

# John Thiam-Leong Thong

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

124  
papers

7,496  
citations

42  
h-index

85  
g-index

131  
ext. papers

8,256  
ext. citations

6.8  
avg, IF

5.79  
L-index

#	Paper	IF	Citations
124	Modification of thermal transport in few-layer MoS by atomic-level defect engineering. <i>Nanoscale</i> , <b>2021</b> , 13, 11561-11567	7.7	4
123	Field-Effect Transistors: Low-Symmetry PdSe <sub>2</sub> for High Performance Thermoelectric Applications (Adv. Funct. Mater. 52/2020). <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2070347	15.6	3
122	Probing thermal transport across amorphous region embedded in a single crystalline silicon nanowire. <i>Scientific Reports</i> , <b>2020</b> , 10, 821	4.9	3
121	Studying thermal transport in suspended monolayer molybdenum disulfide prepared by a nano-manipulator-assisted transfer method. <i>Nanotechnology</i> , <b>2020</b> , 31, 225702	3.4	7
120	Low-Symmetry PdSe <sub>2</sub> for High Performance Thermoelectric Applications. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2004896	15.6	23
119	Thermal Transport in 2D Semiconductors—Considerations for Device Applications. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1903929	15.6	41
118	Atomic Layer Deposition of High-Quality AlO Thin Films on MoS with Water Plasma Treatment. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 35438-35443	9.5	7
117	Selective Engineering of Chalcogen Defects in MoS by Low-Energy Helium Plasma. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 24404-24411	9.5	24
116	Probing the Physical Origin of Anisotropic Thermal Transport in Black Phosphorus Nanoribbons. <i>Advanced Materials</i> , <b>2018</b> , 30, e1804928	24	31
115	Selectivity of MoS <sub>2</sub> gas sensors based on a time constant spectrum method. <i>Sensors and Actuators A: Physical</i> , <b>2017</b> , 255, 28-33	3.9	14
114	Thermal Conductance of the 2D MoS/h-BN and graphene/h-BN Interfaces. <i>Scientific Reports</i> , <b>2017</b> , 7, 43886	4.9	64
113	MoS <sub>2</sub> based photosensor detecting both light wavelength and intensity. <i>Sensors and Actuators A: Physical</i> , <b>2017</b> , 266, 205-210	3.9	
112	Ultralow Thermal Conductivity of Single-Crystalline Porous Silicon Nanowires. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1702824	15.6	35
111	Vacuum level dependent photoluminescence in chemical vapor deposition-grown monolayer MoS. <i>Scientific Reports</i> , <b>2017</b> , 7, 16714	4.9	20
110	Engineering the thermal conductivity along an individual silicon nanowire by selective helium ion irradiation. <i>Nature Communications</i> , <b>2017</b> , 8, 15919	17.4	45
109	Origin of Contact Resistance at Ferromagnetic Metal-Graphene Interfaces. <i>ACS Nano</i> , <b>2016</b> , 10, 11219-11227	16.7	14
108	Lateral heat flow distribution and defect-dependent thermal resistance in an individual silicon nanowire. <i>Nanotechnology</i> , <b>2016</b> , 27, 115402	3.4	2

107	Raman analysis of gold on WSe2 single crystal film. <i>Materials Research Express</i> , <b>2015</b> , 2, 065009	1.7	14
106	Manipulating Steady Heat Conduction by Sensu-shaped Thermal Metamaterials. <i>Scientific Reports</i> , <b>2015</b> , 5, 10242	4.9	50
105	Tuning the threshold voltage of MoS2 field-effect transistors via surface treatment. <i>Nanoscale</i> , <b>2015</b> , 7, 10823-31	7.7	60
104	MoS2 oxygen sensor with gate voltage stress induced performance enhancement. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 123105	3.4	21
103	Low resistance metal contacts to MoS2 devices with nickel-etched-graphene electrodes. <i>ACS Nano</i> , <b>2015</b> , 9, 869-77	16.7	154
102	Invisible Sensors: Simultaneous Sensing and Camouflaging in Multiphysical Fields. <i>Advanced Materials</i> , <b>2015</b> , 27, 7752-8	24	145
101	Full control and manipulation of heat signatures: cloaking, camouflage and thermal metamaterials. <i>Advanced Materials</i> , <b>2014</b> , 26, 1731-4	24	262
100	Length-dependent thermal conductivity in suspended single-layer graphene. <i>Nature Communications</i> , <b>2014</b> , 5, 3689	17.4	603
99	Low-contact-resistance graphene devices with nickel-etched-graphene contacts. <i>ACS Nano</i> , <b>2014</b> , 8, 994-1001	10.1	143
98	Experimental demonstration of a bilayer thermal cloak. <i>Physical Review Letters</i> , <b>2014</b> , 112, 054302	7.4	362
97	Profiling nanowire thermal resistance with a spatial resolution of nanometers. <i>Nano Letters</i> , <b>2014</b> , 14, 806-12	11.5	47
96	Control of surface morphology and crystal structure of silicon nanowires and their coherent phonon transport characteristics. <i>Acta Materialia</i> , <b>2014</b> , 64, 62-71	8.4	11
95	What does annealing do to metal-graphene contacts?. <i>Nano Letters</i> , <b>2014</b> , 14, 3840-7	11.5	92
94	Gallium ion implantation greatly reduces thermal conductivity and enhances electronic one of ZnO nanowires. <i>AIP Advances</i> , <b>2014</b> , 4, 057128	1.5	7
93	Suppression of Void Formation in Si0.5Ge0.5 Alloy Nanowire during Ni Germanosilicidation. <i>Advanced Engineering Materials</i> , <b>2014</b> , 16, 1032-1037	3.5	
92	Suppressing thermal conductivity of suspended tri-layer graphene by gold deposition. <i>Advanced Materials</i> , <b>2013</b> , 25, 6884-8	24	43
91	Polarization splitter using horizontal slot waveguide. <i>Optics Express</i> , <b>2013</b> , 21, 3363-9	3.3	30
90	Low-Contact-Resistance Contacts to Graphene via Metal-Mediated Etching. <i>Materials Research Society Symposia Proceedings</i> , <b>2013</b> , 1553, 1		

89	Magnetism in MoS <sub>2</sub> induced by proton irradiation. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 102103	3-4	170
88	Efficient and broadband polarization rotator using horizontal slot waveguide for silicon photonics. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 021105	3-4	39
87	Diameter-dependent thermal transport in individual ZnO nanowires and its correlation with surface coating and defects. <i>Small</i> , <b>2012</b> , 8, 738-45	11	49
86	Cobalt-mediated crystallographic etching of graphite from defects. <i>Small</i> , <b>2012</b> , 8, 2515-23	11	21
85	Flow sensing of single cell by graphene transistor in a microfluidic channel. <i>Nano Letters</i> , <b>2011</b> , 11, 5240-5	11.5	93
84	Mega-electron-volt proton irradiation on supported and suspended graphene: A Raman spectroscopic layer dependent study. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 084309	2.5	52
83	An Electrically Tuned Solid-State Thermal Memory Based on Metal-Insulator Transition of Single-Crystalline VO <sub>2</sub> Nanobeams. <i>Advanced Functional Materials</i> , <b>2011</b> , 21, 1602-1607	15.6	114
82	Thermal transport in suspended and supported few-layer graphene. <i>Nano Letters</i> , <b>2011</b> , 11, 113-8	11.5	214
81	The effect of layer number and substrate on the stability of graphene under MeV proton beam irradiation. <i>Carbon</i> , <b>2011</b> , 49, 1720-1726	10.4	73
80	Capturing a DNA duplex under near-physiological conditions. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 163702	3-4	6
79	Interference lithographically defined and catalytically etched, large-area silicon nanocones from nanowires. <i>Nanotechnology</i> , <b>2010</b> , 21, 205305	3-4	36
78	Parallel fabrication of polymer-protected nanogaps. <i>Nanotechnology</i> , <b>2010</b> , 21, 385303	3-4	7
77	Large-diameter graphene nanotubes synthesized using Ni nanowire templates. <i>Nano Letters</i> , <b>2010</b> , 10, 4844-50	11.5	94
76	Thermal oxidation of polycrystalline tungsten nanowire. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 094312	2.5	8
75	Improving the morphological stability of a polycrystalline tungsten nanowire with a carbon shell. <i>Nanotechnology</i> , <b>2010</b> , 21, 195701	3-4	9
74	High mobility, printable, and solution-processed graphene electronics. <i>Nano Letters</i> , <b>2010</b> , 10, 92-8	11.5	413
73	Self-aligned nanolithography by selective polymer dissolution. <i>Nanoscale</i> , <b>2010</b> , 2, 2302-6	7-7	8
72	Gold on graphene as a substrate for surface enhanced Raman scattering study. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 163111	3-4	73

71	Converting carbon nanofibers to carbon nanoneedles: catalyst splitting and reverse motion. <i>Nanoscale</i> , <b>2010</b> , 2, 2180-5	7.7	5
70	Field emission from a large area of vertically-aligned carbon nanofibers with nanoscale tips and controlled spatial geometry. <i>Carbon</i> , <b>2010</b> , 48, 1362-1368	10.4	25
69	Probing layer number and stacking order of few-layer graphene by Raman spectroscopy. <i>Small</i> , <b>2010</b> , 6, 195-200	11	521
68	Polymer-protected sub-2-nm-nanogap fabrication for biological sensing in near-physiological conditions. <i>Small</i> , <b>2009</b> , 5, 2797-801	11	14
67	High-throughput synthesis of graphene by intercalation-exfoliation of graphite oxide and study of ionic screening in graphene transistor. <i>ACS Nano</i> , <b>2009</b> , 3, 3587-94	16.7	237
66	P-type electrical, photoconductive, and anomalous ferromagnetic properties of Cu <sub>2</sub> O nanowires. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 113106	3.4	90
65	Direct amperometric detection of glucose on a multiple-branching carbon nanotube forest. <i>Analyst, The</i> , <b>2008</b> , 133, 448-51	5	27
64	Improving the NH <sub>3</sub> gas sensitivity of ZnO nanowire sensors by reducing the carrier concentration. <i>Nanotechnology</i> , <b>2008</b> , 19, 205502	3.4	112
63	Field emission properties of individual zinc oxide nanowire field emitter. <i>Journal of Vacuum Science &amp; Technology B</i> , <b>2008</b> , 26, 983		6
62	Simple, low-cost technique for photolithographic self-aligned top metal contacts to nanowires and nanotubes. <i>Nanotechnology</i> , <b>2008</b> , 19, 455305	3.4	1
61	Improving the NH <sub>3</sub> gas sensitivity of ZnO nanowire sensors by reducing the carrier concentration. <i>Nanotechnology</i> , <b>2008</b> , 19, 399801-399801	3.4	3
60	Site-specific growth of ZnO nanowires from patterned Zn via compatible semiconductor processing. <i>Journal of Crystal Growth</i> , <b>2008</b> , 310, 2485-2492	1.6	27
59	Effect of sidewall modification in the determination of friction coefficient of vertically aligned carbon nanotube films using friction force microscopy. <i>Carbon</i> , <b>2007</b> , 45, 2737-2743	10.4	9
58	The effects of gas exposure and UV illumination on field emission from individual ZnO nanowires. <i>Nanotechnology</i> , <b>2007</b> , 18, 185608	3.4	34
57	Horizontally directed growth of carbon nanotubes utilizing self-generated electric field from plasma induced surface charging. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 243108	3.4	14
56	Enhanced field emission from CuO nanowire arrays by in situ laser irradiation. <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 114302	2.5	23
55	Lateral ZnO nanowire growth on a planar substrate using a growth barrier. <i>Nanotechnology</i> , <b>2007</b> , 18, 055601	3.4	13
54	Co-synthesis of ZnO/TiO <sub>2</sub> Nanostructures by Directly Heating Brass in Air. <i>Advanced Functional Materials</i> , <b>2006</b> , 16, 2415-2422	15.6	89

53	Multiwalled Carbon Nanotubes Beaded with ZnO Nanoparticles for Ultrafast Nonlinear Optical Switching. <i>Advanced Materials</i> , <b>2006</b> , 18, 587-592	24	199
52	In situ observation of localized metallic nanocrystal growth on carbon nanotube templates in a scanning electron microscope. <i>Nanotechnology</i> , <b>2006</b> , 17, 2373-2377	3-4	5
51	The growth mechanism and field-emission properties of single carbon nanotips. <i>Nanotechnology</i> , <b>2006</b> , 17, 3655-3661	3-4	13
50	Field-emission properties of ultrathin 5nm tungsten nanowire. <i>Journal of Applied Physics</i> , <b>2006</b> , 100, 11432-5	3-5	39
49	Characteristics of single metallic nanowire growth via a field-emission induced process. <i>Journal of Applied Physics</i> , <b>2006</b> , 99, 064309	2-5	15
48	Life cycle of a tungsten cold field emitter. <i>Journal of Applied Physics</i> , <b>2006</b> , 99, 104903	2-5	24
47	Field-emission-induced growth of nanowire between electrodes. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 19311-6	3-4	5
46	Simple fabrication of a ZnO nanowire photodetector with a fast photoresponse time. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 133114	3-4	287
45	Substrate-friendly synthesis of metal oxide nanostructures using a hotplate. <i>Small</i> , <b>2006</b> , 2, 80-4	11	84
44	Enhanced field emission from O <sub>2</sub> and CF <sub>4</sub> plasma-treated CuO nanowires. <i>Chemical Physics Letters</i> , <b>2006</b> , 419, 458-463	2-5	62
43	Plasma synthesis of well-aligned carbon nanocones. <i>Diamond and Related Materials</i> , <b>2005</b> , 14, 902-906	3-5	18
42	Large-scale synthesis and field emission properties of vertically oriented CuO nanowire films. <i>Nanotechnology</i> , <b>2005</b> , 16, 88-92	3-4	314
41	Controlled Growth and Field-Emission Properties of Cobalt Oxide Nanowalls. <i>Advanced Materials</i> , <b>2005</b> , 17, 1595-1599	24	235
40	Effects of CF <sub>4</sub> plasma on the field emission properties of aligned multi-wall carbon nanotube films. <i>Carbon</i> , <b>2005</b> , 43, 395-400	10-4	66
39	Efficient field emission from Fe <sub>2</sub> O <sub>3</sub> nanoflakes on an atomic force microscope tip. <i>Applied Physics Letters</i> , <b>2005</b> , 87, 023103	3-4	78
38	Patterning and fusion of CuO nanorods with a focused laser beam. <i>Nanotechnology</i> , <b>2005</b> , 16, 1238-1244	3-4	16
37	High-resolution nanowire atomic force microscope probe grown by a field-emission induced process. <i>Applied Physics Letters</i> , <b>2004</b> , 84, 5207-5209	3-4	28
36	Effect of shot noise and secondary emission noise in scanning electron microscope images. <i>Scanning</i> , <b>2004</b> , 26, 36-40	1-6	22

35	Electron-acoustic and surface electron beam induced voltage signal formation in scanning electron microscopy analysis of semiconducting samples. <i>Ultramicroscopy</i> , <b>2004</b> , 101, 183-95	3.1	4
34	Effects of adsorbates on the field emission current from carbon nanotubes. <i>Applied Surface Science</i> , <b>2004</b> , 233, 20-23	6.7	24
33	Fabrication of super-sharp nanowire atomic force microscope probes using a field emission induced growth technique. <i>Review of Scientific Instruments</i> , <b>2004</b> , 75, 3248-3255	1.7	24
32	In situ nanowire growth for electrical interconnects. <i>Nanotechnology</i> , <b>2004</b> , 15, 687-691	3.4	24
31	Large-Scale Ordered Carbon Nanotube Arrays Initiated from Highly Ordered Catalyst Arrays on Silicon Substrates. <i>Chemistry of Materials</i> , <b>2004</b> , 16, 2757-2761	9.6	34
30	Laser Pruning of Carbon Nanotubes as a Route to Static and Movable Structures. <i>Advanced Materials</i> , <b>2003</b> , 15, 300-303	24	77
29	Add-on transmission attachments for the scanning electron microscope. <i>Review of Scientific Instruments</i> , <b>2003</b> , 74, 134-140	1.7	8
28	Submicron Co(TaC) line array produced by electron-beam direct writing. <i>Journal of Applied Physics</i> , <b>2003</b> , 93, 7417-7419	2.5	1
27	Properties and applications of cobalt-based material produced by electron-beam-induced deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2002</b> , 20, 1295-1302	2.9	119
26	Ferromagnetic nano-dot array fabricated by electron beam radiation induced nano-scale phase transition. <i>Journal of Applied Physics</i> , <b>2002</b> , 91, 6854	2.5	8
25	Field-emission induced growth of nanowires. <i>Applied Physics Letters</i> , <b>2002</b> , 81, 4823-4825	3.4	52
24	High-resolution atomic force microscope nanotip grown by self-field emission. <i>Applied Physics Letters</i> , <b>2002</b> , 81, 3037-3039	3.4	16
23	Direct magnetic patterning of nonferromagnetic Co-C thin films by electron-beam radiation. <i>IEEE Transactions on Magnetics</i> , <b>2002</b> , 38, 1970-1972	2	5
22	Fabrication of vertically aligned carbon nanotubes patterns by chemical vapor deposition for field emitters. <i>Diamond and Related Materials</i> , <b>2002</b> , 11, 1638-1642	3.5	40
21	Single-image signal-to-noise ratio estimation. <i>Scanning</i> , <b>2001</b> , 23, 328-36	1.6	38
20	Reduction of charging effects using vector scanning in the scanning electron microscope. <i>Scanning</i> , <b>2001</b> , 23, 395-402	1.6	11
19	Controlled synthesis of aligned carbon nanotube arrays on catalyst patterned silicon substrates by plasma-enhanced chemical vapor deposition. <i>Applied Surface Science</i> , <b>2001</b> , 181, 248-254	6.7	25
18	Evolution of hillocks during silicon etching in TMAH. <i>Journal of Micromechanics and Microengineering</i> , <b>2001</b> , 11, 61-69	2	21

17	High-current field emission from a vertically aligned carbon nanotube field emitter array. <i>Applied Physics Letters</i> , <b>2001</b> , 79, 2811-2813	3.4	67
16	Investigations on the morphology of silicon surfaces anisotropically etched with TMAH. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , <b>2000</b> , 72, 177-179	3.1	8
15	Improving the speed of scanning electron microscope deflection systems. <i>Measurement Science and Technology</i> , <b>1999</b> , 10, 1070-1074	2	7
14	Characterisation of pyramid formation arising from the TMAH etching of silicon. <i>Sensors and Actuators A: Physical</i> , <b>1998</b> , 71, 238-243	3.9	25
13	A portable scanning electron microscope column design based on the use of permanent magnets. <i>Scanning</i> , <b>1998</b> , 20, 87-91	1.6	8
12	Determination of secondary electron yield from insulators due to a low-kV electron beam. <i>Journal of Applied Physics</i> , <b>1998</b> , 84, 4543-4548	2.5	51
11	Miniature scanning electron microscope design based upon the use of permanent magnets <b>1997</b> ,		2
10	TMAH etching of silicon and the interaction of etching parameters. <i>Sensors and Actuators A: Physical</i> , <b>1997</b> , 63, 243-249	3.9	102
9	Eddy current compensation for magnetic electron lenses. <i>Measurement Science and Technology</i> , <b>1996</b> , 7, 1583-1590	2	5
8	Insulator charging under irradiation with a stationary electron probe. <i>Measurement Science and Technology</i> , <b>1994</b> , 5, 1089-1095	2	19
7	A topography measurement instrument based on the scanning electron microscope. <i>Review of Scientific Instruments</i> , <b>1992</b> , 63, 131-138	1.7	13
6	Transit time effect in electron beam testing voltage measurements. <i>Measurement Science and Technology</i> , <b>1992</b> , 3, 827-837	2	4
5	In situ topography measurement in the SEM. <i>Scanning</i> , <b>1992</b> , 14, 65-72	1.6	10
4	Picosecond electron pulse generation via beam deflection-chopping in the SEM. <i>Measurement Science and Technology</i> , <b>1991</b> , 2, 207-216	2	7
3	Improving the dynamic response of magnetic electron lenses. <i>Measurement Science and Technology</i> , <b>1991</b> , 2, 1116-1118	2	6
2	An electron-optical phase-shift element for high-speed electron beam testing. <i>Measurement Science and Technology</i> , <b>1990</b> , 1, 337-344	2	4
1	A Contactless 3-D Measuring Technique For IC Inspection <b>1987</b> ,		3