

Baratunde A Cola

List of Publications by Year in descending order

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papers

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citations

136950

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84
all docs

84
docs citations

84
times ranked

4512
citing authors

#	ARTICLE	IF	CITATIONS
1	Harvesting Waste Thermal Energy Using a Carbon-Nanotube-Based Thermo-Electrochemical Cell. Nano Letters, 2010, 10, 838-846.	9.1	431
2	Carbon Nanotubes and Related Nanomaterials: Critical Advances and Challenges for Synthesis toward Mainstream Commercial Applications. ACS Nano, 2018, 12, 11756-11784.	14.6	388
3	High thermal conductivity of chain-oriented amorphous polythiophene. Nature Nanotechnology, 2014, 9, 384-390.	31.5	327
4	Photoacoustic characterization of carbon nanotube array thermal interfaces. Journal of Applied Physics, 2007, 101, 054313.	2.5	208
5	High Power Density Electrochemical Thermocells for Inexpensively Harvesting Low-Grade Thermal Energy. Advanced Materials, 2017, 29, 1605652.	21.0	166
6	Increased real contact in thermal interfaces: A carbon nanotube/foil material. Applied Physics Letters, 2007, 90, 093513.	3.3	144
7	A carbon nanotube optical rectenna. Nature Nanotechnology, 2015, 10, 1027-1032.	31.5	131
8	Contact mechanics and thermal conductance of carbon nanotube array interfaces. International Journal of Heat and Mass Transfer, 2009, 52, 3490-3503.	4.8	127
9	Higher Recovery and Better Energy Dissipation at Faster Strain Rates in Carbon Nanotube Bundles: An <i>in-Situ</i> Study. ACS Nano, 2012, 6, 2189-2197.	14.6	96
10	A metallization and bonding approach for high performance carbon nanotube thermal interface materials. Nanotechnology, 2010, 21, 445705.	2.6	95
11	Effects of a carbon nanotube layer on electrical contact resistance between copper substrates. Nanotechnology, 2006, 17, 2294-2303.	2.6	74
12	Design and optimization of thermo-electrochemical cells. Journal of Applied Electrochemistry, 2014, 44, 325-336.	2.9	74
13	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
14	Rethinking phonons: The issue of disorder. Npj Computational Materials, 2017, 3, .	8.7	66
15	Thermal and mechanical properties of 3D printed boron nitride ϵ ABS composites. Applied Composite Materials, 2018, 25, 1205-1217.	2.5	66
16	Dendrimer-assisted controlled growth of carbon nanotubes for enhanced thermal interface conductance. Nanotechnology, 2007, 18, 385303.	2.6	60
17	Thermal conductivity of bismuth telluride nanowire array-epoxy composite. Applied Physics Letters, 2009, 94, .	3.3	60
18	Nitrogen- and Boron-Doped Carbon Nanotube Electrodes in a Thermo-Electrochemical Cell. Journal of the Electrochemical Society, 2012, 159, B483-B488.	2.9	52

#	ARTICLE	IF	CITATIONS
19	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
20	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
21	Tunable Thermal Energy Transport across Diamond Membranes and Diamond-Si Interfaces by Nanoscale Graphoepitaxy. ACS Applied Materials & Interfaces, 2019, 11, 18517-18527.	8.0	49
22	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
23	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
24	Effects of Growth Temperature on Carbon Nanotube Array Thermal Interfaces. Journal of Heat Transfer, 2008, 130, .	2.1	45
25	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
26	Carbon Nanotube Array Thermal Interfaces for High-Temperature Silicon Carbide Devices. Nanoscale and Microscale Thermophysical Engineering, 2008, 12, 228-237.	2.6	40
27	Highly specular carbon nanotube absorbers. Applied Physics Letters, 2010, 97, 163116.	3.3	39
28	Thermo-electrochemical generator: energy harvesting & thermoregulation for liquid cooling applications. Sustainable Energy and Fuels, 2017, 1, 1381-1389.	4.9	39
29	Thermal radiation in systems of many dipoles. Physical Review B, 2019, 100, .	3.2	39
30	Nanoparticle decoration of carbon nanotubes by sputtering. Carbon, 2013, 57, 274-281.	10.3	38
31	High Thermal and Electrical Conductivity of Template Fabricated P3HT/MWCNT Composite Nanofibers. ACS Applied Materials & Interfaces, 2016, 8, 14788-14794.	8.0	37
32	Collective near-field thermal emission from polaritonic nanoparticle arrays. Physical Review Materials, 2017, 1, .	2.4	34
33	Effects of morphology on the micro-compression response of carbon nanotube forests. Nanoscale, 2012, 4, 3373.	5.6	32
34	Carbon nanotube thermal interfaces enhanced with sprayed on nanoscale polymer coatings. Nanotechnology, 2013, 24, 105401.	2.6	32
35	A Stepped-Bar Apparatus for Thermal Resistance Measurements. Journal of Electronic Packaging, Transactions of the ASME, 2013, 135, .	1.8	31
36	Poly(3-hexylthiophene) Nanotube Array Surfaces with Tunable Wetting and Contact Thermal Energy Transport. ACS Nano, 2015, 9, 1080-1088.	14.6	29

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37	A maximum entropy approach to optimal mixing in a pulsed source-sink flow. <i>Physics of Fluids</i> , 2006, 18, 011701.	4.0	27
38	A Review of Carbon Nanotube Ensembles as Flexible Electronics and Advanced Packaging Materials. <i>Journal of Electronic Packaging, Transactions of the ASME</i> , 2011, 133, .	1.8	27
39	Palladium Thiolate Bonding of Carbon Nanotube Thermal Interfaces. <i>Journal of Electronic Packaging, Transactions of the ASME</i> , 2011, 133, .	1.8	25
40	Enhanced Molecular Order in Polythiophene Films Electropolymerized in a Mixed Electrolyte of Anionic Surfactants and Boron Trifluoride Diethyl Etherate. <i>ACS Applied Materials & Interfaces</i> , 2012, 4, 1697-1703.	8.0	25
41	A Pulsed Source-Sink Fluid Mixing Device. <i>Journal of Microelectromechanical Systems</i> , 2006, 15, 259-266.	2.5	23
42	Electrical and Thermal Interface Conductance of Carbon Nanotubes Grown under Direct Current Bias Voltage. <i>Journal of Physical Chemistry C</i> , 2008, 112, 19727-19733.	3.1	23
43	Buckling-driven delamination of carbon nanotube forests. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	22
44	Compressive response of vertically aligned carbon nanotube films gleaned from in situ flat-punch indentations. <i>Journal of Materials Research</i> , 2013, 28, 984-997.	2.6	22
45	Electrochemical Characterization of Carbon Nanotube and Poly(3,4-ethylenedioxythiophene)~Poly(styrenesulfonate) Composite Aqueous Electrolyte for Thermo-Electrochemical Cells. <i>Journal of the Electrochemical Society</i> , 2016, 163, F867-F871.	2.9	22
46	High Performance Multiwall Carbon Nanotube-Insulator-Metal Tunnel Diode Arrays for Optical Rectification. <i>Advanced Electronic Materials</i> , 2018, 4, 1700446.	5.1	22
47	Enhanced Electrical Conductivity of Imidazolium-Based Ionic Liquids Mixed with Carbon Nanotubes: A Spectroscopic Study. <i>Journal of the Electrochemical Society</i> , 2014, 161, H481-H486.	2.9	21
48	Strongly anisotropic thermal and electrical conductivities of a self-assembled silver nanowire network. <i>RSC Advances</i> , 2016, 6, 90674-90681.	3.6	20
49	Reversible tailoring of mechanical properties of carbon nanotube forests by immersing in solvents. <i>Carbon</i> , 2014, 69, 178-187.	10.3	19
50	Thermal Conductance of Poly(3-methylthiophene) Brushes. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 25578-25585.	8.0	19
51	Photon-Assisted Tunneling in Carbon Nanotube Optical Rectennas: Characterization and Modeling. <i>ACS Applied Electronic Materials</i> , 2019, 1, 692-700.	4.3	17
52	Comparison of kinetic theory and fluctuational electrodynamics for radiative heat transfer in nanoparticle chains. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020, 246, 106947.	2.3	17
53	Thermomechanical and Thermal Contact Characteristics of Bismuth Telluride Films Electrodeposited on Carbon Nanotube Arrays. <i>Advanced Materials</i> , 2009, 21, 4280-4283.	21.0	14
54	The impact of polymer matrix blends on thermal and mechanical properties of boron nitride composites. <i>Journal of Applied Polymer Science</i> , 2020, 137, 48661.	2.6	14

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55	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
56	Oxidation limited thermal boundary conductance at metal-graphene interface. Carbon, 2018, 139, 913-921.	10.3	13
57	Deformation response of conformally coated carbon nanotube forests. Nanotechnology, 2013, 24, 475707.	2.6	12
58	Carbon Nanotube Array Thermal Interfaces Enhanced With Paraffin Wax. , 2008, , .		11
59	Photonic thermal conduction by infrared plasmonic resonators in semiconductor nanowires. Applied Physics Letters, 2019, 114, 163104.	3.3	10
60	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
61	Thermal rectification in thin films driven by gradient grain microstructure. Journal of Applied Physics, 2018, 123, .	2.5	8
62	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
63	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
64	Incorporation of polyethylene fillers in all-polymer high-thermal-conductivity composites. Polymer Bulletin, 2021, 78, 3835-3850.	3.3	7
65	Melt-processed P3HT and PE Polymer Nanofiber Thermal Conductivity. MRS Advances, 2017, 2, 3619-3626.	0.9	6
66	Report on Carbon Nano Material Workshop: Challenges and Opportunities. Nanoscale and Microscale Thermophysical Engineering, 2013, 17, 10-24.	2.6	5
67	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
68	Sub-diffractive waveguiding by mid-infrared plasmonic resonators in semiconductor nanowires. Nanoscale, 2018, 10, 5708-5716.	5.6	5
69	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
70	Experimental considerations of CVD diamond film measurements using time domain thermoreflectance. , 2017, , .		4
71	HIGH PERFORMANCE MULTI-INSULATOR CARBON NANOTUBE TUNNEL DIODE ARRAYS. , 2018, , .		3
72	Vertically aligned carbon nanotube based thermal interface materials for low contact pressure and low ambient pressure applications. , 2016, , .		2

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73	Tunneling diodes based on polymer infiltrated vertically aligned carbon nanotube forests. Nanotechnology, 2020, 31, 405202.	2.6	2
74	Characterization of Metallically Bonded Carbon Nanotube-Based Thermal Interface Materials Using a High Accuracy 1D Steady-State Technique. , 2011, , .		1
75	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
76	Characterization of Carbon Nanotube Forest Interfaces Using Time Domain Thermorefectance. , 2015, , .		1
77	Thermo-optical properties of packed nanoparticle thermal interface materials. , 2017, , .		1
78	Palladium Thiolate Bonding of Carbon Nanotube Thermal Interfaces for High-Temperature Electronics. , 2009, , .		1
79	Thermal Conductivity Measurement of Individual Polythiophene Nanofibers With Suspended Micro-Resistance Thermometer Devices. , 2012, , .		0
80	Solvent Soaking and Drying of Carbon Nanotube Forests for Enhanced Contact Area and Thermal Interface Conductance. , 2013, , .		0
81	Thermal conductivity of melt-processed nanofibers. , 2016, , .		0
82	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
83	Aluminum Foil/Carbon Nanotube Thermal Interface Materials. , 2007, , .		0
84	Carbon Nanotube Array Thermal Interfaces on Chemical Vapor Deposited Diamond. , 2007, , .		0