Xue-Peng Wang

List of Publications by Year
in descending order

35 papers	920 citations	471509 17 h-index	454955 30 g-index
35 all docs	35 docs citations	35 times ranked	884 citing authors

#	Article	IF	Citations
1	Continuous transition from double-layer to Faradaic charge storage in confined electrolytes. Nature Energy, 2022, 7, 222-228.	39.5	130
2	Phaseâ€Change Superlattice Materials toward Low Power Consumption and High Density Data Storage: Microscopic Picture, Working Principles, and Optimization. Advanced Functional Materials, 2018, 28, 1803380.	14.9	119
3	Highly Efficient Three Primary Color Organic Singleâ€Crystal Lightâ€Emitting Devices with Balanced Carrier Injection and Transport. Advanced Functional Materials, 2017, 27, 1604659.	14.9	69
4	Clarification of the Molecular Doping Mechanism in Organic Singleâ€Crystalline Semiconductors and their Application in Colorâ€Tunable Lightâ€Emitting Devices. Advanced Materials, 2018, 30, e1801078.	21.0	53
5	Electric field analyses on monolayer semiconductors: the example of InSe. Physical Chemistry Chemical Physics, 2018, 20, 6945-6950.	2.8	46
6	Highâ€Throughput Screening for Phaseâ€Change Memory Materials. Advanced Functional Materials, 2021, 31, 2009803.	14.9	43
7	Origin of high thermal stability of amorphous Ge1Cu2Te3 alloy: A significant Cu-bonding reconfiguration modulated by Te lone-pair electrons for crystallization. Acta Materialia, 2015, 90, 88-93.	7.9	42
8	Vacancy Structures and Melting Behavior in Rock-Salt GeSbTe. Scientific Reports, 2016, 6, 25453.	3.3	42
9	Highâ€Colorâ€Rendering and Highâ€Efficiency White Organic Lightâ€Emitting Devices Based on Doubleâ€Doped Organic Single Crystals. Advanced Functional Materials, 2019, 29, 1807606.	14.9	42
10	Directional Forces by Momentumless Excitation and Order-to-Order Transition in Peierls-Distorted Solids: The Case of GeTe. Physical Review Letters, 2018, 120, 185701.	7.8	38
11	Time-dependent density-functional theory molecular-dynamics study on amorphization of Sc-Sb-Te alloy under optical excitation. Npj Computational Materials, 2020, 6, .	8.7	32
12	Metalâ€“Insulator Transition of Geâ€“Sbâ€“Te Superlattice: An Electron Counting Model Study. IEEE Nanotechnology Magazine, 2018, 17, 140-146.	2.0	31
13	Element-specific amorphization of vacancy-ordered GeSbTe for ternary-state phase change memory. Acta Materialia, 2017, 136, 242-248.	7.9	30
14	Black Silicon IR Photodiode Supersaturated With Nitrogen by Femtosecond Laser Irradiation. IEEE Sensors Journal, 2018, 18, 3595-3601.	4.7	25
15	Phaseâ€Changeâ€Memory Process at the Limit: A Proposal for Utilizing Monolayer Sb₂Te₃. Advanced Science, 2021, 8, 2004185.	11.2	25
16	Role of the nano amorphous interface in the crystallization of Sb2Te3 towards non-volatile phase change memory: insights from first principles. Physical Chemistry Chemical Physics, 2014, 16, 10810.	2.8	24
17	Strong electron-polarized atom chain in amorphous phase-change memory Ge Sb Te alloy. Acta Materialia, 2018, 143, 102-106.	7.9	24
18	Demystifying the Stern layer at a metalâ€“electrolyte interface: Local dielectric constant, specific ion adsorption, and partial charge transfer. Journal of Chemical Physics, 2021, 154, 124701.	3.0	15

#	Article	IF	Citations
19	Mexican-hat potential energy surface in two-dimensional III2-VI3 materials and the importance of entropy barrier in ultrafast reversible ferroelectric phase change. Applied Physics Reviews, 2021, 8, .	11.3	13
20	Investigating the dynamics of excitons in monolayer WSe₂ before and after organic super acid treatment. Nanoscale, 2018, 10, 9346-9352.	5.6	12
21	Theoretical Insights into MXene Termination and Surface Charge Regulation. Journal of Physical Chemistry C, 2021, 125, 21771-21779.	3.1	10
22	Optical subpicosecond nonvolatile switching and electron-phonon coupling in ferroelectric materials. Physical Review B, 2020, 102, .	3.2	9
23	Giant lattice expansion by quantum stress and universal atomic forces in semiconductors under instant ultrafast laser excitation. Physical Chemistry Chemical Physics, 2017, 19, 24735-24741.	2.8	7
24	Controllable molecular doping in organic single crystals toward high-efficiency light-emitting devices. Organic Electronics, 2021, 91, 106089.	2.6	7
25	Non-phase-separated 2D Bâ€“Câ€“N alloys via molecule-like carbon doping in 2D BN: atomic structures and optoelectronic properties. Physical Chemistry Chemical Physics, 2018, 20, 23106-23111.	2.8	6
26	Nucleation Dynamics of Phaseâ€Change Memory Materials: Atomic Motion and Property Evolution. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000441.	2.4	5
27	memory device. Chemical Research in Chinese Universities, 2016, 32, 76-81.	2.6	4
28	Stability enhancement of the metastable cubic Sb2Te3 in supperlattice-like films. Materials Letters, 2019, 243, 153-156.	2.6	4
29	Nanoscale amorphous interfaces in phase-change memory materials: structure, properties and design. Journal Physics D: Applied Physics, 2020, 53, 114002.	2.8	4
30	Electronic structure evolution and exciton energy shifting dynamics in WSe₂: from monolayer to bulk. Journal Physics D: Applied Physics, 2021, 54, 354002.	2.8	4
31	Ultrafast dynamics of spin relaxation in monolayer WSe₂ and the WSe₂/graphene heterojunction. Physical Chemistry Chemical Physics, 2022, 24, 16538-16544.	2.8	3
32	First-principles research on mechanism of sub-band absorption of amorphous silicon induced by ultrafast laser irradiation. Results in Physics, 2021, 31, 104941.	4.1	2
33	Origin of high data retention for Ge1Cu2Te3 phase-change memory. , 2015, , .		0
34	Erratum to â€œMetalâ€“Insulator Transition of Geâ€“Sbâ€“Te Superlattice: An Electron Counting Model Studyâ€•[Jan 18 140-146]. IEEE Nanotechnology Magazine, 2018, 17, 614-614.	2.0	0
35	Orbital-selective electronic excitation in phase-change memory materials: a brief review. Zeitschrift Fur Naturforschung - Section B Journal of Chemical Sciences, 2021, .	0.7	0