Heterostructures with High Accuracy Rotational Alignment. Nano Letters, 2016, 16, 1989-1995.	9.1	477
43	Quantum transport simulation of exciton condensate transport physics in a double-layer graphene system. Physical Review B, 2015, 92, .	3.2	7
44	High-frequency prospects of 2D nanomaterials for flexible nanoelectronics from baseband to sub-THz devices. , 2015, , .		14
45	On the Electrostatic Control of Gate-Normal-Tunneling Field-Effect Transistors. IEEE Transactions on Electron Devices, 2015, 62, 2292-2299.	3.0	10
46	Air Stable Doping and Intrinsic Mobility Enhancement in Monolayer Molybdenum Disulfide by Amorphous Titanium Suboxide Encapsulation. Nano Letters, 2015, 15, 4329-4336.	9.1	167
47	In Situ Observation of Initial Stage in Dielectric Growth and Deposition of Ultrahigh Nucleation Density Dielectric on Two-Dimensional Surfaces. Nano Letters, 2015, 15, 6626-6633.	9.1	24
48	Comment on â€œAssessment of field-induced quantum confinement in heterogate germanium electronâ€“hole bilayer tunnel field-effect transistorâ€•[Appl. Phys. Lett. 105, 082108 (2014)]. Applied Physics Letters, 2015, 106, 026102.	3.3	3
49	Strong spin-orbit coupling and Zeeman spin splitting in angle dependent magnetoresistance of Bi2Te3. Applied Physics Letters, 2014, 104, .	3.3	29
50	Impact of contact and access resistances in graphene field-effect transistors on quartz substrates for radio frequency applications. Applied Physics Letters, 2014, 104, .	3.3	4
51	Thin, relaxed Si1â^'xGex virtual substrates on Si grown using C-doped Ge buffers. Applied Physics Letters, 2014, 105, 152107.	3.3	0
52	Semi-classical ensemble Monte Carlo simulator using innovative quantum corrections for nano-scale n-channel FinFETs. , 2014, , .		2
53	Improved cleaning process for post-texture surface contamination removal for single heterojunction solar cells on ∼25µm thick exfoliated and flexible mono-crystalline silicon substrates. , 2014, , .		0
54	Density-functional-theory-based study of monolayer MoS<inf>2</inf> on oxide. , 2014, , .		1

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55	Fast and slow transient charging in various III-V field-effect transistors with atomic-layer-deposited-Al2O3 gate dielectric. Applied Physics Letters, 2013, 102, .	3.3	6
56	Two-dimensional weak anti-localization in Bi2Te3 thin film grown on Si(111)-(7â€‰Ã—â€‰7) surface by molecular beam epitaxy. Applied Physics Letters, 2013, 102, .	3.3	72
57	Single heterojunction solar cells on exfoliated flexible âˆ¼25â€‰Î¼m thick mono-crystalline silicon substrates. Applied Physics Letters, 2013, 102, .	3.3	39
58	Strained-Si/strained-Ge type-II staggered heterojunction gate-normal-tunneling field-effect transistor. Applied Physics Letters, 2013, 103, .	3.3	16
59	Germanium nMOSFETs with GeO2 Passivation and n+/p Junctions Formed by Spin-On Dopants. , 2012, , .		0
60	Reduced Gate-Leakage Current and Charge Trapping Characteristics of Dysprosium-Incorporated $hbox{HfO}_{2}$ Gate-Oxide n-MOS Devices. IEEE Transactions on Electron Devices, 2011, 58, 562-566.	3.0	3
61	Neural Network Modeling of Degradation of Solar Cells. , 2011, , .		0
62	Device characteristics of HfON charge-trap layer nonvolatile memory. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, 1005-1010.	1.2	9
63	Effects of InP barrier layer thicknesses and different ALD oxides on device performance of In<inf>0.7</inf>Ga<inf>0.3</inf>As MOSFETs. , 2010, , .		5
64	First-principles studies of small arsenic interstitial complexes in crystalline silicon. Physical Review B, 2009, 79, .	3.2	7
65	Role of Boron TED and Series Resistance in SiGe/Si Heterojunction pMOSFETs. Materials Research Society Symposia Proceedings, 2009, 1155, 1.	0.1	0
66	Physical and electrical characterizations of metal-oxide-semiconductor capacitors fabricated on GaAs substrates with different surface chemical treatments and Al2O3 gate dielectric. Journal of Vacuum Science & Technology B, 2009, 27, 2390-2395.	1.3	17
67	Realization of a high mobility dual-gated graphene field-effect transistor with Al2O3 dielectric. Applied Physics Letters, 2009, 94, .	3.3	827
68	On strain and scattering in deeply-scaled n-channel MOSFETs: A quantum-corrected semiclassical Monte Carlo analysis. , 2008, , .		6
69	Breakdown mechanism for the thin EOT Dy<inf>2</inf>O<inf>3</inf>/HfO<inf>2</inf> dielectric. , 2008, , .		0
70	Inversion-type indium phosphide metal-oxide-semiconductor field-effect transistors with equivalent oxide thickness of 12Å... using stacked HfAlOxâ•HfO2 gate dielectric. Applied Physics Letters, 2008, 92, 253506.	3.3	23
71	Gate-first inversion-type InP metal-oxide-semiconductor field-effect transistors with atomic-layer-deposited Al2O3 gate dielectric. Applied Physics Letters, 2008, 92, 233508.	3.3	24
72	Vertical Flash Memory Cell With Nanocrystal Floating Gate for Ultradense Integration and Good Retention. IEEE Electron Device Letters, 2007, 28, 449-451.	3.9	21

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73	Hole Mobility and Thermal Velocity Enhancement for Uniaxial Stress in Si up to 4 GPa. IEEE Transactions on Electron Devices, 2007, 54, 291-296.	3.0	20
74	Ultra-Thin Si1âˆ’x Ge x Dislocation Blocking Layers for Ge/Strained Si CMOS Devices. Journal of Electronic Materials, 2007, 36, 641-647.	2.2	4
75	Using Self-assembly and Selective Chemical Vapor Deposition for Precise Positioning of Individual Germanium Nanoparticles on Hafnia. Materials Research Society Symposia Proceedings, 2006, 921, 1.	0.1	0
76	Silicon interstitials atSiâˆ•SiO2interfaces: Density functional calculations. Physical Review B, 2005, 72, .	3.2	24
77	Simultaneous shallowâ€junction formation and gate dopingpâ€channel metalâ€semiconductorâ€oxide fieldâ€effect transistor process using cobalt silicide as a diffusion/doping source. Applied Physics Letters, 1994, 64, 345-347.	3.3	7
78	Application of Perovskite Quantum Dots as Absorber for Perovskite Solar Cell. Angewandte Chemie, 0, , e202112412.	2.0	8