

Shiying Guo

List of Publications by Year in descending order

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49
papers

2,584
citations

304368

22
h-index

214527

47
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all docs

49
docs citations

49
times ranked

3370
citing authors

#	ARTICLE	IF	CITATIONS
1	Recent progress in 2D group-VA semiconductors: from theory to experiment. <i>Chemical Society Reviews</i> , 2018, 47, 982-1021.	18.7	697
2	2D V&E Binary Materials: Status and Challenges. <i>Advanced Materials</i> , 2019, 31, e1902352.	11.1	303
3	Few-Layer Antimonene: Anisotropic Expansion and Reversible Crystalline-Phase Evolution Enable Large-Capacity and Long-Life Na-Ion Batteries. <i>ACS Nano</i> , 2018, 12, 1887-1893.	7.3	175
4	Advances of 2D bismuth in energy sciences. <i>Chemical Society Reviews</i> , 2020, 49, 263-285.	18.7	138
5	Ultrathin Bismuth Nanosheets for Stable Na-Ion Batteries: Clarification of Structure and Phase Transition by in Situ Observation. <i>Nano Letters</i> , 2019, 19, 1118-1123.	4.5	124
6	Two-dimensional SiP: an unexplored direct band-gap semiconductor. <i>2D Materials</i> , 2017, 4, 015030.	2.0	78
7	Designing sub-10-nm Metal-Oxide-Semiconductor Field-Effect Transistors via Ballistic Transport and Disparate Effective Mass: The Case of Two-Dimensional Bi_2Te_3 . <i>Physical Review Applied</i> , 2020, 13, 014002.	1.5	69
8	Ultrathin tellurium dioxide: emerging direct bandgap semiconductor with high-mobility transport anisotropy. <i>Nanoscale</i> , 2018, 10, 8397-8403.	2.8	66
9	Identifying electrocatalytic activity and mechanism of $\text{Ce}_{1/3}\text{NbO}_3$ perovskite for nitrogen reduction to ammonia at ambient conditions. <i>Applied Catalysis B: Environmental</i> , 2021, 280, 119419.	10.8	60
10	A class of Pb-free double perovskite halide semiconductors with intrinsic ferromagnetism, large spin splitting and high Curie temperature. <i>Materials Horizons</i> , 2018, 5, 961-968.	6.4	59
11	Anisotropic In-plane Ballistic Transport in Monolayer Black Arsenic-Phosphorus FETs. <i>Advanced Electronic Materials</i> , 2020, 6, 1901281.	2.6	59
12	A safe and efficient liquid-solid synthesis for copper azide films with excellent electrostatic stability. <i>Nano Energy</i> , 2019, 66, 104135.	8.2	56
13	Tailoring natural layered $\sqrt{2}$ -phase antimony into few layer antimonene for Li storage with high rate capabilities. <i>Journal of Materials Chemistry A</i> , 2019, 7, 3238-3243.	5.2	54
14	First-principles study of SO_2 sensors based on phosphorene and its isoelectronic counterparts: GeS, GeSe, SnS, SnSe. <i>Chemical Physics Letters</i> , 2017, 686, 83-87.	1.2	51
15	Two-dimensional transition metal diborides: promising Dirac electrocatalysts with large reaction regions toward efficient N_2 fixation. <i>Journal of Materials Chemistry A</i> , 2019, 7, 25887-25893.	5.2	45
16	Mechanistic Understanding of Two-Dimensional Phosphorus, Arsenic, and Antimony High-Capacity Anodes for Fast-Charging Lithium/Sodium Ion Batteries. <i>Journal of Physical Chemistry C</i> , 2018, 122, 29559-29566.	1.5	38
17	A highly sensitive and selective SnS_2 monolayer sensor in detecting SF_6 decomposition gas. <i>Applied Surface Science</i> , 2021, 541, 148494.	3.1	38
18	DFT coupled with NEGF study of a promising two-dimensional channel material: black phosphorene-type GaTeCl. <i>Nanoscale</i> , 2018, 10, 3350-3355.	2.8	37

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19	Two-Dimensional Pnictogen for Field-Effect Transistors. Research, 2019, 2019, 1046329.	2.8	34
20	Uncovering the Anisotropic Electronic Structure of 2D Group VA-VA Monolayers for Quantum Transport. IEEE Electron Device Letters, 2021, 42, 66-69.	2.2	31
21	An Ångström-level d -spacing controlling synthetic route for MoS_2 towards stable intercalation of sodium ions. Journal of Materials Chemistry A, 2018, 6, 22513-22518.	5.2	24
22	Sensing Performance of SO_2 , SO_2 , and NO_2 Gas Molecules on 2D Pentagonal PdSe_2 : A First-Principle Study. IEEE Electron Device Letters, 2021, 42, 573-576.	2.2	22
23	Stabilizing Layered Structure in Aqueous Electrolyte via Dynamic Water Intercalation/Deintercalation. Advanced Materials, 2022, 34, e2108541.	11.1	22
24	Unusual Electronic Transitions in Two-dimensional Layered SnSb Driven by Electronic State Rehybridization. Physical Review Applied, 2019, 11, .	1.5	21
25	Ultrascaled Double-Gate Monolayer SnS MOSFETs for High-Performance and Low-Power Applications. Physical Review Applied, 2020, 14, .	1.5	21
26	Beneficial restacking of 2D nanomaterials for electrocatalysis: a case of MoS_2 membranes. Chemical Communications, 2020, 56, 7005-7008.	2.2	20
27	Band offsets in new BN/BX ($X = \text{P}, \text{As}, \text{Sb}$) lateral heterostructures based on bond-orbital theory. Nanoscale, 2018, 10, 15918-15925.	2.8	18
28	Atomic-level tunnel engineering of todorokite MnO_2 for precise evaluation of lithium storage mechanisms by in situ transmission electron microscopy. Nano Energy, 2019, 63, 103840.	8.2	17
29	Enhanced interband tunneling in two-dimensional tunneling transistors through anisotropic energy dispersion. Physical Review B, 2022, 105, .	1.1	16
30	Band engineering realized by chemical combination in 2D group VA-VA materials. Nanoscale Horizons, 2019, 4, 1145-1152.	4.1	15
31	Pressurized Alloying Assisted Synthesis of High Quality Antimonene for Capacitive Deionization. Advanced Functional Materials, 2021, 31, 2102766.	7.8	15
32	High-Performance and Low-Power Transistors Based on Anisotropic Monolayer TeO_2 . Physical Review Applied, 2022, 17, .	1.5	15
33	Ballistic Quantum Transport of Sub-10 nm 2D $\text{Sb}_2\text{Te}_2\text{Se}$ Transistors. Advanced Electronic Materials, 2019, 5, 1900813.	2.6	14
34	Ballistic Transport in High-Performance and Low-Power Sub-5 nm Two-Dimensional ZrNBr MOSFETs. IEEE Electron Device Letters, 2020, 41, 1029-1032.	2.2	14
35	Smart confinement of MnO enabling highly reversible Mn(II)/Mn(III) redox for asymmetric supercapacitors. Journal of Power Sources, 2021, 495, 229801.	4.0	14
36	Defect Regulating of Few-Layer Antimonene from Acid-Assisted Exfoliation for Enhanced Electrocatalytic Nitrogen Fixation. ACS Applied Materials & Interfaces, 2021, 13, 40618-40628.	4.0	14

#	ARTICLE	IF	CITATIONS
37	Robust two-dimensional topological insulators in derivatives of group-VA oxides with large band gap: Tunable quantum spin Hall states. <i>Applied Materials Today</i> , 2019, 15, 163-170.	2.3	13
38	Dependence of Tunneling Mechanism on Two-Dimensional Material Parameters: A High-Throughput Study. <i>Physical Review Applied</i> , 2022, 17, .	1.5	13
39	High-performance monolayer Na ₃ Sb shrinking transistors: a DFT-NEGF study. <i>Nanoscale</i> , 2020, 12, 18931-18937.	2.8	11
40	Lattice-resolution visualization of anisotropic sodiation degrees and revelation of sodium storage mechanisms in todorokite-type MnO ₂ with in-situ TEM. <i>Energy Storage Materials</i> , 2021, 37, 345-353.	9.5	11
41	Stability enhancement and electronic tunability of two-dimensional SbIV compounds via surface functionalization. <i>Applied Surface Science</i> , 2018, 427, 363-368.	3.1	8
42	Electronic structure and transport properties of 2D RhTeCl: a NEGF-DFT study. <i>Nanoscale</i> , 2019, 11, 20461-20466.	2.8	8
43	Electronic band structures and optical properties of atomically thin AuSe: first-principle calculations. <i>Journal of Semiconductors</i> , 2019, 40, 062004.	2.0	7
44	High-Performance Monolayer BeN ₂ Transistors With Ultrahigh On-State Current: A DFT Coupled With NEGF Study. <i>IEEE Transactions on Electron Devices</i> , 2022, 69, 4501-4506.	1.6	7
45	Quantum Transport in Monolayer Γ - Γ Field-Effect Transistors. <i>Advanced Electronic Materials</i> , 2021, 7, 2001169.	2.6	6
46	First-principle study of puckered arsenene MOSFET. <i>Journal of Semiconductors</i> , 2020, 41, 082006.	2.0	4
47	Electronic Structure and Quantum Transport Properties of 2D SiP: A First-Principles Study. <i>Journal of Electronic Materials</i> , 2021, 50, 5499-5506.	1.0	1
48	Bismuthene. , 2022, , 173-196.		1
49	Group V materials: From bulk to monolayer. <i>Chinese Science Bulletin</i> , 2017, 62, 2233-2251.	0.4	0