

# Shiying Guo

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

44  
papers

1,749  
citations

19  
h-index

41  
g-index

49  
ext. papers

2,226  
ext. citations

10.6  
avg, IF

5.19  
L-index

#	Paper	IF	Citations
44	Stabilizing Layered Structure in Aqueous Electrolyte via Dynamic Water Intercalation/Deintercalation.. <i>Advanced Materials</i> , <b>2022</b> , e2108541	24	5
43	Bismuthene <b>2022</b> , 173-196		
42	Quantum Transport in Monolayer $\text{ECS}$ Field-Effect Transistors. <i>Advanced Electronic Materials</i> , <b>2021</b> , 7, 2001169	6.4	1
41	Sensing Performance of $\text{SO}_2$ and $\text{NO}_2$ Gas Molecules on 2D Pentagonal $\text{PdSe}_2$ A First-Principle Study. <i>IEEE Electron Device Letters</i> , <b>2021</b> , 42, 573-576	4.4	2
40	Lattice-resolution visualization of anisotropic sodiation degrees and revelation of sodium storage mechanisms in todorokite-type $\text{MnO}_2$ with in-situ TEM. <i>Energy Storage Materials</i> , <b>2021</b> , 37, 345-353	19.4	2
39	Smart confinement of $\text{MnO}$ enabling highly reversible $\text{Mn(II)/Mn(III)}$ redox for asymmetric supercapacitors. <i>Journal of Power Sources</i> , <b>2021</b> , 495, 229801	8.9	5
38	Pressurized Alloying Assisted Synthesis of High Quality Antimonene for Capacitive Deionization. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2102766	15.6	3
37	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> , <b>2021</b> , 280, 119419	21.8	31
36	A highly sensitive and selective $\text{SnS}_2$ monolayer sensor in detecting $\text{SF}_6$ decomposition gas. <i>Applied Surface Science</i> , <b>2021</b> , 541, 148494	6.7	12
35	Uncovering the Anisotropic Electronic Structure of 2D Group VA-VA Monolayers for Quantum Transport. <i>IEEE Electron Device Letters</i> , <b>2021</b> , 42, 66-69	4.4	17
34	Electronic Structure and Quantum Transport Properties of 2D $\text{SiP}$ : A First-Principles Study. <i>Journal of Electronic Materials</i> , <b>2021</b> , 50, 5499-5506	1.9	0
33	Defect Regulating of Few-Layer Antimonene from Acid-Assisted Exfoliation for Enhanced Electrocatalytic Nitrogen Fixation. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 40618-40628	9.5	5
32	Beneficial restacking of 2D nanomaterials for electrocatalysis: a case of $\text{MoS}_2$ membranes. <i>Chemical Communications</i> , <b>2020</b> , 56, 7005-7008	5.8	12
31	Ballistic Transport in High-Performance and Low-Power Sub-5 nm Two-Dimensional $\text{ZrNBr}$ MOSFETs. <i>IEEE Electron Device Letters</i> , <b>2020</b> , 41, 1029-1032	4.4	9
30	Anisotropic In-Plane Ballistic Transport in Monolayer Black Arsenic-Phosphorus FETs. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 1901281	6.4	36
29	Designing sub-10-nm Metal-Oxide-Semiconductor Field-Effect Transistors via Ballistic Transport and Disparate Effective Mass: The Case of Two-Dimensional $\text{BiN}$ . <i>Physical Review Applied</i> , <b>2020</b> , 13,	4.3	42
28	Advances of 2D bismuth in energy sciences. <i>Chemical Society Reviews</i> , <b>2020</b> , 49, 263-285	58.5	78

27	First-principle study of puckered arsenene MOSFET. <i>Journal of Semiconductors</i> , <b>2020</b> , 41, 082006	2.3	1
26	Ultrascaled Double-Gate Monolayer SnS <sub>2</sub> MOSFETs for High-Performance and Low-Power Applications. <i>Physical Review Applied</i> , <b>2020</b> , 14,	4.3	7
25	High-performance monolayer NaSb shrinking transistors: a DFT-NEGF study. <i>Nanoscale</i> , <b>2020</b> , 12, 18931-18937	1.9	7
24	Tailoring natural layered $\alpha$ -phase antimony into few layer antimonene for Li storage with high rate capabilities. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 3238-3243	13	37
23	Ultrathin Bismuth Nanosheets for Stable Na-Ion Batteries: Clarification of Structure and Phase Transition by in Situ Observation. <i>Nano Letters</i> , <b>2019</b> , 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. <i>Applied Materials Today</i> , <b>2019</b> , 15, 163-170	6.6	13
21	Unusual Electronic Transitions in Two-dimensional Layered SnSb <sub>2</sub> Te <sub>4</sub> Driven by Electronic State Rehybridization. <i>Physical Review Applied</i> , <b>2019</b> , 11,	4.3	14
20	Atomic-level tunnel engineering of todorokite MnO <sub>2</sub> for precise evaluation of lithium storage mechanisms by in situ transmission electron microscopy. <i>Nano Energy</i> , <b>2019</b> , 63, 103840	17.1	12
19	Electronic band structures and optical properties of atomically thin AuSe: first-principle calculations. <i>Journal of Semiconductors</i> , <b>2019</b> , 40, 062004	2.3	3
18	Band engineering realized by chemical combination in 2D group VAV <sub>3</sub> materials. <i>Nanoscale Horizons</i> , <b>2019</b> , 4, 1145-1152	10.8	10
17	2D V-V Binary Materials: Status and Challenges. <i>Advanced Materials</i> , <b>2019</b> , 31, e1902352	24	236
16	Ballistic Quantum Transport of Sub-10 nm 2D Sb <sub>2</sub> Te <sub>2</sub> Se Transistors. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1900813	6.4	7
15	A safe and efficient liquid-solid synthesis for copper azide films with excellent electrostatic stability. <i>Nano Energy</i> , <b>2019</b> , 66, 104135	17.1	37
14	Two-Dimensional Pnictogen for Field-Effect Transistors. <i>Research</i> , <b>2019</b> , 2019, 1046329	7.8	21
13	Electronic structure and transport properties of 2D RhTeCl: a NEGF-DFT study. <i>Nanoscale</i> , <b>2019</b> , 11, 20461-20466	17.1	20466
12	Two-dimensional transition metal diborides: promising Dirac electrocatalysts with large reaction regions toward efficient N <sub>2</sub> fixation. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 25887-25893	13	20
11	Ultrathin tellurium dioxide: emerging direct bandgap semiconductor with high-mobility transport anisotropy. <i>Nanoscale</i> , <b>2018</b> , 10, 8397-8403	7.7	43
10	Few-Layer Antimonene: Anisotropic Expansion and Reversible Crystalline-Phase Evolution Enable Large-Capacity and Long-Life Na-Ion Batteries. <i>ACS Nano</i> , <b>2018</b> , 12, 1887-1893	16.7	135

9	DFT coupled with NEGF study of a promising two-dimensional channel material: black phosphorene-type GaTeCl. <i>Nanoscale</i> , <b>2018</b> , 10, 3350-3355	7.7	25
8	Recent progress in 2D group-VA semiconductors: from theory to experiment. <i>Chemical Society Reviews</i> , <b>2018</b> , 47, 982-1021	58.5	549
7	Stability enhancement and electronic tunability of two-dimensional SbIV compounds via surface functionalization. <i>Applied Surface Science</i> , <b>2018</b> , 427, 363-368	6.7	8
6	A class of Pb-free double perovskite halide semiconductors with intrinsic ferromagnetism, large spin splitting and high Curie temperature. <i>Materials Horizons</i> , <b>2018</b> , 5, 961-968	14.4	40
5	Band offsets in new BN/BX (X = P, As, Sb) lateral heterostructures based on bond-orbital theory. <i>Nanoscale</i> , <b>2018</b> , 10, 15918-15925	7.7	12
4	An Ågström-level d-spacing controlling synthetic route for MoS <sub>2</sub> towards stable intercalation of sodium ions. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 22513-22518	13	20
3	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> , <b>2018</b> , 122, 29559-29567	3.8	27
2	Two-dimensional SiP: an unexplored direct band-gap semiconductor. <i>2D Materials</i> , <b>2017</b> , 4, 015030	5.9	59
1	First-principles study of SO <sub>2</sub> sensors based on phosphorene and its isoelectronic counterparts: GeS, GeSe, SnS, SnSe. <i>Chemical Physics Letters</i> , <b>2017</b> , 686, 83-87	2.5	35