

Deblina Sarkar

List of Publications by Year in descending order

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32
papers

4,727
citations

361045

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h-index

713013

21
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35
all docs

35
docs citations

35
times ranked

7392
citing authors

#	ARTICLE	IF	CITATIONS
1	MoS ₂ Field-Effect Transistor for Next-Generation Label-Free Biosensors. ACS Nano, 2014, 8, 3992-4003.	7.3	870
2	Role of Metal Contacts in Designing High-Performance Monolayer n-Type WSe ₂ Field Effect Transistors. Nano Letters, 2013, 13, 1983-1990.	4.5	833
3	A subthermionic tunnel field-effect transistor with an atomically thin channel. Nature, 2015, 526, 91-95.	13.7	793
4	Computational Study of Metal Contacts to Monolayer Transition-Metal Dichalcogenide Semiconductors. Physical Review X, 2014, 4, .	2.8	429
5	Functionalization of Transition Metal Dichalcogenides with Metallic Nanoparticles: Implications for Doping and Gas-Sensing. Nano Letters, 2015, 15, 2852-2862.	4.5	329
6	2D Semiconductor FETs—Projections and Design for Sub-10 nm VLSI. IEEE Transactions on Electron Devices, 2015, 62, 3459-3469.	1.6	240
7	Proposal for tunnel-field-effect-transistor as ultra-sensitive and label-free biosensors. Applied Physics Letters, 2012, 100, .	1.5	206
8	Impact of Contact on the Operation and Performance of Back-Gated Monolayer MoS ₂ Field-Effect-Transistors. ACS Nano, 2015, 9, 7904-7912.	7.3	137
9	Controllable and Rapid Synthesis of High-Quality and Large-Area Bernal Stacked Bilayer Graphene Using Chemical Vapor Deposition. Chemistry of Materials, 2014, 26, 907-915.	3.2	135
10	Low-Frequency Noise in Bilayer MoS ₂ Transistor. ACS Nano, 2014, 8, 5633-5640.	7.3	89
11	Fundamental limitations of conventional-FET biosensors: Quantum-mechanical-tunneling to the rescue. , 2012, , .		73
12	High-Frequency Behavior of Graphene-Based Interconnects—Part I: Impedance Modeling. IEEE Transactions on Electron Devices, 2011, 58, 843-852.	1.6	65
13	Proposal for all-graphene monolithic logic circuits. Applied Physics Letters, 2013, 103, .	1.5	60
14	Tunnel-field-effect-transistor based gas-sensor: Introducing gas detection with a quantum-mechanical transducer. Applied Physics Letters, 2013, 102, .	1.5	59
15	Subthreshold-swing physics of tunnel field-effect transistors. AIP Advances, 2014, 4, .	0.6	54
16	High-Frequency Behavior of Graphene-Based Interconnects—Part II: Impedance Analysis and Implications for Inductor Design. IEEE Transactions on Electron Devices, 2011, 58, 853-859.	1.6	50
17	A computational study of metal-contacts to beyond-graphene 2D semiconductor materials. , 2012, , .		38
18	Electron-hole duality during band-to-band tunneling process in graphene-nanoribbon tunnel-field-effect-transistors. Applied Physics Letters, 2010, 97, .	1.5	37

#	ARTICLE	IF	CITATIONS
19	Graphene and beyond-graphene 2D crystals for next-generation green electronics. Proceedings of SPIE, 2014, , .	0.8	37
20	A Novel Enhanced Electric-Field Impact-Ionization MOS Transistor. IEEE Electron Device Letters, 2010, 31, 1175-1177.	2.2	30
21	Vertically Stacked and Independently Controlled Twin-Gate MOSFETs on a Single Si Nanowire. IEEE Electron Device Letters, 2011, 32, 1492-1494.	2.2	27
22	Impact-ionization field-effect-transistor based biosensors for ultra-sensitive detection of biomolecules. Applied Physics Letters, 2013, 102, .	1.5	21
23	2D material based field effect transistors and nanoelectromechanical systems for sensing applications. IScience, 2021, 24, 103513.	1.9	21
24	Performance evaluation and design considerations of 2D semiconductor based FETs for sub-10 nm VLSI. , 2014, , .		20
25	Designing band-to-band tunneling field-effect transistors with 2D semiconductors for next-generation low-power VLSI. , 2015, , .		18
26	2D electronics: Graphene and beyond. , 2013, , .		17
27	Graphene inductors for high-frequency applications - design, fabrication, characterization, and study of skin effect. , 2014, , .		11
28	Prospects of carbon nanomaterials for next-generation green electronics. , 2010, , .		5
29	AC conductance modeling and analysis of graphene nanoribbon interconnects. , 2010, , .		2
30	A quantitative inquisition into ESD sensitivity to strain in nanoscale CMOS protection devices. , 2010, , .		1
31	NEMS Sensors Based on Novel Nanomaterials. , 2022, , 133-185.		1
32	2-Dimensional tunnel devices and circuits on graphene: Opportunities and challenges. , 2013, , .		0