Baratunde A Cola

List of Publications by Year
in descending order

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84 papers	3,876 citations	136950 32 h-index	123424 61 g-index
84 all docs	84 docs citations	84 times ranked	4512 citing authors

#	Article	IF	Citations
1	Incorporation of polyethylene fillers in all-polymer high-thermal-conductivity composites. Polymer Bulletin, 2021, 78, 3835-3850.	3.3	7
2	The impact of polymer matrix blends on thermal and mechanical properties of boron nitride composites. Journal of Applied Polymer Science, 2020, 137, 48661.	2.6	14
3	Tunneling diodes based on polymer infiltrated vertically aligned carbon nanotube forests. Nanotechnology, 2020, 31, 405202.	2.6	2
4	Comparison of kinetic theory and fluctuational electrodynamics for radiative heat transfer in nanoparticle chains. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 246, 106947.	2.3	17
5	Nanostructured Carbon Electrodes for Increased Power Density in Flow Thermo-Electrochemical Generator Heat Sinks. Journal of Electrochemical Energy Conversion and Storage, 2019, 16, .	2.1	9
6	Thermal Boundary Conductance and Phonon Transmission in Hexagonal Boron Nitride/Graphene Heterostructures. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900446.	1.8	8
7	Photonic thermal conduction by infrared plasmonic resonators in semiconductor nanowires. Applied Physics Letters, 2019, 114, 163104.	3.3	10
8	Photon-Assisted Tunneling in Carbon Nanotube Optical Rectennas: Characterization and Modeling. ACS Applied Electronic Materials, 2019, 1, 692-700.	4.3	17
9	Tunable Thermal Energy Transport across Diamond Membranes and Diamondâ€“Si Interfaces by Nanoscale Graphoepitaxy. ACS Applied Materials & Interfaces, 2019, 11, 18517-18527.	8.0	49
10	Thermal radiation in systems of many dipoles. Physical Review B, 2019, 100, .	3.2	39
11	High Performance Multiwall Carbon Nanotubeâ€“Insulatorâ€“Metal Tunnel Diode Arrays for Optical Rectification. Advanced Electronic Materials, 2018, 4, 1700446.	5.1	22
12	Probing Growth-Induced Anisotropic Thermal Transport in High-Quality CVD Diamond Membranes by Multifrequency and Multiple-Spot-Size Time-Domain Thermoreflectance. ACS Applied Materials & Interfaces, 2018, 10, 4808-4815.	8.0	52
13	Optical Rectennae: High Performance Multiwall Carbon Nanotubeâ€“Insulatorâ€“Metal Tunnel Diode Arrays for Optical Rectification (Adv. Electron. Mater. 3/2018). Advanced Electronic Materials, 2018, 4, 1870017.	5.1	0
14	Thermal rectification in thin films driven by gradient grain microstructure. Journal of Applied Physics, 2018, 123, .	2.5	8
15	Sub-diffractional waveguiding by mid-infrared plasmonic resonators in semiconductor nanowires. Nanoscale, 2018, 10, 5708-5716.	5.6	5
16	Thermal and mechanical properties of 3D printed boron nitride â€“ ABS composites. Applied Composite Materials, 2018, 25, 1205-1217.	2.5	66
17	Carbon Nanotubes and Related Nanomaterials: Critical Advances and Challenges for Synthesis toward Mainstream Commercial Applications. ACS Nano, 2018, 12, 11756-11784.	14.6	388
18	Oxidation limited thermal boundary conductance at metal-graphene interface. Carbon, 2018, 139, 913-921.	10.3	13

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19	HIGH PERFORMANCE MULTI-INSULATOR CARBON NANOTUBE TUNNEL DIODE ARRAYS. , 2018, , .		3
20	A Study of Electrical Resistance in Carbon Nanotubeâ€“Insulatorâ€“Metal Diode Arrays for Optical Rectenna. IEEE Nanotechnology Magazine, 2017, 16, 230-238.	2.0	13
21	High Power Density Electrochemical Thermocells for Inexpensively Harvesting Lowâ€Grade Thermal Energy. Advanced Materials, 2017, 29, 1605652.	21.0	166
22	Thermo-electrochemical generator: energy harvesting & thermoregulation for liquid cooling applications. Sustainable Energy and Fuels, 2017, 1, 1381-1389.	4.9	39
23	Mechanical Behavior of Carbon Nanotube Forests Grown With Plasma Enhanced Chemical Vapor Deposition: Pristine and Conformally Coated. Journal of Engineering Materials and Technology, Transactions of the ASME, 2017, 139, .	1.4	5
24	Thermo-optical properties of packed nanoparticle thermal interface materials. , 2017, , .		1
25	Experimental considerations of CVD diamond film measurements using time domain thermoreflectance. , 2017, , .		4
26	Rethinking phonons: The issue of disorder. Npj Computational Materials, 2017, 3, .	8.7	66
27	Collective near-field thermal emission from polaritonic nanoparticle arrays. Physical Review Materials, 2017, 1, .	2.4	34
28	Melt-processed P3HT and PE Polymer Nanofiber Thermal Conductivity. MRS Advances, 2017, 2, 3619-3626.	0.9	6
29	High Thermal and Electrical Conductivity of Template Fabricated P3HT/MWCNT Composite Nanofibers. ACS Applied Materials & Interfaces, 2016, 8, 14788-14794.	8.0	37
30	Vertically aligned carbon nanotube based thermal interface materials for low contact pressure and low ambient pressure applications. , 2016, , .		2
31	Strongly anisotropic thermal and electrical conductivities of a self-assembled silver nanowire network. RSC Advances, 2016, 6, 90674-90681.	3.6	20
32	Thermal conductivity of melt-processed nanofibers. , 2016, , .		0
33	Thermal Conductance of Poly(3-methylthiophene) Brushes. ACS Applied Materials & Interfaces, 2016, 8, 25578-25585.	8.0	19
34	Thermal Boundary Resistance in GaN Films Measured by Time Domain Thermoreflectance with Robust Monte Carlo Uncertainty Estimation. Nanoscale and Microscale Thermophysical Engineering, 2016, 20, 22-32.	2.6	69
35	Electrochemical Characterization of Carbon Nanotube and Poly (3,4-ethylenedioxythiophene)â^'Poly(styrenesulfonate) Composite Aqueous Electrolyte for Thermo-Electrochemical Cells. Journal of the Electrochemical Society, 2016, 163, F867-F871.	2.9	22
36	Characterization of Carbon Nanotube Forest Interfaces Using Time Domain Thermoreflectance. , 2015, , .		1

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37	Poly(3-hexylthiophene) Nanotube Array Surfaces with Tunable Wetting and Contact Thermal Energy Transport. ACS Nano, 2015, 9, 1080-1088.	14.6	29
38	A carbon nanotube optical rectenna. Nature Nanotechnology, 2015, 10, 1027-1032.	31.5	131
39	Enhanced Electrical Conductivity of Imidazolium-Based Ionic Liquids Mixed with Carbon Nanotubes: A Spectroscopic Study. Journal of the Electrochemical Society, 2014, 161, H481-H486.	2.9	21
40	Enhanced thermo-electrochemical power using carbon nanotube additives in ionic liquid redox electrolytes. Journal of Materials Chemistry A, 2014, 2, 20676-20682.	10.3	50
41	A Pyrenylpropyl Phosphonic Acid Surface Modifier for Mitigating the Thermal Resistance of Carbon Nanotube Contacts. Advanced Functional Materials, 2014, 24, 465-471.	14.9	48
42	Design and optimization of thermo-electrochemical cells. Journal of Applied Electrochemistry, 2014, 44, 325-336.	2.9	74
43	High thermal conductivity of chain-oriented amorphous polythiophene. Nature Nanotechnology, 2014, 9, 384-390.	31.5	327
44	Reversible tailoring of mechanical properties of carbon nanotube forests by immersing in solvents. Carbon, 2014, 69, 178-187.	10.3	19
45	Carbon nanotube thermal interfaces enhanced with sprayed on nanoscale polymer coatings. Nanotechnology, 2013, 24, 105401.	2.6	32
46	Buckling-driven delamination of carbon nanotube forests. Applied Physics Letters, 2013, 102, .	3.3	22
47	Deformation response of conformally coated carbon nanotube forests. Nanotechnology, 2013, 24, 475707.	2.6	12
48	Report on Carbon Nano Material Workshop: Challenges and Opportunities. Nanoscale and Microscale Thermophysical Engineering, 2013, 17, 10-24.	2.6	5
49	Nanoparticle decoration of carbon nanotubes by sputtering. Carbon, 2013, 57, 274-281.	10.3	38
50	A Stepped-Bar Apparatus for Thermal Resistance Measurements. Journal of Electronic Packaging, Transactions of the ASME, 2013, 135, .	1.8	31
51	Compressive response of vertically aligned carbon nanotube films gleaned from in situ flat-punch indentations. Journal of Materials Research, 2013, 28, 984-997.	2.6	22
52	Report on the Seventh U.S.â€“Japan Joint Seminar on Nanoscale Transport Phenomenaâ€”Science and Engineering. Nanoscale and Microscale Thermophysical Engineering, 2013, 17, 25-49.	2.6	1
53	Solvent Soaking and Drying of Carbon Nanotube Forests for Enhanced Contact Area and Thermal Interface Conductance. , 2013, , .		0
54	Conformally coating vertically aligned carbon nanotube arrays using thermal decomposition of iron pentacarbonyl. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, 03D101.	1.2	4

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55	Characterization of Metallically Bonded Carbon Nanotube-Based Thermal Interface Materials Using a High Accuracy 1D Steady-State Technique. Journal of Electronic Packaging, Transactions of the ASME, 2012, 134, .	1.8	46
56	Higher Recovery and Better Energy Dissipation at Faster Strain Rates in Carbon Nanotube Bundles: An in-Situ Study. ACS Nano, 2012, 6, 2189-2197.	14.6	96
57	Effects of morphology on the micro-compression response of carbon nanotube forests. Nanoscale, 2012, 4, 3373.	5.6	32
58	Nitrogen- and Boron-Doped Carbon Nanotube Electrodes in a Thermo-Electrochemical Cell. Journal of the Electrochemical Society, 2012, 159, B483-B488.	2.9	52
59	Thermal Conductivity Measurement of Individual Polythiophene Nanofibers With Suspended Micro-Resistance Thermometer Devices. , 2012, , .		0
60	Enhanced Molecular Order in Polythiophene Films Electropolymerized in a Mixed Electrolyte of Anionic Surfactants and Boron Trifluoride Diethyl Etherate. ACS Applied Materials & Interfaces, 2012, 4, 1697-1703.	8.0	25
61	Characterization of Metallically Bonded Carbon Nanotube-Based Thermal Interface Materials Using a High Accuracy 1D Steady-State Technique. , 2011, , .		1
62	Palladium Thiolate Bonding of Carbon Nanotube Thermal Interfaces. Journal of Electronic Packaging, Transactions of the ASME, 2011, 133, .	1.8	25
63	A Review of Carbon Nanotube Ensembles as Flexible Electronics and Advanced Packaging Materials. Journal of Electronic Packaging, Transactions of the ASME, 2011, 133, .	1.8	27
64	Photo- and thermionic emission from potassium-intercalated carbon nanotube arrays. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, 423-434.	1.2	44
65	Highly specular carbon nanotube absorbers. Applied Physics Letters, 2010, 97, 163116.	3.3	39
66	A metallization and bonding approach for high performance carbon nanotube thermal interface materials. Nanotechnology, 2010, 21, 445705.	2.6	95
67	Harvesting Waste Thermal Energy Using a Carbon-Nanotube-Based Thermo-Electrochemical Cell. Nano Letters, 2010, 10, 838-846.	9.1	431
68	Thermal conductivity of bismuth telluride nanowire array-epoxy composite. Applied Physics Letters, 2009, 94, .	3.3	60
69	Thermomechanical and Thermal Contact Characteristics of Bismuth Telluride Films Electrodeposited on Carbon Nanotube Arrays. Advanced Materials, 2009, 21, 4280-4283.	21.0	14
70	Contact mechanics and thermal conductance of carbon nanotube array interfaces. International Journal of Heat and Mass Transfer, 2009, 52, 3490-3503.	4.8	127
71	Palladium Thiolate Bonding of Carbon Nanotube Thermal Interfaces for High-Temperature Electronics. , 2009, , .		1
72	Carbon Nanotube Array Thermal Interfaces Enhanced With Paraffin Wax. , 2008, , .		11

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73	Carbon Nanotube Array Thermal Interfaces for High-Temperature Silicon Carbide Devices. Nanoscale and Microscale Thermophysical Engineering, 2008, 12, 228-237.	2.6	40
74	Electrical and Thermal Interface Conductance of Carbon Nanotubes Grown under Direct Current Bias Voltage. Journal of Physical Chemistry C, 2008, 112, 19727-19733.	3.1	23
75	Effects of Growth Temperature on Carbon Nanotube Array Thermal Interfaces. Journal of Heat Transfer, 2008, 130, .	2.1	45
76	Influence of Bias-Enhanced Nucleation on Thermal Conductance Through Chemical Vapor Deposited Diamond Films. IEEE Transactions on Components and Packaging Technologies, 2008, 31, 46-53.	1.3	7
77	Increased real contact in thermal interfaces: A carbon nanotube/foil material. Applied Physics Letters, 2007, 90, 093513.	3.3	144
78	Dendrimer-assisted controlled growth of carbon nanotubes for enhanced thermal interface conductance. Nanotechnology, 2007, 18, 385303.	2.6	60
79	Photoacoustic characterization of carbon nanotube array thermal interfaces. Journal of Applied Physics, 2007, 101, 054313.	2.5	208
80	Aluminum Foil/Carbon Nanotube Thermal Interface Materials. , 2007, , .		0
81	Carbon Nanotube Array Thermal Interfaces on Chemical Vapor Deposited Diamond. , 2007, , .		0
82	A Pulsed Source-Sink Fluid Mixing Device. Journal of Microelectromechanical Systems, 2006, 15, 259-266.	2.5	23
83	Effects of a carbon nanotube layer on electrical contact resistance between copper substrates. Nanotechnology, 2006, 17, 2294-2303.	2.6	74
84	A maximum entropy approach to optimal mixing in a pulsed sourceâ€“sink flow. Physics of Fluids, 2006, 18, 011701.	4.0	27