

Asegun Henry

List of Publications by Year in descending order

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51
papers

3,477
citations

185998

28
h-index

197535

49
g-index

52
all docs

52
docs citations

52
times ranked

3382
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermal energy grid storage: Liquid containment and pumping above 2000°C. Applied Energy, 2022, 308, 118081.	5.1	6
2	Validation of the Porous Medium Approximation for Hydrodynamics Analysis in Compact Heat Exchangers. Journal of Fluids Engineering, Transactions of the ASME, 2022, 144, .	0.8	3
3	Thermophotovoltaic efficiency of 40%. Nature, 2022, 604, 287-291.	13.7	108
4	Ultrahigh temperature sensible heat storage and heat transfer fluids. , 2021, , 57-84.		2
5	Enhancement of ion diffusion by targeted phonon excitation. Cell Reports Physical Science, 2021, 2, 100431.	2.8	15
6	High-temperature Pumping of Silicon for Thermal Energy Grid Storage. Energy, 2021, 233, 121105.	4.5	3
7	Machine learned interatomic potentials for modeling interfacial heat transport in Ge/GaAs. Computational Materials Science, 2021, 200, 110836.	1.4	7
8	A deep neural network interatomic potential for studying thermal conductivity of Ga ₂ O ₃ . Applied Physics Letters, 2020, 117, .	1.5	43
9	Inverted metamorphic AlGaInAs/GaInAs tandem thermophotovoltaic cell designed for thermal energy grid storage application. Journal of Applied Physics, 2020, 128, .	1.1	10
10	Five thermal energy grand challenges for decarbonization. Nature Energy, 2020, 5, 635-637.	19.8	137
11	Fast & accurate interatomic potentials for describing thermal vibrations. Computational Materials Science, 2020, 184, 109884.	1.4	7
12	Effect of light atoms on thermal transport across solid–solid interfaces. Physical Chemistry Chemical Physics, 2019, 21, 17029-17035.	1.3	17
13	Thermal energy grid storage using multi-junction photovoltaics. Energy and Environmental Science, 2019, 12, 334-343.	15.6	93
14	Interface conductance modal analysis of a crystalline Si-amorphous SiO ₂ interface. Journal of Applied Physics, 2019, 125, .	1.1	11
15	Using Green-Kubo modal analysis (GKMA) and interface conductance modal analysis (ICMA) to study phonon transport with molecular dynamics. Journal of Applied Physics, 2019, 125, .	1.1	21
16	Thermal Transport in Disordered Materials. Nanoscale and Microscale Thermophysical Engineering, 2019, 23, 81-116.	1.4	66
17	Estimating the cost of high temperature liquid metal based concentrated solar power. Journal of Renewable and Sustainable Energy, 2018, 10, .	0.8	16
18	The Importance of Phonons with Negative Phase Quotient in Disordered Solids. Scientific Reports, 2018, 8, 2627.	1.6	6

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19	Thermal Boundary Conductance Across Heteroepitaxial ZnO/GaN Interfaces: Assessment of the Phonon Gas Model. Nano Letters, 2018, 18, 7469-7477.	4.5	53
20	Interfacial Defect Vibrations Enhance Thermal Transport in Amorphous Multilayers with Ultrahigh Thermal Boundary Conductance. Advanced Materials, 2018, 30, e1804097.	11.1	55
21	Phonon transport at interfaces between different phases of silicon and germanium. Journal of Applied Physics, 2017, 121, .	1.1	55
22	Empirical interatomic potentials optimized for phonon properties. Npj Computational Materials, 2017, 3, .	3.5	36
23	Understanding Divergent Thermal Conductivity in Single Polythiophene Chains Using Greenâ€™Kubo Modal Analysis and Sonification. Journal of Physical Chemistry A, 2017, 121, 5586-5596.	1.1	13
24	Rethinking phonons: The issue of disorder. Npj Computational Materials, 2017, 3, .	3.5	66
25	Phonon optimized interatomic potential for aluminum. AIP Advances, 2017, 7, 125022.	0.6	4
26	Thermophotovoltaics: a potential pathway to high efficiency concentrated solar power. Energy and Environmental Science, 2016, 9, 2654-2665.	15.6	60
27	Interface conductance modal analysis of lattice matched InGaAs/InP. Applied Physics Letters, 2016, 108, .	1.5	12
28	A method for distinguishing between propagons, diffusions, and locons. Journal of Applied Physics, 2016, 120, .	1.1	77
29	Examining the Validity of the Phonon Gas Model in Amorphous Materials. Scientific Reports, 2016, 6, 37675.	1.6	48
30	Phonon Transport at Crystalline Si/Ge Interfaces: The Role of Interfacial Modes of Vibration. Scientific Reports, 2016, 6, 23139.	1.6	83
31	Phonon transport at interfaces: Determining the correct modes of vibration. Journal of Applied Physics, 2016, 119, .	1.1	59
32	Phonon transport in amorphous carbon using Greenâ€™Kubo modal analysis. Applied Physics Letters, 2016, 108, .	1.5	28
33	Non-negligible Contributions to Thermal Conductivity From Localized Modes in Amorphous Silicon Dioxide. Scientific Reports, 2016, 6, 35720.	1.6	52
34	Direct calculation of modal contributions to thermal conductivity via Greenâ€™Kubo modal analysis. New Journal of Physics, 2016, 18, 013028.	1.2	112
35	Examining the Effects of Stiffness and Mass Difference on the Thermal Interface Conductance Between Lennard-Jones Solids. Scientific Reports, 2016, 5, 18361.	1.6	24
36	Nanoscale optomechanical actuators for controlling mechanotransduction in living cells. Nature Methods, 2016, 13, 143-146.	9.0	113

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37	Calculation of Modal Contributions to Heat Transfer across Si/Ge Interfaces. Materials Research Society Symposia Proceedings, 2015, 1779, 21-26.	0.1	1
38	A formalism for calculating the modal contributions to thermal interface conductance. New Journal of Physics, 2015, 17, 103002.	1.2	62
39	Ensemble averaging vs. time averaging in molecular dynamics simulations of thermal conductivity. Journal of Applied Physics, 2015, 117, .	1.1	19
40	A new solar fuels reactor concept based on a liquid metal heat transfer fluid: Reactor design and efficiency estimation. Solar Energy, 2015, 122, 547-561.	2.9	23
41	High thermal conductivity of chain-oriented amorphous polythiophene. Nature Nanotechnology, 2014, 9, 384-390.	15.6	327
42	The prospect of high temperature solid state energy conversion to reduce the cost of concentrated solar power. Energy and Environmental Science, 2014, 7, 1819-1828.	15.6	39
43	THERMAL TRANSPORT IN POLYMERS. Annual Review of Heat Transfer, 2014, 17, 485-520.	0.3	100
44	Molecular dynamics simulation of thermal energy transport in polydimethylsiloxane. Journal of Applied Physics, 2011, 109, .	1.1	87
45	Polyethylene nanofibres with very high thermal conductivities. Nature Nanotechnology, 2010, 5, 251-255.	15.6	718
46	1D-to-3D transition of phonon heat conduction in polyethylene using molecular dynamics simulations. Physical Review B, 2010, 82, .	1.1	101
47	Anomalous heat conduction in polyethylene chains: Theory and molecular dynamics simulations. Physical Review B, 2009, 79, .	1.1	124
48	Explicit Treatment of Hydrogen Atoms in Thermal Simulations of Polyethylene. Nanoscale and Microscale Thermophysical Engineering, 2009, 13, 99-108.	1.4	13
49	High Thermal Conductivity of Single Polyethylene Chains Using Molecular Dynamics Simulations. Physical Review Letters, 2008, 101, 235502.	2.9	337
50	Thermoelectric Energy Conversion in Nanostructures. , 2006, , .		1
51	A Computational Framework for Modelling and Simulating Vibrational Mode Dynamics. Modelling and Simulation in Materials Science and Engineering, 0, , .	0.8	3