Wenhan Zhou

List of Publications by Year in Descending Order

37 papers	1,201 citations	17 h-index	34 g-index
44 ext. papers	1,526 ext. citations	7.2 avg, IF	4.76 L-index

#	Paper	IF	Citations
37	Extending Channel Scaling Limit of p-MOSFETs Through Antimonene With Heavy Effective Mass and High Density of State. *IEEE Transactions on Electron Devices*, **2022**, 1-6	2.9	6
36	Unexpected band gap evolution and high carrier mobility sparked by the orbital variation in two-dimensional GaGeX (X = S, Se, Te). *Physica E: Low-Dimensional Systems and Nanostructures*, **2022**, 138, 115112	3	0
35	Dipole-Engineering Strategy for Regulating the Electronic Contact of a Two-Dimensional Sb X /Graphene (X = P , . *Physical Review Applied*, **2022**, 17,	4.3	4
34	Quantum Transport in Monolayer CS Field-Effect Transistors. *Advanced Electronic Materials*, **2021**, 7, 2001169	6.4	1
33	Pressurized Alloying Assisted Synthesis of High Quality Antimonene for Capacitive Deionization. *Advanced Functional Materials*, **2021**, 31, 2102766	15.6	3
32	Modulating tunneling width and energy window for high-on-current two-dimensional tunnel field-effect transistors. *Nano Energy*, **2021**, 81, 105642	17.1	8
31	A highly sensitive and selective SnS2 monolayer sensor in detecting SF6 decomposition gas. *Applied Surface Science*, **2021**, 541, 148494	6.7	12
30	Uncovering the Anisotropic Electronic Structure of 2D Group VA-VA Monolayers for Quantum Transport. *IEEE Electron Device Letters*, **2021**, 42, 66-69	4.4	17
29	Ballistic Transport in High-Performance and Low-Power Sub-5 nm Two-Dimensional ZrNBr MOSFETs. *IEEE Electron Device Letters*, **2020**, 41, 1029-1032	4.4	9
28	Anisotropic In-Plane Ballistic Transport in Monolayer Black Arsenic-Phosphorus FETs. *Advanced Electronic Materials*, **2020**, 6, 1901281	6.4	36
27	Designing sub-10-nm Metal-Oxide-Semiconductor Field-Effect Transistors via Ballistic Transport and Disparate Effective Mass: The Case of Two-Dimensional BiN. *Physical Review Applied*, **2020**, 13,	4.3	42
26	First-principle study of puckered arsenene MOSFET. *Journal of Semiconductors*, **2020**, 41, 082006	2.3	1
25	Ultrascaled Double-Gate Monolayer SnS2 MOSFETs for High-Performance and Low-Power Applications. *Physical Review Applied*, **2020**, 14,	4.3	7
24	High-performance monolayer NaSb shrinking transistors: a DFT-NEGF study. *Nanoscale*, **2020**, 12, 18931-18937	7.7	7
23	Ultrathin Bismuth Nanosheets for Stable Na-Ion Batteries: Clarification of Structure and Phase Transition by in Situ Observation. *Nano Letters*, **2019**, 19, 1118-1123	11.5	93
22	Robust two-dimensional topological insulators in derivatives of group-VA oxides with large band gap: Tunable quantum spin Hall states. *Applied Materials Today*, **2019**, 15, 163-170	6.6	13
21	Unusual Electronic Transitions in Two-dimensional Layered SnSb2Te4 Driven by Electronic State Rehybridization. *Physical Review Applied*, **2019**, 11,	4.3	14

20	Electronic band structures and optical properties of atomically thin AuSe: first-principle calculations. *Journal of Semiconductors*, **2019**, 40, 062004	2.3	3
19	Modulating Epitaxial Atomic Structure of Antimonene through Interface Design. *Advanced Materials*, **2019**, 31, e1902606	24	63
18	CsPbBr Quantum Dots 2.0: Benzenesulfonic Acid Equivalent Ligand Awakens Complete Purification. *Advanced Materials*, **2019**, 31, e1900767	24	189
17	Band engineering realized by chemical combination in 2D group VA–VA materials. *Nanoscale Horizons*, **2019**, 4, 1145-1152	10.8	10
16	Ballistic Quantum Transport of Sub-10 nm 2D Sb2Te2Se Transistors. *Advanced Electronic Materials*, **2019**, 5, 1900813	6.4	7
15	Topologically protected states and half-metal behaviors: Defect-strain synergy effects in two-dimensional antimonene. *Physical Review Materials*, **2019**, 3,	3.2	5
14	Two-Dimensional Pnictogen for Field-Effect Transistors. *Research*, **2019**, 2019, 1046329	7.8	21
13	Recent progress in 2D group IV-IV monochalcogenides: synthesis, properties and applications. *Nanotechnology*, **2019**, 30, 252001	3.4	52
12	Electronic structure and transport properties of 2D RhTeCl: a NEGF-DFT study. *Nanoscale*, **2019**, 11, 20461-20466	7.7	26
11	Ultrathin tellurium dioxide: emerging direct bandgap semiconductor with high-mobility transport anisotropy. *Nanoscale*, **2018**, 10, 8397-8403	7.7	43
10	DFT coupled with NEGF study of a promising two-dimensional channel material: black phosphorene-type GaTeCl. *Nanoscale*, **2018**, 10, 3350-3355	7.7	25
9	Stability enhancement and electronic tunability of two-dimensional SbIV compounds via surface functionalization. *Applied Surface Science*, **2018**, 427, 363-368	6.7	8
8	A class of Pb-free double perovskite halide semiconductors with intrinsic ferromagnetism, large spin splitting and high Curie temperature. *Materials Horizons*, **2018**, 5, 961-968	14.4	40
7	Band offsets in new BN/BX (X = P, As, Sb) lateral heterostructures based on bond-orbital theory. *Nanoscale*, **2018**, 10, 15918-15925	7.7	12
6	Mechanistic Understanding of Two-Dimensional Phosphorus, Arsenic, and Antimony High-Capacity Anodes for Fast-Charging Lithium/Sodium Ion Batteries. *Journal of Physical Chemistry C*, **2018**, 122, 29559-29566	3.8	27
5	Antimonene Oxides: Emerging Tunable Direct Bandgap Semiconductor and Novel Topological Insulator. *Nano Letters*, **2017**, 17, 3434-3440	11.5	217
4	Two-dimensional SiP: an unexplored direct band-gap semiconductor. *2D Materials*, **2017**, 4, 015030	5.9	59
3	First-principles study of SO2 sensors based on phosphorene and its isoelectronic counterparts: GeS, GeSe, SnS, SnSe. *Chemical Physics Letters*, **2017**, 686, 83-87	2.5	35

2	Layer-controlled band alignment, work function and optical properties of few-layer GeSe. *Physica B: Condensed Matter*, **2017**, 519, 90-94	2.8	22
1	Two-dimensional GeS with tunable electronic properties via external electric field and strain. *Nanotechnology*, **2016**, 27, 274001	3.4	68