

Jonathan A Malen

List of Publications by Year in descending order

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83
papers

4,488
citations

136740

32
h-index

102304

66
g-index

84
all docs

84
docs citations

84
times ranked

5506
citing authors

#	ARTICLE	IF	CITATIONS
1	Reducing the uncertainty caused by the laser spot radius in frequency-domain thermoreflectance measurements of thermal properties. <i>Review of Scientific Instruments</i> , 2022, 93, 023001.	0.6	4
2	Nanocrystal Ordering Enhances Thermal Transport and Mechanics in Single-Domain Colloidal Nanocrystal Superlattices. <i>Nano Letters</i> , 2022, 22, 4669-4676.	4.5	6
3	Signatures of Coherent Phonon Transport in Ultralow Thermal Conductivity Two-Dimensional Ruddlesden-Popper Phase Perovskites. <i>ACS Nano</i> , 2021, 15, 4165-4172.	7.3	21
4	Thermally conductive ultra-low-k dielectric layers based on two-dimensional covalent organic frameworks. <i>Nature Materials</i> , 2021, 20, 1142-1148.	13.3	158
5	Universal Model for Predicting the Thermal Boundary Conductance of a Multilayered-Metal-Dielectric Interface. <i>Physical Review Applied</i> , 2021, 15, .	1.5	3
6	Observation of reduced thermal conductivity in a metal-organic framework due to the presence of adsorbates. <i>Nature Communications</i> , 2020, 11, 4010.	5.8	97
7	Fullerene rotational dynamics generate disordered configurations that suppress thermal conductivity in superatomic crystals. <i>Nanoscale Horizons</i> , 2020, 5, 1524-1529.	4.1	7
8	Assessing the impact of disjoining pressure on thin-film evaporation with atomistic simulation and kinetic theory. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	12
9	Enhancing Thermal Interface Conductance to Graphene Using Ni-Pd Alloy Contacts. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 34317-34322.	4.0	5
10	Doping-Induced Superconductivity in the van der Waals Superatomic Crystal $\text{Re}_6\text{Se}_8\text{Cl}_2$. <i>Nano Letters</i> , 2020, 20, 1718-1724.	4.5	28
11	Hot-spot thermal management by phase change materials enhanced by spatially graded metal meshes. <i>International Journal of Heat and Mass Transfer</i> , 2020, 150, 119153.	2.5	5
12	Reduction of thermal conductivity in ferroelectric SrTiO_3 thin films. <i>Physical Review Materials</i> , 2020, 4, .	1.1	0
13	Report on the Ninth U.S.-Japan Joint Seminar on Nanoscale Transport Phenomena. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2019, 23, 79-80.	1.4	0
14	Solution-Processable Superatomic Thin-Films. <i>Journal of the American Chemical Society</i> , 2019, 141, 10967-10971.	6.6	11
15	Ferroelectric Domain Walls in PbTiO_3 Are Effective Regulators of Heat Flow at Room Temperature. <i>Nano Letters</i> , 2019, 19, 7901-7907.	4.5	48
16	A multifunctional shape-morphing elastomer with liquid metal inclusions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 21438-21444.	3.3	203
17	Impact of metal adhesion layer diffusion on thermal interface conductance. <i>Physical Review B</i> , 2019, 99, .	1.1	6
18	Nondiffusive electron transport in metals: A two-temperature Boltzmann transport equation analysis of thermoreflectance experiments. <i>Physical Review B</i> , 2019, 99, .	1.1	1

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19	Chemical Reactions Impede Thermal Transport Across Metal/ In_2O_3 Interfaces. Nano Letters, 2019, 19, 8533-8538.	4.5	28
20	Thermal conductivity of metal powders for powder bed additive manufacturing. Additive Manufacturing, 2018, 21, 201-208.	1.7	91
21	Nanoscale thermal transport aspects of heat-assisted magnetic recording devices and materials. MRS Bulletin, 2018, 43, 112-118.	1.7	14
22	Thermal Analyses of a Human Kidney and a Rabbit Kidney During Cryopreservation by Vitrification. Journal of Biomechanical Engineering, 2018, 140, .	0.6	23
23	Spontaneous Electronic Band Formation and Switchable Behaviors in a Phase-Rich Superatomic Crystal. Journal of the American Chemical Society, 2018, 140, 15601-15605.	6.6	17
24	Regulating hot and cold. Nature Energy, 2018, 3, 826-827.	19.8	1
25	Effect of epitaxial strain and vacancies on the ferroelectric-like response of CaTiO_3 thin films. Applied Physics Letters, 2018, 113, .	1.5	9
26	Thermal Conductance of In_2O_3 /Metal Interfaces. , 2018, , .		3
27	THERMAL TRANSPORT BEHAVIORS IN LEAD HALIDE PEROVSKITES. , 2018, , .		1
28	High thermal conductivity in soft elastomers with elongated liquid metal inclusions. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2143-2148.	3.3	456
29	Cooperative Molecular Behavior Enhances the Thermal Conductance of Binary Self-Assembled Monolayer Junctions. Nano Letters, 2017, 17, 220-227.	4.5	36
30	Phonon-boundary scattering in nanoporous silicon films: Comparison of Monte Carlo techniques. Journal of Applied Physics, 2017, 122, .	1.1	38
31	Phonon Speed, Not Scattering, Differentiates Thermal Transport in Lead Halide Perovskites. Nano Letters, 2017, 17, 5734-5739.	4.5	94
32	Orientational order controls crystalline and amorphous thermal transport in superatomic crystals. Nature Materials, 2017, 16, 83-88.	13.3	94
33	Temperature Dependent Thermal Conductivity and Thermal Interface Resistance of Pentacene Thin Films with Varying Morphology. ACS Applied Materials & Interfaces, 2016, 8, 19168-19174.	4.0	14
34	Morse potential-based model for contacting composite rough surfaces: Application to self-assembled monolayer junctions. Journal of Applied Physics, 2016, 119, .	1.1	9
35	Nondiffusive heat dissipation from a pulse-heated conductive filament in RRAM. , 2016, , .		0
36	Enhancing thermal transport in nanocomposites by polymer-graft modification of particle fillers. Polymer, 2016, 93, 72-77.	1.8	20

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37	Thermal conductivity of the cryoprotective cocktail DP6 in cryogenic temperatures, in the presence and absence of synthetic ice modulators. <i>Cryobiology</i> , 2016, 73, 196-202.	0.3	13
38	Amplified charge and discharge rates in phase change materials for energy storage using spatially-enhanced thermal conductivity. <i>Applied Energy</i> , 2016, 181, 224-231.	5.1	20
39	Enhancement of Thermal Conductance at Metal-Dielectric Interfaces Using Subnanometer Metal Adhesion Layers. <i>Physical Review Applied</i> , 2016, 5, .	1.5	51
40	Thermal interface conductance across metal alloy–dielectric interfaces. <i>Physical Review B</i> , 2016, 93, .	1.1	20
41	Nondiffusive Thermal Transport Increases Temperature Rise in RRAM Filaments. <i>IEEE Electron Device Letters</i> , 2016, 37, 572-575.	2.2	8
42	Modifying the thermal conductivity of small molecule organic semiconductor thin films with metal nanoparticles. <i>Scientific Reports</i> , 2015, 5, 16095.	1.6	35
43	Interpretation of thermoreflectance measurements with a two-temperature model including non-surface heat deposition. <i>Journal of Applied Physics</i> , 2015, 118, .	1.1	18
44	Large Thermal Conductivity Differences between the Crystalline and Vitrified States of DMSO with Applications to Cryopreservation. <i>PLoS ONE</i> , 2015, 10, e0125862.	1.1	27
45	Vibrational Mismatch of Metal Leads Controls Thermal Conductance of Self-Assembled Monolayer Junctions. <i>Nano Letters</i> , 2015, 15, 2985-2991.	4.5	104
46	Microsecond-sustained lasing from colloidal quantum dot solids. <i>Nature Communications</i> , 2015, 6, 8694.	5.8	109
47	Advances in Studying Phonon Mean Free Path Dependent Contributions to Thermal Conductivity. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2015, 19, 183-205.	1.4	56
48	Analytical interpretation of nondiffusive phonon transport in thermoreflectance thermal conductivity measurements. <i>Physical Review B</i> , 2014, 90, .	1.1	44
49	Coupling of Organic and Inorganic Vibrational States and Their Thermal Transport in Nanocrystal Arrays. <i>Journal of Physical Chemistry C</i> , 2014, 118, 7288-7295.	1.5	68
50	Instrumentation of broadband frequency domain thermoreflectance for measuring thermal conductivity accumulation functions. <i>Review of Scientific Instruments</i> , 2013, 84, 064901.	0.6	70
51	Periodic heating amplifies the efficiency of thermoelectric energy conversion. <i>Energy and Environmental Science</i> , 2013, 6, 1267.	15.6	58
52	Bi ₂ Sb Alloy Nanocrystals: Colloidal Synthesis, Charge Transport, and Thermoelectric Properties. <i>ACS Nano</i> , 2013, 7, 10296-10306.	7.3	36
53	Tunable Electrical and Thermal Transport in Ice-Templated Multilayer Graphene Nanocomposites through Freezing Rate Control. <i>ACS Nano</i> , 2013, 7, 11183-11189.	7.3	65
54	Universal phonon mean free path spectra in crystalline semiconductors at high temperature. <i>Scientific Reports</i> , 2013, 3, 2963.	1.6	125

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55	Surface chemistry mediates thermal transport in three-dimensional nanocrystal arrays. Nature Materials, 2013, 12, 410-415.	13.3	218
56	Broadband phonon mean free path contributions to thermal conductivity measured using frequency domain thermorelectance. Nature Communications, 2013, 4, 1640.	5.8	479
57	The impact of film thickness and substrate surface roughness on the thermal resistance of aluminum nitride nucleation layers. Journal of Applied Physics, 2013, 113, .	1.1	30
58	Experimental estimates of in-plane thermal conductivity in FePt-C granular thin film heat assisted magnetic recording media using a model layered system. Applied Physics Letters, 2013, 103, .	1.5	13
59	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.	1.4	1
60	Heat Dissipation in GaN Based Power Electronics. ECS Transactions, 2013, 58, 343-349.	0.3	3
61	Dependence of Thermal Conductivities of the AlN Film in the LED Architecture on Surface Roughness and Lattice Mismatch. , 2013, , .		1
62	A New Device and Technique for Thermal Conductivity Measurements of Glass-Forming Materials With Application to Cryopreservation. , 2013, , .		0
63	Compositionally matched nitrogen-doped Ge ₂ Sb ₂ Te ₅ /Ge ₂ Sb ₂ Te ₅ superlattice-like structures for phase change random access memory. Applied Physics Letters, 2013, 103, 133507.	1.5	10
64	Layer-by-layer thermal conductivities of the Group III nitride films in blue/green light emitting diodes. Applied Physics Letters, 2012, 100, .	1.5	43
65	Thermal Conductivity of Carbon Nanotube Aerogels With Different Filling Gases. , 2012, , .		0
66	Temperature Dependent Thermal Properties in LEDs for Solid State Lighting. , 2012, , .		1
67	Gas Diffusion, Energy Transport, and Thermal Accommodation in Singleâ€“Walled Carbon Nanotube Aerogels. Advanced Functional Materials, 2012, 22, 5251-5258.	7.8	95
68	A Modified 3-Omega Technique to Measure Thermal Conductivity in Liquids, Gases, and Powders. , 2011, , .		0
69	Thermal conductivity measurements of nitrogen-doped Ge ₂ Sb ₂ Te ₅ . , 2011, , .		0
70	Optical Measurement of Thermal Conductivity Using Fiber Aligned Frequency Domain Thermorelectance. Journal of Heat Transfer, 2011, 133, .	1.2	101
71	Thermoelectricity in Fullereneâ€“Metal Heterojunctions. Nano Letters, 2011, 11, 4089-4094.	4.5	163
72	Improved 3-omega measurement of thermal conductivity in liquid, gases, and powders using a metal-coated optical fiber. Review of Scientific Instruments, 2011, 82, 064903.	0.6	31

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73	Thermal Transport in LEDs for Solid State Lighting. , 2011, , .		0
74	Fundamentals of energy transport, energy conversion, and thermal properties in organicâ€“inorganic heterojunctions. Chemical Physics Letters, 2010, 491, 109-122.	1.2	151
75	Thermoelectricity at the Organic-Inorganic Interface. , 2010, , .		1
76	Hydride fuel for LWRsâ€™Project overview. Nuclear Engineering and Design, 2009, 239, 1374-1405.	0.8	25
77	Thermal hydraulic analysis for grid supported pressurized water reactor cores. Nuclear Engineering and Design, 2009, 239, 1442-1460.	0.8	16
78	Economic analysis of grid and wire wrap supported hydride and oxide fueled pressurized water reactors. Nuclear Engineering and Design, 2009, 239, 1505-1530.	0.8	12
79	Thermal hydraulic design of a hydride-fueled inverted PWR core. Nuclear Engineering and Design, 2009, 239, 1471-1480.	0.8	6
80	Identifying the Length Dependence of Orbital Alignment and Contact Coupling in Molecular Heterojunctions. Nano Letters, 2009, 9, 1164-1169.	4.5	207
81	The Nature of Transport Variations in Molecular Heterojunction Electronics. Nano Letters, 2009, 9, 3406-3412.	4.5	97
82	Probing the Chemistry of Molecular Heterojunctions Using Thermoelectricity. Nano Letters, 2008, 8, 715-719.	4.5	250
83	Methanol Steam Reformer on a Silicon Wafer. Journal of Microelectromechanical Systems, 2006, 15, 976-985.	1.7	34