Bo Cai

List of Publications by Year
in descending order

54 papers	6,948 citations	126907 33 h-index	155660 55 g-index
55 all docs	55 docs citations	55 times ranked	7930 citing authors

#	Article	IF	Citations
1	Facet-induced coordination competition for highly ordered CsPbBr3 nanoplatelets with strong polarized emission. Nano Research, 2022, 15, 502-509.	10.4	18
2	Perspective on Metal Halides with Selfâ€Trapped Exciton toward White Lightâ€Emitting Diodes. Advanced Optical Materials, 2022, 10, .	7.3	14
3	Boosting Charge Transport in BiVO₄ Photoanode for Solar Water Oxidation. Advanced Materials, 2022, 34, e2108178.	21.0	111
4	Substantial Improvement of Operating Stability by Strengthening Metalâ€Halogen Bonds in Halide Perovskites. Advanced Functional Materials, 2022, 32, .	14.9	16
5	Charge-carrier dynamics and regulation strategies in perovskite light-emitting diodes: From materials to devices. Applied Physics Reviews, 2022, 9, .	11.3	20
6	Green Perovskite Lightâ€Emitting Diodes with 200ÂHours Stability and 16% Efficiency: Crossâ€Linking Strategy and Mechanism. Advanced Functional Materials, 2021, 31, 2011003.	14.9	67
7	Inâ€Situ and Reversible Enhancement of Photoluminescence from CsPbBr₃ Nanoplatelets by Electrical Bias. Advanced Optical Materials, 2021, 9, 2100346.	7.3	7
8	Halide ion migration in lead-free all-inorganic cesium tin perovskites. Applied Physics Letters, 2021, 119, .	3.3	14
9	Perovskite Anion Exchange: A Microdynamics Model and a Polar Adsorption Strategy for Precise Control of Luminescence Color. Advanced Functional Materials, 2021, 31, 2106871.	14.9	45
10	P-Type AsP Nanosheet as an Electron Donor for Stable Solar Broad-Spectrum Hydrogen Evolution. ACS Applied Materials & Interfaces, 2021, 13, 55102-55111.	8.0	2
11	Advances of 2D bismuth in energy sciences. Chemical Society Reviews, 2020, 49, 263-285.	38.1	138
12	Lead-free, stable, high-efficiency (52%) blue luminescent FA₃Bi₂Br₉ perovskite quantum dots. Nanoscale Horizons, 2020, 5, 580-585.	8.0	70
13	Shining Emitter in a Stable Host: Design of Halide Perovskite Scintillators for X-ray Imaging from Commercial Concept. ACS Nano, 2020, 14, 5183-5193.	14.6	205
14	A bilateral interfacial passivation strategy promoting efficiency and stability of perovskite quantum dot light-emitting diodes. Nature Communications, 2020, 11, 3902.	12.8	204
15	Efficient Blue Perovskite Lightâ€Emitting Diodes Boosted by 2D/3D Energy Cascade Channels. Advanced Functional Materials, 2020, 30, 2001732.	14.9	118
16	Two-Dimensional BAs/InTe: A Promising Tandem Solar Cell with High Power Conversion Efficiency. ACS Applied Materials & Interfaces, 2020, 12, 6074-6081.	8.0	32
17	Transferable High-Quality Inorganic Perovskites for Optoelectronic Devices by Weak Interaction Heteroepitaxy. ACS Applied Materials & Interfaces, 2020, 12, 19674-19681.	8.0	12
18	Photon-Induced Reshaping in Perovskite Material Yields of Nanocrystals with Accurate Control of Size and Morphology. Journal of Physical Chemistry Letters, 2019, 10, 4149-4156.	4.6	18

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19	Waterâ€Assisted Synthesis of Blue Chip Excitable 2D Halide Perovskite with Greenâ€Red Dual Emissions for White LEDs. Small Methods, 2019, 3, 1900365.	8.6	25
20	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.	4.3	13
21	Unusual Electronic Transitions in Two-dimensional Layered <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mi>Sn</mml:mi><mml:mi>Sb</mml:mi></mml:mrow><mml:mn>2</mml:mn></m Driven by Electronic State Rehybridization. Physical Review Applied, 2019, 11, .	3.8	21
22	Ferroelastic lattice rotation and band-gap engineering in quasi 2D layered-structure PdSe₂under uniaxial stress. Nanoscale, 2019, 11, 12317-12325.	5.6	32
23	Band engineering realized by chemical combination in 2D group VAâ€"VA materials. Nanoscale Horizons, 2019, 4, 1145-1152.	8.0	15
24	Electronic structure and transport properties of 2D RhTeCl: a NEGF-DFT study. Nanoscale, 2019, 11, 20461-20466.	5.6	8
25	Photonâ€Induced Reversible Phase Transition in CsPbBr₃ Perovskite. Advanced Functional Materials, 2019, 29, 1807922.	14.9	56
26	Stability enhancement and electronic tunability of two-dimensional SbIV compounds via surface functionalization. Applied Surface Science, 2018, 427, 363-368.	6.1	8
27	Stable, Efficient Red Perovskite Lightâ€Emitting Diodes by (Î±, Î´)â€CsPbI₃ Phase Engineering. Advanced Functional Materials, 2018, 28, 1804285.	14.9	105
28	In Situ Passivation of PbBr₆^{4â€"} Octahedra toward Blue Luminescent CsPbBr₃ Nanoplatelets with Near 100% Absolute Quantum Yield. ACS Energy Letters, 2018, 3, 2030-2037.	17.4	402
29	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.	12.2	59
30	Band offsets in new BN/BX (X = P, As, Sb) lateral heterostructures based on bond-orbital theory. Nanoscale, 2018, 10, 15918-15925.	5.6	18
31	Twoâ€Dimensional Metal Halide Perovskites: Theory, Synthesis, and Optoelectronics. Small Methods, 2017, 1, 1600018.	8.6	115
32	Antimonene Oxides: Emerging Tunable Direct Bandgap Semiconductor and Novel Topological Insulator. Nano Letters, 2017, 17, 3434-3440.	9.1	250
33	Van der Waals bilayer antimonene: A promising thermophotovoltaic cell material with 31% energy conversion efficiency. Nano Energy, 2017, 38, 561-568.	16.0	92
34	Two-dimensional SiP: an unexplored direct band-gap semiconductor. 2D Materials, 2017, 4, 015030.	4.4	78
35	Enhancing Optoelectronic Properties of Low-Dimensional Halide Perovskite via Ultrasonic-Assisted Template Refinement. ACS Applied Materials & Interfaces, 2017, 9, 39602-39609.	8.0	12
36	Quantum confinement effect of two-dimensional all-inorganic halide perovskites. Science China Materials, 2017, 60, 811-818.	6.3	38

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37	Cation Exchangeâ€Induced Dimensionality Construction: From Monolayered to Multilayered 2D Single Crystal Halide Perovskites. Advanced Materials Interfaces, 2017, 4, 1700441.	3.7	38
38	Double-Protected All-Inorganic Perovskite Nanocrystals by Crystalline Matrix and Silica for Triple-Modal Anti-Counterfeiting Codes. ACS Applied Materials & Interfaces, 2017, 9, 26556-26564.	8.0	232
39	50â€Fold EQE Improvement up to 6.27% of Solutionâ€Processed Allâ€Inorganic Perovskite CsPbBr₃ QLEDs via Surface Ligand Density Control. Advanced Materials, 2017, 29, 1603885.	21.0	982
40	Two-dimensional GeS with tunable electronic properties via external electric field and strain. Nanotechnology, 2016, 27, 274001.	2.6	85
41	A promising two-dimensional solar cell donor: Black arsenicâ€"phosphorus monolayer with 1.54 eV direct bandgap and mobility exceeding 14,000 cm2Vâ˜1sâ˜1. Nano Energy, 2016, 28, 433-439.	16.0	212
42	Pressure-dependent structural, electronic and optical properties of ZnO with native defect: A first-principles study. Modern Physics Letters B, 2016, 30, 1650275.	1.9	3
43	A promising two-dimensional channel material: monolayer antimonide phosphorus. Science China Materials, 2016, 59, 648-656.	6.3	28
44	Semiconductor-topological insulator transition of two-dimensional SbAs induced by biaxial tensile strain. Physical Review B, 2016, 93, .	3.2	118
45	Two-dimensional BX (X = P, As, Sb) semiconductors with mobilities approaching graphene. Nanoscale, 2016, 8, 13407-13413.	5.6	122
46	CsPbX₃ Quantum Dots for Lighting and Displays: Roomâ€Temperature Synthesis, Photoluminescence Superiorities, Underlying Origins and White Lightâ€Emitting Diodes. Advanced Functional Materials, 2016, 26, 2435-2445.	14.9	2,055
47	Quantum Dots: CsPbX₃ Quantum Dots for Lighting and Displays: Roomâ€Temperature Synthesis, Photoluminescence Superiorities, Underlying Origins and White Lightâ€Emitting Diodes (Adv.) Tj ETQq1 1 0.784314 rgBT /Ov [illegible]	14.9	59
48	N- and p-type doping of antimonene. RSC Advances, 2016, 6, 14620-14625.	3.6	57
49	GeSe monolayer semiconductor with tunable direct band gap and small carrier effective mass. Applied Physics Letters, 2015, 107, .	3.3	148
50	Structural and electronic properties of atomically thin germanium selenide polymorphs. Science China Materials, 2015, 58, 929-935.	6.3	54
51	The impact of Mg content on the structural, electrical and optical properties of MgZnO alloys: A first principles study. Current Applied Physics, 2015, 15, 423-428.	2.4	52
52	Tinene: a two-dimensional Dirac material with a 72 meV band gap. Physical Chemistry Chemical Physics, 2015, 17, 12634-12638.	2.8	66
53	Noncovalent Molecular Doping of Twoâ€Dimensional Materials. ChemNanoMat, 2015, 1, 542-557.	2.8	41
54	Hydrogenated arsenenes as planar magnet and Dirac material. Applied Physics Letters, 2015, 107, .	3.3	137