John Thiam-Leong Thong

List of Publications by Year
in descending order

128 papers	8,893 citations	50170 46 h-index	40881 93 g-index
131 all docs	131 docs citations	131 times ranked	12442 citing authors

#	Article	IF	Citations
1	Length-dependent thermal conductivity in suspended single-layer graphene. Nature Communications, 2014, 5, 3689.	5.8	735
2	Probing Layer Number and Stacking Order of Fewâ€Layer Graphene by Raman Spectroscopy. Small, 2010, 6, 195-200.	5.2	650
3	Experimental Demonstration of a Bilayer Thermal Cloak. Physical Review Letters, 2014, 112, 054302.	2.9	456
4	High Mobility, Printable, and Solution-Processed Graphene Electronics. Nano Letters, 2010, 10, 92-98.	4.5	455
5	Full Control and Manipulation of Heat Signatures: Cloaking, Camouflage and Thermal Metamaterials. Advanced Materials, 2014, 26, 1731-1734.	11.1	362
6	Large-scale synthesis and field emission properties of vertically oriented CuO nanowire films. Nanotechnology, 2005, 16, 88-92.	1.3	348
7	Simple fabrication of a ZnO nanowire photodetector with a fast photoresponse time. Applied Physics Letters, 2006, 88, 133114.	1.5	315
8	High-Throughput Synthesis of Graphene by Intercalationâ^'Exfoliation of Graphite Oxide and Study of Ionic Screening in Graphene Transistor. ACS Nano, 2009, 3, 3587-3594.	7.3	263
9	Controlled Growth and Field-Emission Properties of Cobalt Oxide Nanowalls. Advanced Materials, 2005, 17, 1595-1599.	11.1	255
10	Thermal Transport in Suspended and Supported Few-Layer Graphene. Nano Letters, 2011, 11, 113-118.	4.5	246
11	Multiwalled Carbon Nanotubes Beaded with ZnO Nanoparticles for Ultrafast Nonlinear Optical Switching. Advanced Materials, 2006, 18, 587-592.	11.1	219
12	Magnetism in MoS2 induced by proton irradiation. Applied Physics Letters, 2012, 101, .	1.5	205
13	Invisible Sensors: Simultaneous Sensing and Camouflaging in Multiphysical Fields. Advanced Materials, 2015, 27, 7752-7758.	11.1	202
14	Low Resistance Metal Contacts to MoS₂ Devices with Nickel-Etched-Graphene Electrodes. ACS Nano, 2015, 9, 869-877.	7.3	184
15	Low-Contact-Resistance Graphene Devices with Nickel-Etched-Graphene Contacts. ACS Nano, 2014, 8, 994-1001.	7.3	158
16	An Electrically Tuned Solidâ€State Thermal Memory Based on Metalâ€“Insulator Transition of Singleâ€Crystalline VO₂ Nanobeams. Advanced Functional Materials, 2011, 21, 1602-1607.	7.8	133
17	Properties and applications of cobalt-based material produced by electron-beam-induced deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2002, 20, 1295-1302.	0.9	126
18	Improving the NH₃gas sensitivity of ZnO nanowire sensors by reducing the carrier concentration. Nanotechnology, 2008, 19, 205502.	1.3	121

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19	TMAH etching of silicon and the interaction of etching parameters. Sensors and Actuators A: Physical, 1997, 63, 243-249.	2.0	112
20	What Does Annealing Do to Metalâ€“Graphene Contacts?. Nano Letters, 2014, 14, 3840-3847.	4.5	111
21	Flow Sensing of Single Cell by Graphene Transistor in a Microfluidic Channel. Nano Letters, 2011, 11, 5240-5246.	4.5	106
22	Co-synthesis of ZnOâ€“CuO Nanostructures by Directly Heating Brass in Air. Advanced Functional Materials, 2006, 16, 2415-2422.	7.8	104
23	Large-Diameter Graphene Nanotubes Synthesized Using Ni Nanowire Templates. Nano Letters, 2010, 10, 4844-4850.	4.5	101
24	P -type electrical, photoconductive, and anomalous ferromagnetic properties of Cu2O nanowires. Applied Physics Letters, 2009, 94, .	1.5	95
25	Substrate-Friendly Synthesis of Metal Oxide Nanostructures Using a Hotplate. Small, 2006, 2, 80-84.	5.2	93
26	Laser Pruning of Carbon Nanotubes as a Route to Static and Movable Structures. Advanced Materials, 2003, 15, 300-303.	11.1	87
27	The effect of layer number and substrate on the stability of graphene under MeV proton beam irradiation. Carbon, 2011, 49, 1720-1726.	5.4	86
28	Efficient field emission from Î±-Fe2O3 nanoflakes on an atomic force microscope tip. Applied Physics Letters, 2005, 87, 023103.	1.5	82
29	Gold on graphene as a substrate for surface enhanced Raman scattering study. Applied Physics Letters, 2010, 97, .	1.5	81
30	Thermal Conductance of the 2D MoS2/h-BN and graphene/h-BN Interfaces. Scientific Reports, 2017, 7, 43886.	1.6	79
31	High-current field emission from a vertically aligned carbon nanotube field emitter array. Applied Physics Letters, 2001, 79, 2811-2813.	1.5	74
32	Effects of CF4 plasma on the field emission properties of aligned multi-wall carbon nanotube films. Carbon, 2005, 43, 395-400.	5.4	71
33	Tuning the threshold voltage of MoS₂field-effect transistors via surface treatment. Nanoscale, 2015, 7, 10823-10831.	2.8	71
34	Thermal Transport in 2D Semiconductorsâ€”Considerations for Device Applications. Advanced Functional Materials, 2020, 30, 1903929.	7.8	71
35	Enhanced field emission from O2 and CF4 plasma-treated CuO nanowires. Chemical Physics Letters, 2006, 419, 458-463.	1.2	66
36	Manipulating Steady Heat Conduction by Sensu-shaped Thermal Metamaterials. Scientific Reports, 2015, 5, 10242.	1.6	65

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37	Engineering the thermal conductivity along an individual silicon nanowire by selective helium ion irradiation. Nature Communications, 2017, 8, 15919.	5.8	65
38	Profiling Nanowire Thermal Resistance with a Spatial Resolution of Nanometers. Nano Letters, 2014, 14, 806-812.	4.5	64
39	Field-emission induced growth of nanowires. Applied Physics Letters, 2002, 81, 4823-4825.	1.5	63
40	Suppressing Thermal Conductivity of Suspended Triâ€layer Graphene by Gold Deposition. Advanced Materials, 2013, 25, 6884-6888.	11.1	62
41	Singleâ€image signalâ€toâ€noise ratio estimation. Scanning, 2001, 23, 328-336.	0.7	57
42	Determination of secondary electron yield from insulators due to a low-kV electron beam. Journal of Applied Physics, 1998, 84, 4543-4548.	1.1	56
43	Mega-electron-volt proton irradiation on supported and suspended graphene: A Raman spectroscopic layer dependent study. Journal of Applied Physics, 2011, 110, .	1.1	56
44	Diameterâ€Dependent Thermal Transport in Individual ZnO Nanowires and its Correlation with Surface Coating and Defects. Small, 2012, 8, 738-745.	5.2	54
45	Probing the Physical Origin of Anisotropic Thermal Transport in Black Phosphorus Nanoribbons. Advanced Materials, 2018, 30, e1804928.	11.1	50
46	Lowâ€Symmetry PdSe₂ for High Performance Thermoelectric Applications. Advanced Functional Materials, 2020, 30, 2004896.	7.8	49
47	Efficient and broadband polarization rotator using horizontal slot waveguide for silicon photonics. Applied Physics Letters, 2012, 101, .	1.5	47
48	Ultralow Thermal Conductivity of Singleâ€Crystalline Porous Silicon Nanowires. Advanced Functional Materials, 2017, 27, 1702824.	7.8	47
49	Field-emission properties of ultrathin 5â€,nm tungsten nanowire. Journal of Applied Physics, 2006, 100, 114325.	1.1	46
50	Fabrication of vertically aligned carbon nanotubes patterns by chemical vapor deposition for field emitters. Diamond and Related Materials, 2002, 11, 1638-1642.	1.8	44
51	Interference lithographically defined and catalytically etched, large-area silicon nanocones from nanowires. Nanotechnology, 2010, 21, 205305.	1.3	41
52	Large-Scale Ordered Carbon Nanotube Arrays Initiated from Highly Ordered Catalyst Arrays on Silicon Substrates. Chemistry of Materials, 2004, 16, 2757-2761.	3.2	38
53	The effects of gas exposure and UV illumination on field emission from individual ZnO nanowires. Nanotechnology, 2007, 18, 185608.	1.3	38
54	Selective Engineering of Chalcogen Defects in MoS₂ by Low-Energy Helium Plasma. ACS Applied Materials & Interfaces, 2019, 11, 24404-24411.	4.0	37

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55	Polarization splitter using horizontal slot waveguide. Optics Express, 2013, 21, 3363.	1.7	35
56	Controlled synthesis of aligned carbon nanotube arrays on catalyst patterned silicon substrates by plasma-enhanced chemical vapor deposition. Applied Surface Science, 2001, 181, 248-254.	3.1	32
57	High-resolution nanowire atomic force microscope probe grownby a field-emission induced process. Applied Physics Letters, 2004, 84, 5207-5209.	1.5	29
58	Fabrication of super-sharp nanowire atomic force microscope probes using a field emission induced growth technique. Review of Scientific Instruments, 2004, 75, 3248-3255.	0.6	29
59	Characterisation of pyramid formation arising from the TMAH etching of silicon. Sensors and Actuators A: Physical, 1998, 71, 238-243.	2.0	28
60	Site-specific growth of ZnO nanowires from patterned Zn via compatible semiconductor processing. Journal of Crystal Growth, 2008, 310, 2485-2492.	0.7	28
61	Direct amperometric detection of glucose on a multiple-branching carbon nanotube forest. Analyst, The, 2008, 133, 448.	1.7	28
62	Effects of adsorbates on the field emission current from carbon nanotubes. Applied Surface Science, 2004, 233, 20-23.	3.1	27
63	Life cycle of a tungsten cold field emitter. Journal of Applied Physics, 2006, 99, 104903.	1.1	27
64	Field emission from a large area of vertically-aligned carbon nanofibers with nanoscale tips and controlled spatial geometry. Carbon, 2010, 48, 1362-1368.	5.4	27
65	MoS2 oxygen sensor with gate voltage stress induced performance enhancement. Applied Physics Letters, 2015, 107, .	1.5	27
66	Vacuum level dependent photoluminescence in chemical vapor deposition-grown monolayer MoS 2. Scientific Reports, 2017, 7, 16714.	1.6	27
67	Effect of shot noise and secondary emission noise in scanning electron microscope images. Scanning, 2004, 26, 36-40.	0.7	26
68	In situnanowire growth for electrical interconnects. Nanotechnology, 2004, 15, 687-691.	1.3	26
69	Evolution of hillocks during silicon etching in TMAH. Journal of Micromechanics and Microengineering, 2001, 11, 61-69.	1.5	25
70	Enhanced field emission from CuO nanowire arrays by in situ laser irradiation. Journal of Applied Physics, 2007, 102, .	1.1	24
71	Patterning and fusion of CuO nanorods with a focused laser beam. Nanotechnology, 2005, 16, 1238-1244.	1.3	23
72	Cobaltâ€Mediated Crystallographic Etching of Graphite From Defects. Small, 2012, 8, 2515-2523.	5.2	22

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73	Insulator charging under irradiation with a stationary electron probe. Measurement Science and Technology, 1994, 5, 1089-1095.	1.4	20
74	High-resolution atomic force microscope nanotip grown by self-field emission. Applied Physics Letters, 2002, 81, 3037-3039.	1.5	20
75	Raman analysis of gold on WSe₂ single crystal film. Materials Research Express, 2015, 2, 065009.	0.8	20
76	Plasma synthesis of well-aligned carbon nanocones. Diamond and Related Materials, 2005, 14, 902-906.	1.8	19
77	Characteristics of single metallic nanowire growth via a field-emission induced process. Journal of Applied Physics, 2006, 99, 064309.	1.1	19
78	A topography measurement instrument based on the scanning electron microscope. Review of Scientific Instruments, 1992, 63, 131-138.	0.6	17
79	Reduction of charging effects using vector scanning in the scanning electron microscope. Scanning, 2001, 23, 395-402.	0.7	17
80	Horizontally directed growth of carbon nanotubes utilizing self-generated electric field from plasma induced surface charging. Applied Physics Letters, 2007, 91, .	1.5	17
81	Origin of Contact Resistance at Ferromagnetic Metalâ€“Graphene Interfaces. ACS Nano, 2016, 10, 11219-11227.	7.3	16
82	Selectivity of MoS 2 gas sensors based on a time constant spectrum method. Sensors and Actuators A: Physical, 2017, 255, 28-33.	2.0	16
83	The growth mechanism and field-emission properties of single carbon nanotips. Nanotechnology, 2006, 17, 3655-3661.	1.3	15
84	Polymerâ€Protected Subâ€2â€nmâ€Nanogap Fabrication for Biological Sensing in Nearâ€Physiological Conditions. Small, 2009, 5, 2797-2801.	5.2	15
85	Atomic Layer Deposition of High-Quality Al₂O₃ Thin Films on MoS₂ with Water Plasma Treatment. ACS Applied Materials & Interfaces, 2019, 11, 35438-35443.	4.0	15
86	Studying thermal transport in suspended monolayer molybdenum disulfide prepared by a nano-manipulator-assisted transfer method. Nanotechnology, 2020, 31, 225702.	1.3	14
87	In situ topography measurement in the SEM. Scanning, 1992, 14, 65-72.	0.7	13
88	Lateral ZnO nanowire growth on a planar substrate using a growth barrier. Nanotechnology, 2007, 18, 055601.	1.3	13
89	Effect of sidewall modification in the determination of friction coefficient of vertically aligned carbon nanotube films using friction force microscopy. Carbon, 2007, 45, 2737-2743.	5.4	13
90	Improving the morphological stability of a polycrystalline tungsten nanowire with a carbon shell. Nanotechnology, 2010, 21, 195701.	1.3	12

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91	Modification of thermal transport in few-layer MoS₂ by atomic-level defect engineering. Nanoscale, 2021, 13, 11561-11567.	2.8	12
92	Add-on transmission attachments for the scanning electron microscope. Review of Scientific Instruments, 2003, 74, 134-140.	0.6	11
93	Control of surface morphology and crystal structure of silicon nanowires and their coherent phonon transport characteristics. Acta Materialia, 2014, 64, 62-71.	3.8	11
94	A portable scanning electron microscope column design based on the use of permanent magnets. Scanning, 1998, 20, 87-91.	0.7	10
95	Parallel fabrication of polymer-protected nanogaps. Nanotechnology, 2010, 21, 385303.	1.3	10
96	Picosecond electron pulse generation via beam deflection-chopping in the SEM. Measurement Science and Technology, 1991, 2, 207-216.	1.4	9
97	Ferromagnetic nano-dot array fabricated by electron beam radiation induced nano-scale phase transition. Journal of Applied Physics, 2002, 91, 6854.	1.1	9
98	Thermal oxidation of polycrystalline tungsten nanowire. Journal of Applied Physics, 2010, 108, .	1.1	9
99	Investigations on the morphology of silicon surfaces anisotropically etched with TMAH. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2000, 72, 177-179.	1.7	8
100	Field emission properties of individual zinc oxide nanowire field emitter. Journal of Vacuum Science & Technology B, 2008, 26, 983.	1.3	8
101	Self-aligned nanolithography by selective polymer dissolution. Nanoscale, 2010, 2, 2302.	2.8	8
102	Gallium ion implantation greatly reduces thermal conductivity and enhances electronic one of ZnO nanowires. AIP Advances, 2014, 4, .	0.6	8
103	Improving the speed of scanning electron microscope deflection systems. Measurement Science and Technology, 1999, 10, 1070-1074.	1.4	7
104	Field-emission-induced growth of nanowire between electrodes. Applied Physics Letters, 2006, 88, 193116.	1.5	7
105	Probing thermal transport across amorphous region embedded in a single crystalline silicon nanowire. Scientific Reports, 2020, 10, 821.	1.6	7
106	Improving the dynamic response of magnetic electron lenses. Measurement Science and Technology, 1991, 2, 1116-1118.	1.4	6
107	Transit time effect in electron beam testing voltage measurements. Measurement Science and Technology, 1992, 3, 827-837.	1.4	6
108	Eddy current compensation for magnetic electron lenses. Measurement Science and Technology, 1996, 7, 1583-1590.	1.4	6

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109	In situ observation of localized metallic nanocrystal growth on carbon nanotube templates in a scanning electron microscope. Nanotechnology, 2006, 17, 2373-2377.	1.3	6
110	Improving the NH₃gas sensitivity of ZnO nanowire sensors by reducing the carrier concentration. Nanotechnology, 2008, 19, 399801-399801.	1.3	6
111	Capturing a DNA duplex under near-physiological conditions. Applied Physics Letters, 2010, 97, 163702.	1.5	6
112	An electron-optical phase-shift element for high-speed electron beam testing. Measurement Science and Technology, 1990, 1, 337-344.	1.4	5
113	Direct magnetic patterning of nonferromagnetic Co-C thin films by electron-beam radiation. IEEE Transactions on Magnetics, 2002, 38, 1970-1972.	1.2	5
114	Electron-acoustic and surface electron beam induced voltage signal formation in scanning electron microscopy analysis of semiconducting samples. Ultramicroscopy, 2004, 101, 183-195.	0.8	5
115	Converting carbon nanofibers to carbon nanoneedles: catalyst splitting and reverse motion. Nanoscale, 2010, 2, 2180.	2.8	5
116	A Contactless 3-D Measuring Technique For IC Inspection. , 1987, , .		3
117	<title>Miniature scanning electron microscope design based upon the use of permanent magnets</title>. , 1997, , .		3
118	Lateral heat flow distribution and defect-dependent thermal resistance in an individual silicon nanowire. Nanotechnology, 2016, 27, 115402.	1.3	3
119	Fieldâ€Effect Transistors: Lowâ€Symmetry PdSe₂ for High Performance Thermoelectric Applications (Adv. Funct. Mater. 52/2020). Advanced Functional Materials, 2020, 30, 2070347.	7.8	3
120	Submicron Co(TaC) line array produced by electron-beam direct writing. Journal of Applied Physics, 2003, 93, 7417-7419.	1.1	2
121	Connection of nanostructures using nanowires grown by a self-field-emission process. , 2002, , .		1
122	Simple, low-cost technique for photolithographic self-aligned top metal contacts to nanowires and nanotubes. Nanotechnology, 2008, 19, 455305.	1.3	1
123	Polarization splitter using horizontal slot waveguide. , 2012, , .		0
124	Metallic nanowires grown via field-emission induced growth as electron sources. , 2012, , .		0
125	Low-Contact-Resistance Contacts to Graphene via Metal-Mediated Etching. Materials Research Society Symposia Proceedings, 2013, 1553, 1.	0.1	0
126	Suppression of Void Formation in Si_{0.5}Ge_{0.5} Alloy Nanowire during Ni Germanosilicidation. Advanced Engineering Materials, 2014, 16, 1032-1037.	1.6	0

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127	Metal-assisted chemical etching of molybdenum disulphide. , 2015, , .		0
128	MoS2 based photosensor detecting both light wavelength and intensity. Sensors and Actuators A: Physical, 2017, 266, 205-210.	2.0	0