

Wenguang Zhu

List of Publications by Year in descending order

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papers

7,708
citations

71102

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51608

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docs citations

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times ranked

9818
citing authors

#	ARTICLE	IF	CITATIONS
1	Prediction of intrinsic two-dimensional ferroelectrics in In ₂ Se ₃ and other III ₂ -VI ₃ van der Waals materials. Nature Communications, 2017, 8, 14956.	12.8	830
2	Superconductivity Modulated by Quantum Size Effects. Science, 2004, 306, 1915-1917.	12.6	540
3	Electrical tuning of valley magnetic moment through symmetry control in bilayer MoS ₂ . Nature Physics, 2013, 9, 149-153.	16.7	540
4	Intercorrelated In-Plane and Out-of-Plane Ferroelectricity in Ultrathin Two-Dimensional Layered Semiconductor In ₂ Se ₃ . Nano Letters, 2018, 18, 1253-1258.	9.1	509
5	Highly Efficient and Exceptionally Durable CO ₂ Photoreduction to Methanol over Freestanding Defective Single-Unit-Cell Bismuth Vanadate Layers. Journal of the American Chemical Society, 2017, 139, 3438-3445.	13.7	508
6	Interface engineering of quantum Hall effects in digital transition metal oxide heterostructures. Nature Communications, 2011, 2, 596.	12.8	395
7	Band Gap Narrowing of Titanium Oxide Semiconductors by Noncompensated Anion-Cation Codoping for Enhanced Visible-Light Photoactivity. Physical Review Letters, 2009, 103, 226401.	7.8	347
8	Half-Heusler Compounds as a New Class of Three-Dimensional Topological Insulators. Physical Review Letters, 2010, 105, 096404.	7.8	306
9	Tuning the Electronic and Chemical Properties of Monolayer MoS ₂ Adsorbed on Transition Metal Substrates. Nano Letters, 2013, 13, 509-514.	9.1	262
10	Intrinsic spin Hall effect in monolayers of group-VI dichalcogenides: A first-principles study. Physical Review B, 2012, 86, .	3.2	213
11	Contrasting Behavior of Carbon Nucleation in the Initial Stages of Graphene Epitaxial Growth on Stepped Metal Surfaces. Physical Review Letters, 2010, 104, 186101.	7.8	194
12	Nickel Doping in Atomically Thin Tin Disulfide Nanosheets Enables Highly Efficient CO ₂ Reduction. Angewandte Chemie - International Edition, 2018, 57, 10954-10958.	13.8	186
13	Room-temperature ferroelectricity and a switchable diode effect in two-dimensional \pm -In ₂ Se ₃ thin layers. Nanoscale, 2018, 10, 14885-14892.	5.6	173
14	Possible interaction-driven topological phases in (111) bilayers of LaNiO ₃ . Physical Review B, 2011, 84, .	3.2	139
15	Nonvolatile Ferroelectric Memory Effect in Ultrathin \pm -In ₂ Se ₃ . Advanced Functional Materials, 2019, 29, 1808606.	14.9	137
16	Tailoring Magnetic Doping in the Topological Insulator Bi ₂ Se ₃ . Physical Review Letters, 2012, 109, 266405.	7.8	136
17	CO Oxidation Facilitated by Robust Surface States on Au-Covered Topological Insulators. Physical Review Letters, 2011, 107, 056804.	7.8	128
18	Substrate Facet Effect on the Growth of Monolayer MoS ₂ on Au Foils. ACS Nano, 2015, 9, 4017-4025.	14.6	97

#	ARTICLE	IF	CITATIONS
19	Harmonizing the Electronic Structures of the Adsorbate and Catalysts for Efficient CO ₂ Reduction. Nano Letters, 2019, 19, 6547-6553.	9.1	88
20	Communication: Stable carbon nanoarches in the initial stages of epitaxial growth of graphene on Cu(111). Journal of Chemical Physics, 2011, 134, 171105.	3.0	80
21	Superior Electrical Conductivity in Hydrogenated Layered Ternary Chalcogenide Nanosheets for Flexible All-Solid-State Supercapacitors. Angewandte Chemie - International Edition, 2016, 55, 5733-5738.	13.8	76
22	Van der Waals Heteroepitaxial Growth of Monolayer Sb in a Puckered Honeycomb Structure. Advanced Materials, 2019, 31, e1806130.	21.0	75
23	High-Temperature Quantum Anomalous Hall Effect in Topological Insulators. Physical Review Letters, 2016, 117, 056804.	7.8	71
24	Interface Engineering in Two-Dimensional Heterostructures: Towards an Advanced Catalyst for Ullmann Couplings. Angewandte Chemie - International Edition, 2016, 55, 1704-1709.	13.8	65
25	Correlation effects in (111) bilayers of perovskite transition-metal oxides. Physical Review B, 2014, 89, .	3.2	63
26	Contrasting Growth Modes of Mn on Ge(100) and Ge(111) Surfaces: Subsurface Segregation versus Intermixing. Physical Review Letters, 2004, 93, 126102.	7.8	60
27	Multistep nucleation and growth mechanisms of organic crystals from amorphous solid states. Nature Communications, 2019, 10, 3872.	12.8	57
28	Atomic-Scale Observation of Reversible Thermally Driven Phase Transformation in 2D In ₂ Se ₃ . ACS Nano, 2019, 13, 8004-8011.	14.6	57
29	Initial stages of Mn adsorption on Ge(111). Physical Review B, 2004, 70, .	3.2	56
30	Orthogonal Electric Control of the Out-of-Plane Field Effect in 2D Ferroelectric In ₂ Se ₃ . Advanced Electronic Materials, 2020, 6, 2000061.	5.1	56
31	Nanocrystal Formation and Faceting Instability in Al(110) Homoepitaxy: True Upward Adatom Diffusion at Step Edges and Island Corners. Physical Review Letters, 2003, 91, 016102.	7.8	55
32	<i>In-Situ</i> Surface Reconstruction of InN Nanosheets for Efficient CO ₂ Electroreduction into Formate. Nano Letters, 2020, 20, 8229-8235.	9.1	55
33	Fabrication and characterization of brookite-rich, visible light-active TiO ₂ films for water splitting. Applied Catalysis B: Environmental, 2009, 93, 90-95.	20.2	54
34	Adatom Ascending at Step Edges and Faceting on fcc Metal (110) Surfaces. Physical Review Letters, 2004, 92, 106102.	7.8	52
35	Antisymmetric Magnetoresistance in a van der Waals Antiferromagnetic/Ferromagnetic Layered MnPS ₃ /Fe ₃ GeTe ₂ Stacking Heterostructure. ACS Nano, 2020, 14, 12037-12044.	14.6	52
36	Few-layer bismuth selenide cathode for low-temperature quasi-solid-state aqueous zinc metal batteries. Nature Communications, 2022, 13, 752.	12.8	49

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37	The Nature of Contact between Pd Leads and Semiconducting Carbon Nanotubes. <i>Nano Letters</i> , 2006, 6, 1415-1419.	9.1	48
38	Dopant-Assisted Concentration Enhancement of Substitutional Mn in Si and Ge. <i>Physical Review Letters</i> , 2008, 100, 027205.	7.8	48
39	Strain tuning of topological band order in cubic semiconductors. <i>Physical Review B</i> , 2012, 85, .	3.2	44
40	Surface-adsorbed ions on TiO ₂ nanosheets for selective photocatalytic CO ₂ reduction. <i>Nano Research</i> , 2018, 11, 3362-3370.	10.4	44
41	Nickel Doping in Atomically Thin Tin Disulfide Nanosheets Enables Highly Efficient CO ₂ Reduction. <i>Angewandte Chemie</i> , 2018, 130, 11120-11124.	2.0	42
42	Direct measurement of ferroelectric polarization in a tunable semimetal. <i>Nature Communications</i> , 2021, 12, 5298.	12.8	42
43	Schottky barrier formation at a carbon nanotube-metal junction. <i>Applied Physics Letters</i> , 2006, 89, 243107.	3.3	41
44	Optimization of Mn doping in group-IV-based dilute magnetic semiconductors by electronic codopants. <i>Physical Review B</i> , 2009, 79, .	3.2	39
45	Layer-dependent ferroelectricity in 2H-stacked few-layer In ₂ Se ₃ . <i>Materials Horizons</i> , 2021, 8, 1472-1480.	12.2	37
46	Suppression of Grain Boundaries in Graphene Growth on Superstructured Mn-Cu(111) Surface. <i>Physical Review Letters</i> , 2012, 109, 265507.	7.8	36
47	Hydrogen-induced magnetization and tunable hydrogen storage in graphitic structures. <i>Physical Review B</i> , 2008, 77, .	3.2	33
48	Atomistic mechanisms for bilayer growth of graphene on metal substrates. <i>Physical Review B</i> , 2015, 91, .	3.2	33
49	Tuning the Electronic Structure of an Antimonene Monolayer through Interface Engineering. <i>Nano Letters</i> , 2020, 20, 8408-8414.	9.1	33
50	Ferroelectric control of single-molecule magnetism in 2D limit. <i>Science Bulletin</i> , 2020, 65, 1252-1259.	9.0	33
51	Phase-Defined van der Waals Schottky Junctions with Significantly Enhanced Thermoelectric Properties. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 2887-2894.	4.6	30
52	Electronic Nature of Step-Edge Barriers against Adatom Descent on Transition-Metal Surfaces. <i>Physical Review Letters</i> , 2008, 101, 216101.	7.8	27
53	Initial Stages of Ti Growth on Diamond (100) Surfaces: From Single Adatom Diffusion to Quantum Wire Formation. <i>Physical Review Letters</i> , 2005, 94, 086101.	7.8	20
54	Kinetics-Limited Two-Step Growth of van der Waals Puckered Honeycomb Sb Monolayer. <i>ACS Nano</i> , 2020, 14, 16755-16760.	14.6	20

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55	Quantum oscillation of Rashba spin splitting in topological insulator Bi_2Se_3 induced by the quantum size effects of Pb adlayers. <i>Physical Review B</i> , 2012, 86, .	3.2	19
56	Tunable Band Alignments in 2D Ferroelectric In_2Se_3 Based Van der Waals Heterostructures. <i>ACS Applied Electronic Materials</i> , 2021, 3, 5114-5123.	4.3	19
57	Prediction of protected band edge states and dielectric tunable quasiparticle and excitonic properties of monolayer MoSi_2N_4 . <i>Npj Computational Materials</i> , 2022, 8, .	8.7	19
58	Superior Electrical Conductivity in Hydrogenated Layered Ternary Chalcogenide Nanosheets for Flexible All-Solid-State Supercapacitors. <i>Angewandte Chemie</i> , 2016, 128, 5827-5832.	2.0	18
59	Terminating Surface Electromigration at the Source. <i>Physical Review Letters</i> , 2011, 106, 156404.	7.8	15
60	Tuning the Nanofriction Between Two Graphene Layers by External Electric Fields: A Density Functional Theory Study. <i>Tribology Letters</i> , 2016, 61, 1.	2.6	15
61	Band-Offset Degradation in van der Waals Heterojunctions. <i>Physical Review Applied</i> , 2019, 12, .	3.8	15
62	Microscopic investigation of $\text{Bi}_2\text{-xSbxTe}_3\text{-ySey}$ systems: On the origin of a robust intrinsic topological insulator. <i>Journal of Physics and Chemistry of Solids</i> , 2019, 128, 251-257.	4.0	15
63	Single-molecule electrical spectroscopy of organocatalysis. <i>Matter</i> , 2021, 4, 2874-2885.	10.0	15
64	Negative Differential Friction Predicted in 2D Ferroelectric In_2Se_3 Commensurate Contacts. <i>Advanced Science</i> , 2022, 9, e2103443.	11.2	12
65	Control of photocurrent and multi-state memory by polar order engineering in 2H-stacked In_2Se_3 ferroelectric. <i>Science China Materials</i> , 2022, 65, 1639-1645.	6.3	12
66	Initial interactions between water molecules and Ti-adsorbed carbon nanotubes. <i>Applied Physics Letters</i> , 2007, 91, 161906.	3.3	11
67	Kinetic Monte Carlo simulations of nanocolumn formation in two-component epitaxial growth. <i>Applied Physics Letters</i> , 2010, 96, 071913.	3.3	11
68	Local fields in conductor surface electromigration: A first-principles study in the low-bias ballistic limit. <i>Physical Review B</i> , 2012, 85, .	3.2	10
69	Formation of Graphene π -n Superlattices on Pb Quantum Wedged Islands. <i>ACS Nano</i> , 2011, 5, 3707-3713.	14.6	9
70	Remarkable Band-Gap Renormalization via Dimensionality of the Layered Material C_3B_3 . <i>Physical Review Applied</i> , 2020, 14, .	3.8	9
71	Adsorbate-induced restructuring of Pb mesas grown on vicinal Si(111) in the quantum regime. <i>Physical Review B</i> , 2009, 80, .	3.2	8
72	Accurate Single-Molecule Kinetic Isotope Effects. <i>Journal of the American Chemical Society</i> , 2022, .	13.7	8

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73	Atomic-Scale Visualization of Polar Domain Boundaries in Ferroelectric In ₂ Se ₃ at the Monolayer Limit. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 11902-11909.	4.6	7
74	Electronic structure of Pd-covered (10,0) carbon nanotube. <i>Physica Status Solidi (B): Basic Research</i> , 2006, 243, 2164-2169.	1.5	6
75	Influence of quantum well states on the formation of Au-Pb alloy in ultra-thin Pb films. <i>Surface Science</i> , 2015, 632, 174-179.	1.9	5
76	Theoretical Design of Robust Ferromagnetism and Bipolar Semiconductivity in Graphene-Based Nanoroads. <i>Journal of Physical Chemistry C</i> , 2017, 121, 24824-24830.	3.1	5
77	Antimonene: Van der Waals Heteroepitaxial Growth of Monolayer Sb in a Puckered Honeycomb Structure (<i>Adv. Mater.</i> 5/2019). <i>Advanced Materials</i> , 2019, 31, 1970035.	21.0	5
78	In situ growth and density-functional-theory study of polarity-dependent homo-epitaxial ZnO microwires. <i>CrystEngComm</i> , 2012, 14, 355-358.	2.6	4
79	Generation and the role of dislocations in single-crystalline phase-change In ₂ Se ₃ nanowires under electrical pulses. <i>Nanotechnology</i> , 2016, 27, 335704.	2.6	4
80	High pressure \hat{I}^3 -to- \hat{I}^2 phase transition in bulk and nanocrystalline In ₂ Se ₃ . <i>High Pressure Research</i> , 2016, 36, 549-556.	1.2	4
81	Ferroelectrics: Nonvolatile Ferroelectric Memory Effect in Ultrathin \hat{I}^2 Se ₃ (<i>Adv. Funct. Mater.</i>) Tj ETQq1 1 0.784314 rgBT /Over 14.9	14.9	4
82	Phonon-Related Monochromatic THz Radiation and its Magneto-Modulation in 2D Ferromagnetic Cr ₂ Ge ₂ Te ₆ . <i>Advanced Science</i> , 2022, 9, e2103229.	11.2	4
83	Near-Field Modulation of Differently Oriented Single Photon Emitters with A Plasmonic Probe. <i>Nano Letters</i> , 2022, 22, 2244-2250.	9.1	4
84	High Photoreactivity on a Reconstructed Anatase TiO ₂ (001) Surface Predicted by <i>Ab Initio</i> Nonadiabatic Molecular Dynamics. <i>Journal of Physical Chemistry Letters</i> , 0, , 5766-5775.	4.6	2
85	Energetics and Atomic Structures of Cu ₂ Te Overlayers on CdTe(111). <i>Journal of Physical Chemistry C</i> , 2015, 119, 4843-4847.	3.1	1
86	Interface Engineering in Two-Dimensional Heterostructures: Towards an Advanced Catalyst for Ullmann Couplings. <i>Angewandte Chemie</i> , 2016, 128, 1736-1741.	2.0	1
87	Long-range behavior of a nonlocal correlation-energy density functional based on the random-phase approximation. <i>Physical Review B</i> , 2020, 101, .	3.2	1
88	Drastically enhanced H ₂ flux through asymmetric quantum Pd films. <i>Physical Review B</i> , 2012, 85, .	3.2	0
89	Atomic scale control of catalytic process in oxidation of Pb thin films. <i>Surface Science</i> , 2012, 606, 450-455.	1.9	0
90	Giant Rashba-like spin-orbit splitting with distinct spin texture in two-dimensional heterostructures*. <i>Chinese Physics B</i> , 2021, 30, 087307.	1.4	0