Hui-Xiong Deng

List of Publications by Year
in descending order

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33 papers	1,720 citations	394286 19 h-index	395590 33 g-index
35 all docs	35 docs citations	35 times ranked	2254 citing authors

#	Article	IF	Citations
1	Donorâ€“Acceptor Pair Quantum Emitters in Hexagonal Boron Nitride. Nano Letters, 2022, 22, 1331-1337.	4.5	17
2	Clarification of the relative magnitude of exciton binding energies in ZnO and SnO2. Applied Physics Letters, 2022, 120, .	1.5	8
3	Band offset trends in IVâ€“VI layered semiconductor heterojunctions. Journal of Physics Condensed Matter, 2022, 34, 195003.	0.7	3
4	Origin of the discrepancy between the fundamental and optical gaps and native defects in two dimensional ultra-wide bandgap semiconductor: Gallium thiophosphate. Applied Physics Letters, 2022, 120, 172108.	1.5	1
5	Large lattice-relaxation-induced intrinsic shallow p-type characteristics in monolayer black phosphorus and black arsenic. Applied Physics Letters, 2021, 118, .	1.5	6
6	Quantum engineering of non-equilibrium efficient p-doping in ultra-wide band-gap nitrides. Light: Science and Applications, 2021, 10, 69.	7.7	42
7	Decoupling of the Electrical and Thermal Transports in Strongly Coupled Interlayer Materials. Journal of Physical Chemistry Letters, 2021, 12, 7832-7839.	2.1	8
8	Electronic structures and band alignment transition in double-wall MoS₂/WS₂ nanotubes for optoelectronic applications. Journal Physics D: Applied Physics, 2021, 54, 095105.	1.3	2
9	Manipulation of crystalline structure, magnetic performance, and topological feature in Mn3Ge films. APL Materials, 2021, 9, .	2.2	4
10	Quasiparticle Band Structure and Optical Properties of the Janus Monolayer and Bilayer SnSSe. Journal of Physical Chemistry C, 2020, 124, 23832-23838.	1.5	23
11	Large cation ethylammonium incorporated perovskite for efficient and spectra stable blue light-emitting diodes. Nature Communications, 2020, 11, 4165.	5.8	217
12	Deep insights into interface engineering by buffer layer for efficient perovskite solar cells: a first-principles study. Science China Materials, 2020, 63, 1588-1596.	3.5	10
13	Reviewing and understanding the stability mechanism of halide perovskite solar cells. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 1034-1056.	8.5	55
14	Orbital localization induced magnetization in nonmetal-doped phosphorene. Journal Physics D: Applied Physics, 2020, 53, 155001.	1.3	4
15	Recent Advances of 2D Materials in Nonlinear Photonics and Fiber Lasers. Advanced Optical Materials, 2020, 8, 1901631.	3.6	122
16	Polarizationâ€Sensitive Photodetectors: Symmetryâ€Reduction Enhanced Polarizationâ€Sensitive Photodetection in Coreâ€“Shell SbI₃/Sb₂O₃ van der Waals Heterostructure (Small 7/2020). Small, 2020, 16, 2070036.	5.2	1
17	Ultrafast photonics of two dimensional AuTe2Se4/3 in fiber lasers. Communications Physics, 2020, 3, .	2.0	93
18	Symmetryâ€Reduction Enhanced Polarizationâ€Sensitive Photodetection in Coreâ€“Shell SbI₃/Sb₂O₃ van der Waals Heterostructure. Small, 2020, 16, e1907172.	5.2	32

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19	Realistic dimension-independent approach for charged-defect calculations in semiconductors. Physical Review B, 2020, 101, .	1.1	30
20	Mixedâ€Valenceâ€Driven Quasiâ€1D Sn^{II}Sn^{IV}S₃ with Highly Polarizationâ€Sensitive UVâ€“visâ€“NIR Photoresponse. Advanced Functional Materials, 2019, 29, 1904416.	7.8	39
21	Machine learning in materials science. InformaÄnÃ-MateriÃ¡ly, 2019, 1, 338-358.	8.5	427
22	Thickness-Dependent Ultrafast Photonics of SnS₂ Nanolayers for Optimizing Fiber Lasers. ACS Applied Nano Materials, 2019, 2, 2697-2705.	2.4	48
23	Abnormal diffusion behaviors of Cu atoms in van der Waals layered material MoS₂. Journal of Materials Chemistry C, 2019, 7, 6052-6058.	2.7	18
24	A systematic study of the negative thermal expansion in zinc-blende and diamond-like semiconductors. New Journal of Physics, 2019, 21, 123015.	1.2	10
25	Electronic structure and exciton shifts in Sb-doped MoS2 monolayer. Npj 2D Materials and Applications, 2019, 3, .	3.9	82
26	Tuning transport performance in two-dimensional metal-organic framework semiconductors: Role of the metal d band. Applied Physics Letters, 2018, 112, .	1.5	53
27	Unified theory of direct or indirect band-gap nature of conventional semiconductors. Physical Review B, 2018, 98, .	1.1	60
28	Field-Effect Transistors: Thickness-Dependent Carrier Transport Characteristics of a New 2D Elemental Semiconductor: Black Arsenic (Adv. Funct. Mater. 43/2018). Advanced Functional Materials, 2018, 28, 1870312.	7.8	2
29	Metal and ligand effects on the stability and electronic properties of crystalline two-dimensional metal-benzenehexathiolate coordination compounds. Journal of Physics Condensed Matter, 2018, 30, 465301.	0.7	20
30	Thicknessâ€Dependent Carrier Transport Characteristics of a New 2D Elemental Semiconductor: Black Arsenic. Advanced Functional Materials, 2018, 28, 1802581.	7.8	125
31	Tunable electronic and optical properties of InSe/InTe van der Waals heterostructures toward optoelectronic applications. Journal of Materials Chemistry C, 2018, 6, 7201-7206.	2.7	87
32	Origin of the Distinct Diffusion Behaviors of Cu and Ag in Covalent and Ionic Semiconductors. Physical Review Letters, 2016, 117, 165901.	2.9	25
33	Exceptional Optoelectronic Properties of Hydrogenated Bilayer Silicene. Physical Review X, 2014, 4, .	2.8	35