

# Xuedong Bai

## 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.

105  
papers

4,354  
citations

33  
h-index

65  
g-index

113  
ext. papers

5,463  
ext. citations

11.7  
avg, IF

5.27  
L-index

#	Paper	IF	Citations
105	Engineering of atomic-scale flexoelectricity at grain boundaries.. <i>Nature Communications</i> , <b>2022</b> , 13, 216	17.4	4
104	Electrically driven motion, destruction, and chirality change of polar vortices in oxide superlattices. <i>Science China: Physics, Mechanics and Astronomy</i> , <b>2022</b> , 65, 1	3.6	1
103	Cation-Deficiency-Dependent CO <sub>2</sub> Electroreduction over Copper-Based Ruddlesden-Popper Perovskite Oxides. <i>Angewandte Chemie</i> , <b>2022</b> , 134, e202111670	3.6	
102	Robust growth of two-dimensional metal dichalcogenides and their alloys by active chalcogen monomer supply.. <i>Nature Communications</i> , <b>2022</b> , 13, 1007	17.4	3
101	Broadband Plasmonic NbN Photocatalysts for Enhanced Hydrogen Generation from Ammonia Borane under Visible-Near-Infrared Illumination.. <i>Journal of Physical Chemistry Letters</i> , <b>2022</b> , 4220-4226	6.4	1
100	Cation-Deficiency-Dependent CO Electroreduction over Copper-Based Ruddlesden-Popper Perovskite Oxides. <i>Angewandte Chemie - International Edition</i> , <b>2021</b> ,	16.4	3
99	Microscopic Kinetics Pathway of Salt Crystallization in Graphene Nanocapillaries. <i>Physical Review Letters</i> , <b>2021</b> , 126, 136001	7.4	9
98	Atomic-Scale Observation of Structure Transition from Brownmillerite to Infinite Layer in SrFeO <sub>2.5</sub> Thin Films. <i>Chemistry of Materials</i> , <b>2021</b> , 33, 3113-3120	9.6	1
97	Creating polar antivortex in PbTiO/SrTiO superlattice. <i>Nature Communications</i> , <b>2021</b> , 12, 2054	17.4	14
96	Two-Dimensional Room-Temperature Giant Antiferrodistortive SrTiO <sub>3</sub> at a Grain Boundary. <i>Physical Review Letters</i> , <b>2021</b> , 126, 225702	7.4	2
95	Engineering polar vortex from topologically trivial domain architecture. <i>Nature Communications</i> , <b>2021</b> , 12, 4620	17.4	4
94	Three-Dimensional Limit of Bulk Rashba Effect in Ferroelectric Semiconductor GeTe. <i>Nano Letters</i> , <b>2021</b> , 21, 77-83	11.5	6
93	Development of in situ optical spectroscopy with high temporal resolution in an aberration-corrected transmission electron microscope. <i>Review of Scientific Instruments</i> , <b>2021</b> , 92, 013704	17	3
92	Atomic-scale dynamics of the phase transition in bilayer PtSe <sub>2</sub> . <i>Journal of Materials Chemistry C</i> , <b>2021</b> , 9, 5261-5266	7.1	0
91	Reversible Intercalation of Al-Ions in Poly(3,4-Ethylenedioxythiophene):Poly(4-Styrenesulfonate) Electrode for Aqueous Electrochemical Capacitors with High Energy Density. <i>Energy Technology</i> , <b>2021</b> , 9, 2001036	3.5	1
90	Perpendicular magnetic anisotropy induced by La <sub>2/3</sub> Sr <sub>1/3</sub> MnO <sub>3</sub> /BaCo <sub>2</sub> O <sub>5</sub> + interlayer coupling. <i>Journal Physics D: Applied Physics</i> , <b>2021</b> , 54, 185302	3	0
89	Giant anisotropic photonics in the 1D van der Waals semiconductor fibrous red phosphorus. <i>Nature Communications</i> , <b>2021</b> , 12, 4822	17.4	7

88	Complete structural characterization of single carbon nanotubes by Rayleigh scattering circular dichroism. <i>Nature Nanotechnology</i> , <b>2021</b> , 16, 1073-1078	28.7	9
87	Edge-Enriched Large-Area Hexagonal BN Ultrathin Films with Enhanced Optical Second Harmonic Generation. <i>Journal of Physical Chemistry Letters</i> , <b>2021</b> , 12, 9475-9480	6.4	1
86	Highly Stable and Spectrally Tunable Gamma Phase RbxCs <sub>1-x</sub> PbI <sub>3</sub> Gradient-Alloyed Quantum Dots in PMMA Matrix through A Sites Engineering. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2008211	15.6	37
85	Rational design of layered oxide materials for sodium-ion batteries. <i>Science</i> , <b>2020</b> , 370, 708-711	33.3	209
84	Surface protonation and oxygen evolution activity of epitaxial La <sub>1-x</sub> Sr <sub>x</sub> CoO <sub>3</sub> thin films. <i>Science China: Physics, Mechanics and Astronomy</i> , <b>2020</b> , 63, 1	3.6	2
83	Seeded growth of large single-crystal copper foils with high-index facets. <i>Nature</i> , <b>2020</b> , 581, 406-410	50.4	68
82	Synthesis of Honeycomb-Structured Beryllium Oxide via Graphene Liquid Cells. <i>Angewandte Chemie</i> , <b>2020</b> , 132, 15864-15870	3.6	
81	Synthesis of Honeycomb-Structured Beryllium Oxide via Graphene Liquid Cells. <i>Angewandte Chemie - International Edition</i> , <b>2020</b> , 59, 15734-15740	16.4	8
80	Atomic origin of spin-valve magnetoresistance at the SrRuO grain boundary. <i>National Science Review</i> , <b>2020</b> , 7, 755-762	10.8	8
79	Constructing Na-Ion Cathodes via Alkali-Site Substitution. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1910840	10.6	11
78	Revealing High Na-Content P2-Type Layered Oxides as Advanced Sodium-Ion Cathodes. <i>Journal of the American Chemical Society</i> , <b>2020</b> , 142, 5742-5750	16.4	84
77	Unraveling nanoscale electrochemical dynamics of graphite fluoride by in situ electron microscopy: key difference between lithiation and sodiation. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 6105-6111	13	15
76	Vertical graphene growth on uniformly dispersed sub-nanoscale SiO <sub>x</sub> /N-doped carbon composite microspheres with a 3D conductive network and an ultra-low volume deformation for fast and stable lithium-ion storage. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 3822-3833	13	28
75	Visualizing Anisotropic Oxygen Diffusion in Ceria under Activated Conditions. <i>Physical Review Letters</i> , <b>2020</b> , 124, 056002	7.4	5
74	Enabling Stable Cycling of 4.2 V High-Voltage All-Solid-State Batteries with PEO-Based Solid Electrolyte. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1909392	15.6	77
73	Regulation of phase transition and magnetocaloric effect by ferroelectric domains in FeRh/PMN-PT heterojunctions. <i>Acta Materialia</i> , <b>2020</b> , 191, 51-59	8.4	14
72	Raman spectra and phonon structures of BaGa <sub>4</sub> Se <sub>7</sub> crystal. <i>Communications Physics</i> , <b>2020</b> , 3,	5.4	6
71	Insight into long-period pattern by depth sectioning using aberration-corrected scanning transmission electron microscope. <i>Ultramicroscopy</i> , <b>2020</b> , 209, 112885	3.1	2

70	Atomic-scale observations of electrical and mechanical manipulation of topological polar flux closure. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 18954-18961	11.5	23
69	In Situ Oxygen Doping of Monolayer MoS for Novel Electronics. <i>Small</i> , <b>2020</b> , 16, e2004276	11	21
68	Optical fibres with embedded two-dimensional materials for ultrahigh nonlinearity. <i>Nature Nanotechnology</i> , <b>2020</b> , 15, 987-991	28.7	37
67	Atomic imaging of mechanically induced topological transition of ferroelectric vortices. <i>Nature Communications</i> , <b>2020</b> , 11, 1840	17.4	24
66	Strain-Inhibited Electromigration of Oxygen Vacancies in LaCoO. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 36800-36806	9.5	12
65	Epitaxial growth of a 100-square-centimetre single-crystal hexagonal boron nitride monolayer on copper. <i>Nature</i> , <b>2019</b> , 570, 91-95	50.4	247
64	Kinetic modulation of graphene growth by fluorine through spatially confined decomposition of metal fluorides. <i>Nature Chemistry</i> , <b>2019</b> , 11, 730-736	17.6	61
63	Atomic-scale imaging of the defect dynamics in ceria nanowires under heating by in situ aberration-corrected TEM. <i>Science China Chemistry</i> , <b>2019</b> , 62, 1704-1709	7.9	3
62	Lattice Dynamics, Phonon Chirality, and Spin-Phonon Coupling in 2D Itinerant Ferromagnet Fe <sub>3</sub> GeTe <sub>2</sub> . <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1904734	15.6	33
61	Atomic origin of Ti-deficient dislocation in SrTiO <sub>3</sub> bicrystals and their electronic structures. <i>Journal of Applied Physics</i> , <b>2019</b> , 126, 174106	2.5	2
60	Subunit cell-level measurement of polarization in an individual polar vortex. <i>Science Advances</i> , <b>2019</b> , 5, eaav4355	14.3	23
59	Diffusion-controlled alloying of single-phase multi-principal transition metal carbides with high toughness and low thermal diffusivity. <i>Applied Physics Letters</i> , <b>2019</b> , 114, 011905	3.4	28
58	Multidimensional Synergistic Nanoarchitecture Exhibiting Highly Stable and Ultrafast Sodium-Ion Storage. <i>Advanced Materials</i> , <b>2018</b> , 30, e1707122	24	94
57	Lithium-Ion Batteries: A Single-Step Hydrothermal Route to 3D Hierarchical Cu <sub>2</sub> O/CuO/rGO Nanosheets as High-Performance Anode of Lithium-Ion Batteries (Small 5/2018). <i>Small</i> , <b>2018</b> , 14, 1870020	11	9
56	Surface plasmon enhanced solar-blind photoresponse of Ga <sub>2</sub> O <sub>3</sub> film with Ga nanospheres. <i>Science China: Physics, Mechanics and Astronomy</i> , <b>2018</b> , 61, 1	3.6	8
55	Direct Observation of Inner-Layer Inward Contractions of Multiwalled Boron Nitride Nanotubes upon in Situ Heating. <i>Nanomaterials</i> , <b>2018</b> , 8,	5.4	6
54	In-situ TEM investigation of MoS <sub>2</sub> upon alkali metal intercalation. <i>Science China Chemistry</i> , <b>2018</b> , 61, 222-227	20.7	18
53	Measurement of complex optical susceptibility for individual carbon nanotubes by elliptically polarized light excitation. <i>Nature Communications</i> , <b>2018</b> , 9, 3387	17.4	13

52	Surface plasmon enhanced solar-blind photoresponse of Ga <sub>2</sub> O <sub>3</sub> film with Ga nanospheres <b>2018</b> , 61, 1		1
51	A Single-Step Hydrothermal Route to 3D Hierarchical Cu <sub>2</sub> O/CuO/rGO Nanosheets as High-Performance Anode of Lithium-Ion Batteries. <i>Small</i> , <b>2018</b> , 14, 1702667	11	68
50	Manipulating the Ferroelectric Domain States and Structural Distortion in Epitaxial BiFeO <sub>3</sub> Ultrathin Films via Bi Nonstoichiometry. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 43792-43801	9.5	6
49	Surface Doping to Enhance Structural Integrity and Performance of Li-Rich Layered Oxide. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1802105	21.8	134
48	Valley Pseudospin with a Widely Tunable Bandgap in Doped Honeycomb BN Monolayer. <i>Nano Letters</i> , <b>2017</b> , 17, 2079-2087	11.5	29
47	Arrays of horizontal carbon nanotubes of controlled chirality grown using designed catalysts. <i>Nature</i> , <b>2017</b> , 543, 234-238	50.4	251
46	Platinum composite nanowires for ultrasensitive mass detection. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 143102	10.2	2
45	The Mechanistic Insights into the 2H-1T Phase Transition of MoS <sub>2</sub> upon Alkali Metal Intercalation: From the Study of Dynamic Sodiation Processes of MoS <sub>2</sub> Nanosheets. <i>Advanced Materials Interfaces</i> , <b>2017</b> , 4, 1700171	4.6	42
44	Resistive switching mechanism in the one diode-one resistor memory based on p-Si/n-ZnO heterostructure revealed by in-situ TEM. <i>Scientific Reports</i> , <b>2017</b> , 7, 45143	4.9	33
43	STEM-EELS Evaluation of the Dependence of Localized Surface Plasmon Linewidth on the Size of Au Nanoparticles. <i>Microscopy and Microanalysis</i> , <b>2017</b> , 23, 1554-1555	0.5	
42	Water-Assisted Preparation of High-Purity Semiconducting (14,4) Carbon Nanotubes. <i>ACS Nano</i> , <b>2017</b> , 11, 186-193	16.7	66
41	Gluing Carbon Black and Sulfur at Nanoscale: A Polydopamine-Based Nano-Binder for Double-Shelled Sulfur Cathodes. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1601591	21.8	57
40	Rolling Up a Monolayer MoS <sub>2</sub> Sheet. <i>Small</i> , <b>2016</b> , 12, 3770-4	11	39
39	Revealing the Electrochemical Lithiation Routes of CuO Nanowires by in Situ TEM. <i>ChemElectroChem</i> , <b>2016</b> , 3, 1296-1300	4.3	10
38	Towards the controlled CVD growth of graphitic BN atomic layer films: The key role of B <sub>2</sub> delivery molecular precursor. <i>Nano Research</i> , <b>2016</b> , 9, 1221-1235	10	13
37	Unraveling the Beesaw Competition between the Electrically Driven Reduction and Reoxidation Processes in Ceria with In Situ Electron Microscopy. <i>ChemCatChem</i> , <b>2016</b> , 8, 3326-3329	5.2	
36	In-situ TEM study of the dynamic behavior of the graphene-metal interface evolution under Joule heating. <i>Science China Technological Sciences</i> , <b>2016</b> , 59, 1080-1084	3.5	8
35	Revealing Three Stages of DNA-Cisplatin Reaction by a Solid-State Nanopore. <i>Scientific Reports</i> , <b>2015</b> , 5, 11868	4.9	11

34	Strong Coupling between ZnO Excitons and Localized Surface Plasmons of Silver Nanoparticles Studied by STEM-EELS. <i>Nano Letters</i> , <b>2015</b> , 15, 5926-31	11.5	38
33	Growing Zigzag (16,0) Carbon Nanotubes with Structure-Defined Catalysts. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 8688-91	16.4	96
32	In situ imaging of on-surface, solvent-free molecular single-crystal growth. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 4972-5	16.4	31
31	Oxygen-Assisted Chemical Vapor Deposition Growth of Large Single-Crystal and High-Quality Monolayer MoS <sub>2</sub> . <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 15632-5	16.4	243
30	Dynamic Rate Mechanism of V <sub>2</sub> O <sub>5</sub> Coated SnO <sub>2</sub> Nanowires for Lithium Ion Batteries Studied by in situ TEM. <i>Microscopy and Microanalysis</i> , <b>2015</b> , 21, 1913-1914	0.5	
29	Real-time Observation of Deep Lithiation of Tungsten Oxide Nanowires by In Situ Electron Microscopy. <i>Angewandte Chemie - International Edition</i> , <b>2015</b> , 54, 15222-5	16.4	24
28	Real-time Observation of Deep Lithiation of Tungsten Oxide Nanowires by In Situ Electron Microscopy. <i>Angewandte Chemie</i> , <b>2015</b> , 127, 15437-15440	3.6	5
27	Strong Coupling between ZnO Exciton and Localized Surface Plasmon in Ag Nanoparticles Studied by STEM-EELS. <i>Microscopy and Microanalysis</i> , <b>2015</b> , 21, 1685-1686	0.5	1
26	Optical visualization and polarized light absorption of the single-wall carbon nanotube to verify intrinsic thermal applications. <i>Light: Science and Applications</i> , <b>2015</b> , 4, e318-e318	16.7	40
25	Unusual role of epilayer-substrate interactions in determining orientational relations in van der Waals epitaxy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 16670-5	11.5	51
24	Carbon-Doped Boron Nitride Nanosheets with Ferromagnetism above Room Temperature. <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 5985-5992	15.6	73
23	Self-adaptive strain-relaxation optimization for high-energy lithium storage material through crumpling of graphene. <i>Nature Communications</i> , <b>2014</b> , 5, 4565	17.4	128
22	Gate-dependent pseudospin mixing in graphene/boron nitride moiré superlattices. <i>Nature Physics</i> , <b>2014</b> , 10, 743-747	16.2	53
21	Filament growth dynamics in solid electrolyte-based resistive memories revealed by in situ TEM. <i>Nano Research</i> , <b>2014</b> , 7, 1065-1072	10	27
20	Chirality-specific growth of single-walled carbon nanotubes on solid alloy catalysts. <i>Nature</i> , <b>2014</b> , 510, 522-4	50.4	569
19	Systematic determination of absolute absorption cross-section of individual carbon nanotubes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 7564-9	11.5	59
18	Real-time in situ TEM studying the fading mechanism of tin dioxide nanowire electrodes in lithium ion batteries. <i>Science China Technological Sciences</i> , <b>2013</b> , 56, 2630-2635	3.5	21
17	Facile synthesis of large-area ultrathin hexagonal BN films via self-limiting growth at the molten B <sub>2</sub> O <sub>3</sub> surface. <i>Small</i> , <b>2013</b> , 9, 1353-8	11	23

16	Recent development of studies on the mechanism of resistive memories in several metal oxides. <i>Science China: Physics, Mechanics and Astronomy</i> , <b>2013</b> , 56, 2361-2369	3.6	9
15	Electrical, Optical and Ionic Probe inside Transmission Electron Microscope. <i>Materials Research Society Symposia Proceedings</i> , <b>2013</b> , 1525, 1		
14	Comparison of Structural Analysis and Electrochemical Studies of C-Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> and CNT-Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> Nanocomposites particles used as Anode for Lithium Ion Battery. <i>Materials Research Society Symposia Proceedings</i> , <b>2013</b> , 1541, 75701		
13	An atlas of carbon nanotube optical transitions. <i>Nature Nanotechnology</i> , <b>2012</b> , 7, 325-9	28.7	154
12	Ultralong aligned single-walled carbon nanotubes on flexible fluorophlogopite mica for strain sensors. <i>Nano Research</i> , <b>2012</b> , 5, 443-449	10	11
11	Evidence for electric-field-driven migration and diffusion of oxygen vacancies in Pr <sub>0.7</sub> Ca <sub>0.3</sub> MnO <sub>3</sub> . <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 114506	2.5	26
10	Photo-enhanced field electron emission of cadmium sulfide nanowires. <i>Science China: Physics, Mechanics and Astronomy</i> , <b>2011</b> , 54, 1963-1966	3.6	1
9	Electroforming and endurance behavior of Al/Pr <sub>0.7</sub> Ca <sub>0.3</sub> MnO <sub>3</sub> /Pt devices. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 113506	3.4	18
8	Intrinsic radial breathing oscillation in suspended single-walled carbon nanotubes. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	32
7	Electrically driven redox process in cerium oxides. <i>Journal of the American Chemical Society</i> , <b>2010</b> , 132, 4197-201	16.4	82
6	Carbon nanotube transistors with graphene oxide films as gate dielectrics. <i>Science China: Physics, Mechanics and Astronomy</i> , <b>2010</b> , 53, 828-833	3.6	19
5	Synthesis of Carbon/Carbon Core/Shell Nanotubes with a High Specific Surface Area. <i>Journal of Physical Chemistry C</i> , <b>2009</b> , 113, 61-68	3.8	36
4	Significantly enhanced critical current densities in MgB <sub>2</sub> tapes made by a scaleable nanocarbon addition route. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 072502	3.4	163
3	NANOMECHANICS OF INDIVIDUAL ZINC OXIDE NANOBELTS MEASURED BY IN SITU TRANSMISSION ELECTRON MICROSCOPY. <i>International Journal of Nanoscience</i> , <b>2006</b> , 05, 951-958	0.6	2
2	Measuring the Work Function at a Nanobelt Tip and at a Nanoparticle Surface. <i>Nano Letters</i> , <b>2003</b> , 3, 1147-1150	11.5	233
1	In situ separator modification via CVD-derived N-doped carbon for highly reversible Zn metal anodes. <i>Nano Research</i> , 1	10	6