Xianghong Niu

List of Publications by Year in descending order

38 papers	3,351 citations	236925 25 h-index	315739 38 g-index
40 all docs	40 docs citations	40 times ranked	4758 citing authors

#	Article	IF	Citations
1	An organic-inorganic perovskite ferroelectric with large piezoelectric response. Science, 2017, 357, 306-309.	12.6	744
2	Metal-Free Single Atom Catalyst for N₂ Fixation Driven by Visible Light. Journal of the American Chemical Society, 2018, 140, 14161-14168.	13.7	742
3	High-Temperature Ferroelectricity and Photoluminescence in a Hybrid Organicâ€“Inorganic Compound: (3-Pyrrolinium)MnCl₃. Journal of the American Chemical Society, 2015, 137, 13148-13154.	13.7	246
4	Electronic and Optical Properties of Edge-Functionalized Graphene Quantum Dots and the Underlying Mechanism. Journal of Physical Chemistry C, 2015, 119, 24950-24957.	3.1	136
5	Rational Design and Characterization of Direct Z-Scheme Photocatalyst for Overall Water Splitting from Excited State Dynamics Simulations. ACS Catalysis, 2020, 10, 1976-1983.	11.2	120
6	Janus MoSSe/WSeTe heterostructures: a direct Z-scheme photocatalyst for hydrogen evolution. Journal of Materials Chemistry A, 2019, 7, 21835-21842.	10.3	119
7	Anomalous Size Dependence of Optical Properties in Black Phosphorus Quantum Dots. Journal of Physical Chemistry Letters, 2016, 7, 370-375.	4.6	99
8	Hybrid Cu⁰ and Cu^x⁺ as Atomic Interfaces Promote Highâ€Selectivity Conversion of CO₂ to C₂H₅OH at Low Potential. Small, 2020, 16, e1901981.	10.0	92
9	Revealing the underlying absorption and emission mechanism of nitrogen doped graphene quantum dots. Nanoscale, 2016, 8, 19376-19382.	5.6	74
10	Covalent Functionalization of Black Phosphorus from First-Principles. Journal of Physical Chemistry Letters, 2016, 7, 4540-4546.	4.6	71
11	Efficient Carrier Separation in Graphitic Zinc Oxide and Blue Phosphorus van der Waals Heterostructure. Journal of Physical Chemistry C, 2017, 121, 3648-3653.	3.1	71
12	Electronic structures and optical properties of arsenene and antimonene under strain and an electric field. Journal of Materials Chemistry C, 2018, 6, 83-90.	5.5	68
13	Greatly Enhanced Optical Absorption of a Defective MoS₂ Monolayer through Oxygen Passivation. ACS Applied Materials & Interfaces, 2016, 8, 13150-13156.	8.0	59
14	POD Nanozyme optimized by charge separation engineering for light/pH activated bacteria catalytic/photodynamic therapy. Signal Transduction and Targeted Therapy, 2022, 7, 86.	17.1	59
15	Highly Fluorescent and Stable Black Phosphorus Quantum Dots in Water. Small, 2018, 14, e1803132.	10.0	58
16	Ultrathin Semiconducting Bi₂Te₂S and Bi₂Te₂Se with High Electron Mobilities. Journal of Physical Chemistry Letters, 2018, 9, 487-490.	4.6	56
17	The stacking dependent electronic structure and optical properties of bilayer black phosphorus. Physical Chemistry Chemical Physics, 2016, 18, 6085-6091.	2.8	54
18	Highly efficient photogenerated electron transfer at a black phosphorus/indium selenide heterostructure interface from ultrafast dynamics. Journal of Materials Chemistry C, 2019, 7, 1864-1870.	5.5	53

#	Article	IF	Citations
19	Bi₂OS₂: a direct-gap two-dimensional semiconductor with high carrier mobility and surface electron states. Materials Horizons, 2018, 5, 1058-1064.	12.2	45
20	Photo-oxidative Degradation and Protection Mechanism of Black Phosphorus: Insights from Ultrafast Dynamics. Journal of Physical Chemistry Letters, 2018, 9, 5034-5039.	4.6	45
21	Arsenene-Based Heterostructures: Highly Efficient Bifunctional Materials for Photovoltaics and Photocatalytics. ACS Applied Materials & Interfaces, 2017, 9, 42856-42861.	8.0	44
22	Electronic, photocatalytic, and optical properties of two-dimensional boron pnictides. Journal of Materials Science, 2019, 54, 2278-2288.	3.7	37
23	Photocatalytic Ammonia Synthesis: Mechanistic Insights into N₂ Activation at Oxygen Vacancies under Visible Light Excitation. ACS Catalysis, 2021, 11, 14058-14066.	11.2	35
24	Photocatalytic performance of few-layer graphitic C₃N₄: enhanced by interlayer coupling. Nanoscale, 2019, 11, 4101-4107.	5.6	34
25	Greatly Enhanced Photoabsorption and Photothermal Conversion of Antimonene Quantum Dots through Spontaneously Partial Oxidation. ACS Applied Materials & Interfaces, 2019, 11, 17987-17993.	8.0	30
26	Au₆S₂monolayer sheets: metallic and semiconducting polymorphs. Materials Horizons, 2017, 4, 1085-1091.	12.2	26
27	Photoabsorption Tolerance of Intrinsic Point Defects and Oxidation in Black Phosphorus Quantum Dots. Journal of Physical Chemistry Letters, 2017, 8, 161-166.	4.6	21
28	Two-Dimensional Phosphorene, Arsenene, and Antimonene Quantum Dots: Anomalous Size-Dependent Behaviors of Optical Properties. Journal of Physical Chemistry C, 2019, 123, 25775-25780.	3.1	18
29	Suppressing photoexcited electronâ€“hole recombination in MoSe₂/WSe₂ lateral heterostructures via interface-coupled state engineering: a time-domain ab initio study. Journal of Materials Chemistry A, 2020, 8, 20621-20628.	10.3	18
30	Interlayer coupling prolonged the photogenerated carrier lifetime of few layered Bi₂OS₂ semiconductors. Nanoscale, 2020, 12, 6057-6063.	5.6	18
31	Explore the underlying mechanism of graphitic C3N5-hosted single-atom catalyst for electrocatalytic nitrogen fixation. International Journal of Hydrogen Energy, 2022, 47, 22035-22044.	7.1	15
32	Ultralong lifetime for fully photogenerated spin-polarized current in two-dimensional ferromagnetic/nonmagnetic semiconductor heterostructures. Physical Review B, 2021, 103, .	3.2	14
33	Revealing the pHâ€Dependent Photoluminescence Mechanism of Graphitic C₃N₄ Quantum Dots. Advanced Theory and Simulations, 2019, 2, 1900074.	2.8	13
34	A new nitrogen fixation strategy: the direct formation of *N₂^{â^'} excited state on metal-free photocatalyst. Journal of Materials Chemistry A, 2021, 9, 6214-6222.	10.3	8
35	Sandwich-Polarized Heterojunction: Efficient Charge Separation and Redox Capability Protection for Photocatalytic Overall Water Splitting. ACS Applied Materials & Interfaces, 2022, 14, 32018-32025.	8.0	4
36	Strain-dependent electronic structure and optical properties of monolayer indium selenide: A density functionalâ€¯+â€¯tight-binding modelâ€¯+â€¯many-body perturbation theory study. FlatChem, 2019, 15, 100092.	5.6	3

#	Article	IF	Citations
37	Extensive theoretical studies on the low-lying electronic states of BBr+. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2016, 159, 60-67.	3.9	1
38	Direct formation of interlayer exciton in two-dimensional van der Waals heterostructures. Materials Horizons, 2021, 8, 2208-2215.	12.2	1