Ashkan Behnam

List of Publications by Year
in descending order

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61 papers	2,396 citations	218677 26 h-index	223800 46 g-index
61 all docs	61 docs citations	61 times ranked	4575 citing authors

#	Article	IF	Citations
1	Hydrogen Sensing Using Pdâ€Functionalized Multiâ€Layer Graphene Nanoribbon Networks. Advanced Materials, 2010, 22, 4877-4880.	21.0	313
2	Metal-semiconductor-metal photodetectors based on graphene/p-type silicon Schottky junctions. Applied Physics Letters, 2013, 102, .	3.3	191
3	High-Field Electrical and Thermal Transport in Suspended Graphene. Nano Letters, 2013, 13, 4581-4586.	9.1	145
4	Effects of nanotube alignment and measurement direction on percolation resistivity in single-walled carbon nanotube films. Journal of Applied Physics, 2007, 102, .	2.5	136
5	Self-Aligned Nanotubeâ€“Nanowire Phase Change Memory. Nano Letters, 2013, 13, 464-469.	9.1	118
6	Annealing free, clean graphene transfer using alternative polymer scaffolds. Nanotechnology, 2015, 26, 055302.	2.6	114
7	In_xGa_{1â€“x}As Nanowire Growth on Graphene: van der Waals Epitaxy Induced Phase Segregation. Nano Letters, 2013, 13, 1153-1161.	9.1	101
8	Transport in Nanoribbon Interconnects Obtained from Graphene Grown by Chemical Vapor Deposition. Nano Letters, 2012, 12, 4424-4430.	9.1	99
9	Monolithic IIIâ€V Nanowire Solar Cells on Graphene via Direct van der Waals Epitaxy. Advanced Materials, 2014, 26, 3755-3760.	21.0	86
10	Computational study of geometry-dependent resistivity scaling in single-walled carbon nanotube films. Physical Review B, 2007, 75, .	3.2	81
11	A computational study of tunneling-percolation electrical transport in graphene-based nanocomposites. Applied Physics Letters, 2009, 95, .	3.3	81
12	Gigahertz Integrated Graphene Ring Oscillators. ACS Nano, 2013, 7, 5588-5594.	14.6	67
13	Effect of carbon nanotube network morphology on thin film transistor performance. Nano Research, 2012, 5, 307-319.	10.4	59
14	Resistivity scaling in single-walled carbon nanotube films patterned to submicron dimensions. Applied Physics Letters, 2006, 89, 093107.	3.3	53
15	Experimental characterization of single-walled carbon nanotube film-Si Schottky contacts using metal-semiconductor-metal structures. Applied Physics Letters, 2008, 92, 243116.	3.3	53
16	Cascading Wafer-Scale Integrated Graphene Complementary Inverters under Ambient Conditions. Nano Letters, 2012, 12, 3948-3953.	9.1	53
17	Ultra-low contact resistance in graphene devices at the Dirac point. 2D Materials, 2018, 5, 025014.	4.4	50
18	Nanolithographic patterning of transparent, conductive single-walled carbon nanotube films by inductively coupled plasma reactive ion etching. Journal of Vacuum Science & Technology B, 2007, 25, 348.	1.3	47

#	Article	IF	Citations
19	Experimental study of graphitic nanoribbon films for ammonia sensing. Journal of Applied Physics, 2011, 109, .	2.5	45
20	Resistivity in percolation networks of one-dimensional elements with a length distribution. Physical Review E, 2009, 79, 012102.	2.1	41
21	Forward-bias diode parameters, electronic noise, and photoresponse of graphene/silicon Schottky junctions with an interfacial native oxide layer. Journal of Applied Physics, 2015, 118, .	2.5	41
22	Metal-semiconductor-metal photodetectors based on single-walled carbon nanotube filmâ€“GaAs Schottky contacts. Journal of Applied Physics, 2008, 103, 114315.	2.5	37
23	High-Gain Graphene Transistors with a Thin AlOx Top-Gate Oxide. Scientific Reports, 2017, 7, 2419.	3.3	36
24	High-Field Transport and Thermal Reliability of Sorted Carbon Nanotube Network Devices. ACS Nano, 2013, 7, 482-490.	14.6	35
25	Nanoscale phase change memory with graphene ribbon electrodes. Applied Physics Letters, 2015, 107, .	3.3	35
26	Hysteresis-Free Nanosecond Pulsed Electrical Characterization of Top-Gated Graphene Transistors. IEEE Transactions on Electron Devices, 2014, 61, 1583-1589.	3.0	31
27	Percolation scaling of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:mo>/</mml:mo><mml:mi>f</mml:mi></mml:mrow></mml:math>noise in single-walled carbon nanotube films. Physical Review B, 2008, 78, .	3.2	27
28	Conductive preferential paths of hot carriers in amorphous phase-change materials. Applied Physics Letters, 2013, 103, .	3.3	25
29	Scaling of graphene integrated circuits. Nanoscale, 2015, 7, 8076-8083.	5.6	25
30	Plasmonic nanohole array for enhancing the SERS signal of a single layer of graphene in water. Scientific Reports, 2017, 7, 14044.	3.3	25
31	2-D modeling of potential distribution and threshold voltage of short channel fully depleted dual material gate SOI MESFET. Solid-State Electronics, 2005, 49, 1341-1346.	1.4	19
32	Temperature-dependent transport and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:mo>/</mml:mo><mml:mi>f</mml:mi></mml:mrow></mml:math>noise mechanisms in single-walled carbon nanotube films. Physical Review B, 2010, 81, .	3.2	18
33	Electronic Transport in Graphitic Nanoribbon Films. ACS Nano, 2011, 5, 1617-1622.	14.6	13
34	Impact of thermal boundary conductances on power dissipation and electrical breakdown of carbon nanotube network transistors. Journal of Applied Physics, 2012, 112, 124506.	2.5	13
35	High field breakdown characteristics of carbon nanotube thin film transistors. Nanotechnology, 2013, 24, 405204.	2.6	13
36	Threshold Voltage Adjustment in Nanoscale DG FinFETs Via Limited Source/Drain Dopants in the Channel. IEEE Transactions on Electron Devices, 2009, 56, 2348-2353.	3.0	12

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37	Electronic properties of metal-semiconductor and metal-oxide-semiconductor structures composed of carbon nanotube film on silicon. Applied Physics Letters, 2010, 97, 233105.	3.3	12
38	Gate tunneling current and quantum capacitance in metal-oxide-semiconductor devices with graphene gate electrodes. Applied Physics Letters, 2016, 109, .	3.3	12
39	Hydrogenation assisted nickel-induced lateral nano-crystallization of amorphous silicon on flexible plastic substrates at low temperatures. Thin Solid Films, 2008, 516, 7790-7796.	1.8	6
40	Novel 3D random-network model for threshold switching of phase-change memories. , 2013, , .		6
41	Pulsed nanosecond characterization of graphene transistors. , 2012, , .		5
42	Reliability, failure, and fundamental limits of graphene and carbon nanotube interconnects. , 2013, , .		4
43	High-field and thermal transport in 2D atomic layer devices. Proceedings of SPIE, 2014, , .	0.8	3
44	SANTA: Self-aligned nanotrench ablation via Joule heating for probing sub-20 nm devices. Nano Research, 2016, 9, 2950-2959.	10.4	3
45	Low-temperature nickel-induced nano-crystallization of silicon on PET by MIC, hydrogenation and mechanical stress. Solid-State Electronics, 2006, 50, 1618-1624.	1.4	2
46	Modeling and Measurements of Low Frequency Noise in Single-Walled Carbon Nanotube Films with Bulk and Percolation Configurations. , 2009, , .		2
47	3D-nHD: A HydroDynamic model for trap-limited conduction in a 3D network. , 2013, , .		2
48	Nano-Scale MOSFET Devices Fabricated Using a Novel Carbon-Nanotube-based Lithography. Materials Research Society Symposia Proceedings, 2006, 913, 1.	0.1	1
49	Percolation transport in single-walled carbon nanotube films: experiment and simulation. Proceedings of SPIE, 2007, , .	0.8	1
50	1/ f noise in single-walled carbon nanotube films. Proceedings of SPIE, 2009, , .	0.8	1
51	Characterization of the metal-semiconductor and metal-insulator-semiconductor junctions between single-walled carbon nanotube films and Si substrates. , 2010, , .		1
52	Transport properties of CVD-grown graphene nanoribbon field-effect transistors. , 2011, , .		1
53	Characterization of Graphene Gate Electrodes for Metal-Oxide-Semiconductor Devices. MRS Advances, 2017, 2, 103-108.	0.9	1
54	Nano-Crystalline Silicon Thin Film Transistors on PET Substrates Using a Hydrogenation-assisted Metal-induced Crystallization Technique. Materials Research Society Symposia Proceedings, 2006, 910, 6.	0.1	0

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55	Geometry Dependent Resistivity in Single-walled Carbon Nanotube Films Patterned Down to Submicron Dimensions. Materials Research Society Symposia Proceedings, 2006, 963, 1.	0.1	0
56	Metal-Semiconductor-Metal (MSM) Photodetectors Based on Single-walled Carbon Nanotube Film-GaAs Schottky Contacts. Materials Research Society Symposia Proceedings, 2007, 1057, 1.	0.1	0
57	Metal-semiconductor-metal (MSM) photodetectors based on single-walled carbon nanotube film-silicon Schottky contacts. Proceedings of SPIE, 2008, , .	0.8	0
58	Characterization and modeling of low frequency noise in single-walled carbon nanotube film-based devices. , 2009, , .		0
59	New Technique of DNA Sensing: Nanoribbon Transverse Electrodes. Biophysical Journal, 2012, 102, 428a.	0.5	0
60	High Field Breakdown of Carbon Nanotube Network Transistors. , 2013, , .		0
61	Nanostructures for enhancing the SERS signal of a graphene monolayer in water and visible light absorption in a graphene monolayer. , 2019, , .		0