Kedar Hippalgaonkar

List of Publications by Year
in descending order

72 papers	4,432 citations	94433 37 h-index	106344 65 g-index
75 all docs	75 docs citations	75 times ranked	6513 citing authors

#	Article	IF	Citations
1	Accelerated automated screening of viscous graphene suspensions with various surfactants for optimal electrical conductivity. , 2022, 1, 139-146.		5
2	An invertible crystallographic representation for general inverse design of inorganic crystals with targeted properties. Matter, 2022, 5, 314-335.	10.0	59
3	All-weather thermal regulation coatings. Joule, 2022, 6, 286-288.	24.0	5
4	Modulation of Spin Dynamics in 2D Transitionâ€Metal Dichalcogenide via Strainâ€Driven Symmetry Breaking. Advanced Science, 2022, , 2200816.	11.2	4
5	Defect Passivation Using a Phosphonic Acid Surface Modifier for Efficient RP Perovskite Blue-Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2022, 14, 34238-34246.	8.0	15
6	Improving carrier mobility in two-dimensional semiconductors with rippled materials. Nature Electronics, 2022, 5, 489-496.	26.0	52
7	Efficacious symmetry-adapted atomic displacement method for lattice dynamical studies. Computer Physics Communications, 2021, 259, 107635.	7.5	3
8	Gateâ€Tunable Polar Optical Phonon to Piezoelectric Scattering in Fewâ€Layer Bi₂O₂Se for Highâ€Performance Thermoelectrics. Advanced Materials, 2021, 33, e2004786.	21.0	48
9	Thermoelectric Materials: Gateâ€Tunable Polar Optical Phonon to Piezoelectric Scattering in Fewâ€Layer Bi₂O₂Se for Highâ€Performance Thermoelectrics (Adv. Mater. 4/2021). Advanced Materials, 2021, 33, 2170023.	21.0	1
10	Electronic transport descriptors for the rapid screening of thermoelectric materials. Materials Horizons, 2021, 8, 2463-2474.	12.2	16
11	Metastable 1Tâ€²-phase group VIB transition metal dichalcogenide crystals. Nature Materials, 2021, 20, 1113-1120.	27.5	119
12	Two-step machine learning enables optimized nanoparticle synthesis. Npj Computational Materials, 2021, 7, .	8.7	86
13	Multiâ€Fidelity Highâ€Throughput Optimization of Electrical Conductivity in P3HTâ€CNT Composites. Advanced Functional Materials, 2021, 31, 2102606.	14.9	20
14	High thermoelectric performance enabled by convergence of nested conduction bands in Pb7Bi4Se13 with low thermal conductivity. Nature Communications, 2021, 12, 4793.	12.8	53
15	Extrapolative Bayesian Optimization with Gaussian Process and Neural Network Ensemble Surrogate Models. Advanced Intelligent Systems, 2021, 3, 2100101.	6.1	23
16	Organic materials as photocatalysts for water splitting. Journal of Materials Chemistry A, 2021, 9, 16222-16232.	10.3	50
17	High Thermoelectric Performance through Crystal Symmetry Enhancement in Triply Doped Diamondoid Compound Cu₂SnSe₃. Advanced Energy Materials, 2021, 11, 2100661.	19.5	39
18	Extrapolative Bayesian Optimization with Gaussian Process and Neural Network Ensemble Surrogate Models. Advanced Intelligent Systems, 2021, 3, .	6.1	2

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19	Benchmarking the performance of Bayesian optimization across multiple experimental materials science domains. Npj Computational Materials, 2021, 7, .	8.7	62
20	Lowâ€Symmetry PdSe₂ for High Performance Thermoelectric Applications. Advanced Functional Materials, 2020, 30, 2004896.	14.9	49
21	Direct measurement of the thermoelectric properties of electrochemically deposited Bi2Te3 thin films. Scientific Reports, 2020, 10, 17922.	3.3	15
22	Dual-mode solid-state thermal rectification. Nature Communications, 2020, 11, 4346.	12.8	37
23	Thermal Conductive 2D Boron Nitride for Highâ€Performance Allâ€Solidâ€State Lithiumâ€“Sulfur Batteries. Advanced Science, 2020, 7, 2001303.	11.2	46
24	Fieldâ€Effect Transistors: Lowâ€Symmetry PdSe₂ for High Performance Thermoelectric Applications (Adv. Funct. Mater. 52/2020). Advanced Functional Materials, 2020, 30, 2070347.	14.9	3
25	Large enhancement of thermoelectric performance in MoS ₂ / <i>h</i> -BN heterostructure due to vacancy-induced band hybridization. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 13929-13936.	7.1	34
26	Machine learning-assisted cross-domain prediction of ionic conductivity in sodium and lithium-based superionic conductors using facile descriptors. Journal of Physics Communications, 2020, 4, 055015.	1.2	16
27	Thermoelectric Properties of Substoichiometric Electron Beam Patterned Bismuth Sulfide. ACS Applied Materials & Interfaces, 2020, 12, 33647-33655.	8.0	17
28	Toward Accelerated Thermoelectric Materials and Process Discovery. ACS Applied Energy Materials, 2020, 3, 2240-2257.	5.1	75
29	Origin of High Thermoelectric Performance in Earth-Abundant Phosphideâ€“Tetrahedrite. ACS Applied Materials & Interfaces, 2020, 12, 9150-9157.	8.0	35
30	Correlating charge and thermoelectric transport to paracrystallinity in conducting polymers. Nature Communications, 2020, 11, 1737.	12.8	45
31	EPIC STAR: a reliable and efficient approach for phonon- and impurity-limited charge transport calculations. Npj Computational Materials, 2020, 6, .	8.7	31
32	High Performance Field Effect Transistor based on Large-sized Highly Crystalline MoS2 Single Crystal. , 2019, , .		1
33	Inertial effective mass as an effective descriptor for thermoelectrics <i>via</i> data-driven evaluation. Journal of Materials Chemistry A, 2019, 7, 23762-23769.	10.3	58
34	Unprecedented Enhancement of Thermoelectric Power Factor Induced by Pressure in Smallâ€Molecule Organic Semiconductors. Advanced Materials, 2019, 31, e1901956.	21.0	30
35	New horizons in thermoelectric materials: Correlated electrons, organic transport, machine learning, and more. Journal of Applied Physics, 2019, 125, .	2.5	50
36	Effects Of Structural Phase Transition On Thermoelectric Performance in Lithium-Intercalated Molybdenum Disulfide (Li_{<i>x</i>}MoS₂). ACS Applied Materials & Interfaces, 2019, 11, 12184-12189.	8.0	31

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37	Employing a Bifunctional Molybdate Precursor To Grow the Highly Crystalline MoS₂ for High-Performance Field-Effect Transistors. ACS Applied Materials & Interfaces, 2019, 11, 14239-14248.	8.0	10
38	2D Singleâ€Layer Ï€â€Conjugated Nickel Bis(dithiolene) Complex: A Goodâ€Electronâ€Poorâ€Phonon Thermoelectric Material. Advanced Electronic Materials, 2019, 5, 1800892.	5.1	21
39	High-contrast and reversible polymer thermal regulator by structural phase transition. Science Advances, 2019, 5, eaax3777.	10.3	41
40	Crystalline polymer nanofibers with ultra-high strength and thermal conductivity. Nature Communications, 2018, 9, 1664.	12.8	97
41	nâ€Type SnSe₂ Orientedâ€Nanoplateâ€Based Pellets for High Thermoelectric Performance. Advanced Energy Materials, 2018, 8, 1702167.	19.5	103
42	Polymer morphology and interfacial charge transfer dominate over energy-dependent scattering in organic-inorganic thermoelectrics. Nature Communications, 2018, 9, 5347.	12.8	58
43	Poly(nickel-ethylenetetrathiolate) and Its Analogs: Theoretical Prediction of High-Performance Doping-Free Thermoelectric Polymers. Journal of the American Chemical Society, 2018, 140, 13200-13204.	13.7	39
44	Probing the Physical Origin of Anisotropic Thermal Transport in Black Phosphorus Nanoribbons. Advanced Materials, 2018, 30, e1804928.	21.0	50
45	Fullâ€Parameter Omnidirectional Thermal Metadevices of Anisotropic Geometry. Advanced Materials, 2018, 30, e1804019.	21.0	87
46	Perspectives on Thermoelectricity in Layered and 2D Materials. Advanced Electronic Materials, 2018, 4, 1800248.	5.1	77
47	Accelerating Materials Development via Automation, Machine Learning, and High-Performance Computing. Joule, 2018, 2, 1410-1420.	24.0	210
48	Enhanced Thermoelectric Performance of PEDOT:PSS Films by Sequential Postâ€Treatment with Formamide. Macromolecular Materials and Engineering, 2018, 303, 1700429.	3.6	69
49	Anomalously low electronic thermal conductivity in metallic vanadium dioxide. Science, 2017, 355, 371-374.	12.6	307
50	Thermal Conductance of the 2D MoS2/h-BN and graphene/h-BN Interfaces. Scientific Reports, 2017, 7, 43886.	3.3	79
51	High thermoelectric power factor in two-dimensional crystals of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2017, 95, .	3.2	201
52	2D Black Phosphorus for Energy Storage and Thermoelectric Applications. Small, 2017, 13, 1700661.	10.0	139
53	Minimizing Isolate Catalyst Motion in Metal-Assisted Chemical Etching for Deep Trenching of Silicon Nanohole Array. ACS Applied Materials & Interfaces, 2017, 9, 20981-20990.	8.0	33
54	Effect of dimensionality on thermoelectric powerfactor of molybdenum disulfide. Journal of Applied Physics, 2017, 121, .	2.5	17

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55	Ultralow Thermal Conductivity of Singleâ€Crystalline Porous Silicon Nanowires. Advanced Functional Materials, 2017, 27, 1702824.	14.9	47
56	Experimental Studies of Thermal Transport in Nanostructures. , 2017, , 319-357.		2
57	Designing hybrid architectures for advanced thermoelectric materials. Materials Chemistry Frontiers, 2017, 1, 2457-2473.	5.9	34
58	Tunable thermal conductivity in mesoporous silicon by slight porosity change. Applied Physics Letters, 2017, 111, .	3.3	8
59	Multifunctional 0Dâ€"2D Ni₂P Nanocrystalsâ€"Black Phosphorus Heterostructure. Advanced Energy Materials, 2017, 7, 1601285.	19.5	149
60	Lithography-free resistance thermometry based technique to accurately measure Seebeck coefficient and electrical conductivity for organic and inorganic thin films. Review of Scientific Instruments, 2017, 88, 125112.	1.3	7
61	Tunable Thermal Transport in Polysilsesquioxane (PSQ) Hybrid Crystals. Scientific Reports, 2016, 6, 21452.	3.3	3
62	Second-Harmonic Generation from Sub-5 nm Gaps by Directed Self-Assembly of Nanoparticles onto Template-Stripped Gold Substrates. Nano Letters, 2015, 15, 5976-5981.	9.1	86
63	Anisotropic in-plane thermal conductivity of black phosphorus nanoribbons at temperatures higher than 100â€‰K. Nature Communications, 2015, 6, 8573.	12.8	311
64	Temperature-Gated Thermal Rectifier for Active Heat Flow Control. Nano Letters, 2014, 14, 4867-4872.	9.1	126
65	Axially Engineered Metalâ€"Insulator Phase Transition by Graded Doping VO₂ Nanowires. Journal of the American Chemical Society, 2013, 135, 4850-4855.	13.7	96
66	Quantifying Surface Roughness Effects on Phonon Transport in Silicon Nanowires. Nano Letters, 2012, 12, 2475-2482.	9.1	285
67	Large Thermoelectric Figure-of-Merits from SiGe Nanowires by Simultaneously Measuring Electrical and Thermal Transport Properties. Nano Letters, 2012, 12, 2918-2923.	9.1	181
68	Observation of Anisotropy in Thermal Conductivity of Individual Single-Crystalline Bismuth Nanowires. ACS Nano, 2011, 5, 3954-3960.	14.6	68
69	Thermal conductivity reduction in an individual single crystalline Bi nanowire by size effect. , 2010, , .		2
70	Fabrication of Microdevices with Integrated Nanowires for Investigating Low-Dimensional Phonon Transport. Nano Letters, 2010, 10, 4341-4348.	9.1	148
71	Room temperature observation of point defect on gold surface using thermovoltage mapping. Microelectronics Reliability, 2007, 47, 1580-1584.	1.7	0
72	An Invertible Crystallographic Representation for General Inverse Design of Inorganic Crystals with Targeted Properties. SSRN Electronic Journal, 0, , .	0.4	1