Zhun-Yong Ong

List of Publications by Citations

51 papers	3,208 citations	25 h-index	56 g-index
66 ext. papers	3,568 ext. citations	5.6 avg, IF	5.59 L-index

#	Paper	IF	Citations
51	Towards intrinsic charge transport in monolayer molybdenum disulfide by defect and interface engineering. *Nature Communications*, **2014**, 5, 5290	17.4	448
50	Molecular dynamics simulation of thermal boundary conductance between carbon nanotubes and SiO2. *Physical Review B*, **2010**, 81,	3.3	234
49	Ballistic to diffusive crossover of heat flow in graphene ribbons. *Nature Communications*, **2013**, 4, 1734	17.4	223
48	Strong Thermal Transport Anisotropy and Strain Modulation in Single-Layer Phosphorene. *Journal of Physical Chemistry C*, **2014**, 118, 25272-25277	3.8	219
47	Effect of substrate modes on thermal transport in supported graphene. *Physical Review B*, **2011**, 84,	3.3	198
46	Analyzing the Carrier Mobility in Transition-Metal Dichalcogenide MoS2 Field-Effect Transistors. *Advanced Functional Materials*, **2017**, 27, 1604093	15.6	178
45	High-Performance Monolayer WS2 Field-Effect Transistors on High-□Dielectrics. *Advanced Materials*, **2015**, 27, 5230-4	24	177
44	Realization of Room-Temperature Phonon-Limited Carrier Transport in Monolayer MoS2 by Dielectric and Carrier Screening. *Advanced Materials*, **2016**, 28, 547-52	24	161
43	Imaging, simulation, and electrostatic control of power dissipation in graphene devices. *Nano Letters*, **2010**, 10, 4787-93	11.5	141
42	Effect of grain boundaries on thermal transport in graphene. *Applied Physics Letters*, **2013**, 102, 033104	3.4	119
41	Atomic-scale evidence for potential barriers and strong carrier scattering at graphene grain boundaries: a scanning tunneling microscopy study. *ACS Nano*, **2013**, 7, 75-86	16.7	118
40	Recent Advances in the Study of Phosphorene and its Nanostructures. *Critical Reviews in Solid State and Materials Sciences*, **2017**, 42, 1-82	10.1	113
39	Mobility enhancement and temperature dependence in top-gated single-layer MoS2. *Physical Review B*, **2013**, 88,	3.3	89
38	Thermal dissipation and variability in electrical breakdown of carbon nanotube devices. *Physical Review B*, **2010**, 82,	3.3	81
37	Thermal Conductance of the 2D MoS/h-BN and graphene/h-BN Interfaces. *Scientific Reports*, **2017**, 7, 43886	4.9	64
36	Efficient approach for modeling phonon transmission probability in nanoscale interfacial thermal transport. *Physical Review B*, **2015**, 91,	3.3	64
35	Reduction of phonon lifetimes and thermal conductivity of a carbon nanotube on amorphous silica. *Physical Review B*, **2011**, 84,	3.3	62

34	Theory of interfacial plasmon-phonon scattering in supported graphene. *Physical Review B*, **2012**, 86,	3.3	56
33	Pseudopotential-based studies of electron transport in graphene and graphene nanoribbons. *Journal of Physics Condensed Matter*, **2013**, 25, 473202	1.8	47
32	Controlling the thermal conductance of graphene/hBN lateral interface with strain and structure engineering. *Physical Review B*, **2016**, 93,	3.3	39
31	Theory of substrate-directed heat dissipation for single-layer graphene and other two-dimensional crystals. *Physical Review B*, **2016**, 94,	3.3	39
30	Topography and refractometry of nanostructures using spatial light interference microscopy. *Optics Letters*, **2010**, 35, 208-10	3	37
29	Frequency and polarization dependence of thermal coupling between carbon nanotubes and SiO2. *Journal of Applied Physics*, **2010**, 108, 103502	2.5	34
28	Theoretical analysis of high-field transport in graphene on a substrate. *Journal of Applied Physics*, **2014**, 116, 034507	2.5	33
27	Anisotropic charged impurity-limited carrier mobility in monolayer phosphorene. *Journal of Applied Physics*, **2014**, 116, 214505	2.5	26
26	Charged impurity scattering in top-gated graphene nanostructures. *Physical Review B*, **2012**, 86,	3.3	23
25	Theory of remote phonon scattering in top-gated single-layer graphene. *Physical Review B*, **2013**, 88,	3.3	19
24	Flexural resonance mechanism of thermal transport across graphene-SiO2 interfaces. *Journal of Applied Physics*, **2018**, 123, 115107	2.5	18
23	Thickness-dependent Kapitza resistance in multilayered graphene and other two-dimensional crystals. *Physical Review B*, **2017**, 95,	3.3	18
22	Signatures of dynamic screening in interfacial thermal transport of graphene. *Physical Review B*, **2013**, 87,	3.3	18
21	Transport and localization in a topological phononic lattice with correlated disorder. *Physical Review B*, **2016**, 94,	3.3	18
20	Energy dissipation in van der Waals 2D devices. *2D Materials*, **2019**, 6, 032005	5.9	13
19	Top oxide thickness dependence of remote phonon and charged impurity scattering in top-gated graphene. *Applied Physics Letters*, **2013**, 102, 183506	3.4	11
18	Tutorial: Concepts and numerical techniques for modeling individual phonon transmission at interfaces. *Journal of Applied Physics*, **2018**, 124, 151101	2.5	11
17	Atomistic S-matrix method for numerical simulation of phonon reflection, transmission, and boundary scattering. *Physical Review B*, **2018**, 98,	3.3	9

16	Enhancement and reduction of one-dimensional heat conduction with correlated mass disorder. *Physical Review B*, **2014**, 90,	3.3	8
15	Ballistic heat conduction and mass disorder in one dimension. *Journal of Physics Condensed Matter*, **2014**, 26, 335402	1.8	6
14	Structure-specific mode-resolved phonon coherence and specularity at graphene grain boundaries. *Physical Review B*, **2020**, 101,	3.3	4
13	Transistors: Realization of Room-Temperature Phonon-Limited Carrier Transport in Monolayer MoS2 by Dielectric and Carrier Screening (Adv. Mater. 3/2016). *Advanced Materials*, **2016**, 28, 546-546	24	4
12	Gate-tunable cross-plane heat dissipation in single-layer transition metal dichalcogenides. *Physical Review Research*, **2020**, 2,	3.9	3
11	Theoretical analysis of thermal boundary conductance of MoS-SiOand WS-SiOinterface. *Nanotechnology*, **2020**,	3.4	3
10	First-principles analysis of structural stability, electronic and phonon transport properties of lateral MoS2-WX2 heterostructures. *Computational Condensed Matter*, **2019**, 19, e00389	1.7	2
9	Electron transport and device physics in monolayer transition-metal dichalcogenides **2016**,		2
8	Energy-efficiency and thermal management in nanoscale devices **2012**,		2
7	Complementary local-global approach for phonon mode connectivities. *Journal of Physics Communications*, **2021**, 5, 015010	1.2	2
6	Atomic-scale study of scattering and electronic properties of CVD graphene grain boundaries **2012**,		1
5	Specular transmission and diffuse reflection in phonon scattering at grain boundary. *Europhysics Letters*, **2021**, 133, 66002	1.6	1
4	The role of flexural coupling in heat dissipation from a two-dimensional layered material to its hexagonal boron nitride substrate. *2D Materials*, **2021**, 8, 035032	5.9	0
3	Response to □omment on □heoretical analysis of high-field transport in graphene on a substrate□ [J. Appl. Phys. 116, 236101 (2014)]. *Journal of Applied Physics*, **2014**, 116, 236102	2.5	
2	Molecular Dynamics Simulation of Interfacial Thermal Resistance Between a (10,10) Carbon Nanotube and SiO2. *Materials Research Society Symposia Proceedings*, **2009**, 1172, 44		
1	Kinetic Monte Carlo Simulations of Effect of Grain Boundary Variability on Forming Times of RRAM Conductive Filaments. *Minerals, Metals and Materials Series*, **2020**, 1039-1045	0.3	