

# Nan Zhang

## List of Publications by Year in descending order

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63  
papers

4,129  
citations

279798

23  
h-index

144013

57  
g-index

71  
all docs

71  
docs citations

71  
times ranked

5226  
citing authors

#	ARTICLE	IF	CITATIONS
1	The origin of ultrahigh piezoelectricity in relaxor-ferroelectric solid solution crystals. <i>Nature Communications</i> , 2016, 7, 13807.	12.8	510
2	3D Nitrogen-Anion-Decorated Nickel Sulfides for Highly Efficient Overall Water Splitting. <i>Advanced Materials</i> , 2017, 29, 1701584.	21.0	478
3	Transparent ferroelectric crystals with ultrahigh piezoelectricity. <i>Nature</i> , 2020, 577, 350-354.	27.8	360
4	Surface/interface nanoengineering for rechargeable Zn-air batteries. <i>Energy and Environmental Science</i> , 2020, 13, 1132-1153.	30.8	344
5	High-purity pyrrole-type FeN <sub>4</sub> sites as a superior oxygen reduction electrocatalyst. <i>Energy and Environmental Science</i> , 2020, 13, 111-118.	30.8	327
6	Interfacial engineering of cobalt sulfide/graphene hybrids for highly efficient ammonia electrosynthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 6635-6640.	7.1	242
7	Ultrathin Cobalt Oxide Layers as Electrocatalysts for High-Performance Flexible Zn-Air Batteries. <i>Advanced Materials</i> , 2019, 31, e1807468.	21.0	227
8	High-Density Planar-like Fe <sub>2</sub> N <sub>6</sub> Structure Catalyzes Efficient Oxygen Reduction. <i>Matter</i> , 2020, 3, 509-521.	10.0	184
9	Dynamic Migration of Surface Fluorine Anions on Cobalt-Based Materials to Achieve Enhanced Oxygen Evolution Catalysis. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 15471-15475.	13.8	178
10	Enhanced Catalytic Activity in Nitrogen-Anion Modified Metallic Cobalt Disulfide Porous Nanowire Arrays for Hydrogen Evolution. <i>ACS Catalysis</i> , 2017, 7, 7405-7411.	11.2	152
11	New Antiferroelectric Perovskite System with Ultrahigh Energy-Storage Performance at Low Electric Field. <i>Chemistry of Materials</i> , 2019, 31, 979-990.	6.7	108
12	Nanopore Confinement of Electrocatalysts Optimizing Triple Transport for an Ultrahigh-Power-Density Zinc-Air Fuel Cell with Robust Stability. <i>Advanced Materials</i> , 2020, 32, e2003251.	21.0	104
13	Solid-liquid phase transition induced electrocatalytic switching from hydrogen evolution to highly selective CO <sub>2</sub> reduction. <i>Nature Catalysis</i> , 2021, 4, 202-211.	34.4	89
14	Subsize Pt-based intermetallic compound enables long-term cyclic mass activity for fuel-cell oxygen reduction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	86
15	Surface Nitrogen-Injection Engineering for High Formation Rate of CO <sub>2</sub> Reduction to Formate. <i>Nano Letters</i> , 2020, 20, 6097-6103.	9.1	71
16	Large Piezoelectric Strain with Superior Thermal Stability and Excellent Fatigue Resistance of Lead-Free Potassium Sodium Niobate-Based Grain Orientation-Controlled Ceramics. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 10220-10226.	8.0	51
17	Stepwise Hollow Prussian Blue Nanoframes/Carbon Nanotubes Composite Film as Ultrahigh Rate Sodium Ion Cathode. <i>Advanced Functional Materials</i> , 2020, 30, 2002624.	14.9	49
18	Constructing Graphitic-Nitrogen-Bonded Pentagons in Interlayer-Expanded Graphene Matrix toward Carbon-Based Electrocatalysts for Acidic Oxygen Reduction Reaction. <i>Advanced Materials</i> , 2021, 33, e2103133.	21.0	47

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19	Tailoring Electronic Structure of Atomically Dispersed Metal-NC <sub>3</sub> S <sub>1</sub> Active Sites for Highly Efficient Oxygen Reduction Catalysis. , 2019, 1, 139-146.		34
20	Two-Dimensional Hierarchical Fe-N-C Electrocatalyst for Zn-Air Batteries with Ultrahigh Specific Capacity. , 2020, 2, 35-41.		34
21	Polar domain structural evolution under electric field and temperature in the (Bi <sub>0.5</sub> Na <sub>0.5</sub> )TiO <sub>3</sub> -0.06BaTiO <sub>3</sub> piezoceramics. Journal of the American Ceramic Society, 2019, 102, 437-447.	3.8	30
22	Strength and toughness improvement in a C/SiC composite reinforced with slurry-prone SiC whiskers. Ceramics International, 2014, 40, 14099-14104.	4.8	28
23	Recoverable Self-Polarization in Lead-Free Bismuth Sodium Titanate Piezoelectric Thin Films. ACS Applied Materials & Interfaces, 2017, 9, 28716-28725.	8.0	26
24	Carbon nanotubes introduced in different phases of C/PyC/SiC composites: Effect on microstructure and properties of the materials. Composites Science and Technology, 2015, 115, 28-33.	7.8	24
25	Local-scale structures across the morphotropic phase boundary in PbZr <sub>1-x</sub> Ti <sub>x</sub> O <sub>3</sub> . IUCr, 2018, 5, 73-81.	2.2	24
26	A new kind of thermocouple made of p-type and n-type semi-conductive oxides with giant thermoelectric voltage for high temperature sensing. Journal of Materials Chemistry C, 2018, 6, 3206-3211.	5.5	23
27	Evolution of mesoscopic domain structure and macroscopic properties in lead-free Bi <sub>0.5</sub> Na <sub>0.5</sub> TiO <sub>3</sub> -BaTiO <sub>3</sub> ferroelectric ceramics. Journal of Applied Physics, 2021, 129, .	2.5	23
28	Magnetolectric relaxor and reentrant behaviours in multiferroic Pb(Fe <sub>2</sub> /3W <sub>1</sub> /3)O <sub>3</sub> crystal. Scientific Reports, 2016, 6, 22327.	3.3	20
29	Crystalline phase and electrical properties of lead-free piezoelectric KNN-based films with different orientations. Journal of the American Ceramic Society, 2017, 100, 2965-2971.	3.8	18
30	Monoclinic distortion, polarization rotation and piezoelectricity in the ferroelectric Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> . IUCr, 2018, 5, 417-427.	2.2	17
31	In-situ domain structure characterization of Pb(Mg <sub>1</sub> /3Nb <sub>2</sub> /3)O <sub>3</sub> -PbTiO <sub>3</sub> crystals under alternating current electric field poling. Acta Materialia, 2021, 210, 116853.	7.9	17
32	Atomic reconfiguration among tri-state transition at ferroelectric/antiferroelectric phase boundaries in Pb(Zr,Ti)O <sub>3</sub> . Nature Communications, 2022, 13, 1390.	12.8	17
33	Self-Polarization in Epitaxial Fully Matched Lead-Free Bismuth Sodium Titanate Based Ferroelectric Thin Films. ACS Applied Materials & Interfaces, 2018, 10, 23945-23951.	8.0	14
34	Multiple structural components and their competition in the intermediate state of antiferroelectric $Pb_{1-x}Zr_xO_3$ . Physical Review B, 2021, 103, .	3.2	13
35	High Curie temperature bismuth-based piezo-/ferroelectric single crystals of complex perovskite structure: recent progress and perspectives. CrystEngComm, 2022, 24, 220-230.	2.6	13
36	Achieving Large Switchable Polarization and Enhanced Piezoelectric Response in BiFeO <sub>3</sub> -PbTiO <sub>3</sub> Solid Solution Ceramics. Advanced Electronic Materials, 2022, 8, 2100883.	5.1	12

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37	Dynamic Migration of Surface Fluorine Anions on Cobalt-Based Materials to Achieve Enhanced Oxygen Evolution Catalysis. <i>Angewandte Chemie</i> , 2018, 130, 15697-15701.	2.0	11
38	Effects of antiferroelectric substitution on the structure and ferroelectric properties of a complex perovskite solid solution. <i>Journal of Materials Chemistry C</i> , 2020, 8, 5795-5806.	5.5	11
39	Impact of quenched random fields on the ferroelectric-to-relaxor crossover in the solid solution $(1-x)\text{BaTiO}_3-x\text{DyFeO}_3$ . <i>Physical Review B</i> , 2018, 98, .	3.2	10
40	Single Crystal Growth and Hierarchical Ferroelectric Domain Structure of $(1-x)\text{BiFeO}_3-x\text{PbTiO}_3$ Solid Solutions. <i>Crystal Growth and Design</i> , 2018, 18, 4503-4510.	3.0	10
41	Chemically engineered multiferroic morphotropic phase boundary in $\text{BiFeO}_3$ -based single phase multiferroics. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	10
42	Ferroelastic domain hierarchy in the intermediate state of $\text{PbZr}_{0.98}\text{Ti}_{0.02}\text{O}_3$ single crystal. <i>APL Materials</i> , 2021, 9, .	5.1	9
43	New method to measure domain-wall motion contribution to piezoelectricity: the case of $\text{PbZr}_{0.65}\text{Ti}_{0.35}\text{O}_3$ ferroelectric. <i>Journal of Applied Crystallography</i> , 2020, 53, 1039-1050.	4.5	8
44	Giant strain responses and relaxor characteristics in lead-free $(\text{Bi}_{0.5}\text{Na}_{0.5})\text{TiO}_3-\text{BaZrO}_3$ ferroelectric thin films. <i>Journal of Materials Chemistry C</i> , 2022, 10, 7449-7459.	5.5	8
45	Complex morphotropic domain structure and ferroelectric properties in high- $T_C$ single crystals of a ternary perovskite solid solution. <i>Journal of Materials Chemistry C</i> , 2018, 6, 9216-9223.	5.5	7
46	Meso- to nano-scopic domain structures in high Curie-temperature piezoelectric $\text{BiScO}_3-\text{PbTiO}_3$ single crystals of complex perovskite structure. <i>Journal of Materials Chemistry C</i> , 2020, 8, 7234-7243.	5.5	7
47	Surface microenvironment optimization-induced robust oxygen reduction for neutral zinc-air batteries. <i>Natural Sciences</i> , 2021, 1, e20210005.	2.1	6
48	Coexistence of relaxor behavior and ferromagnetic order in multiferroic $\text{Pb}(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3-\text{BiFeO}_3$ solid solution. <i>Journal of Materials Chemistry C</i> , 2020, 8, 13306-13318.	5.5	5
49	Multiscale Domain Structures and Ferroic Properties of Dy-Modified $\text{BiFeO}_3-\text{PbTiO}_3$ Single Crystals. <i>Crystal Growth and Design</i> , 2021, 21, 3082-3092.	3.0	5
50	Determination of chemical ordering in the complex perovskite $\text{Pb}(\text{Cd}_{1/3}\text{Nb}_{2/3})\text{O}_3$ . <i>IUCr</i> , 2018, 5, 808-815.	2.2	5
51	Growth and characterization of ternary $\text{BiScO}_3-\text{Pb}(\text{Cd}_{1/3}\text{Nb}_{2/3})\text{O}_3-\text{PbTiO}_3$ ferroelectric single crystals with high Curie temperature. <i>CrystEngComm</i> , 2020, 22, 4544-4551.	2.6	4
52	Single-Beam Acoustic Tweezer Prepared by Lead-Free KNN-Based Textured Ceramics. <i>Micromachines</i> , 2022, 13, 175.	2.9	4
53	Local structures and temperature-driven polarization rotation in Zr-rich $\text{PbZr}_{1-x}\text{Ti}_x\text{O}_3$ . <i>Applied Physics Letters</i> , 2018, 113, .	3.3	3
54	Achieving Higher Strength and Sensitivity toward UV Light in Multifunctional Composites by Controlling the Thickness of Nanolayer on the Surface of Glass Fiber. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 23399-23405.	8.0	3

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55	Strong Anisotropy and Ultralow Percolation Threshold in Multiscale Composites Modified by Carbon Nanotubes Coated Hollow Glass Fiber. <i>Advanced Engineering Materials</i> , 2018, 20, 1800077.	3.5	2
56	Exploring Structure-function Relationship of Two-dimensional Electrocatalysts with Synchrotron Radiation X-ray Absorption Spectrum. <i>Current Chinese Science</i> , 2021, 1, 22-42.	0.5	2
57	Large-Area and Clean Graphene Transfer on Gold-Nanopyramid-Structured Substrates: Implications for Surface-Enhanced Raman Scattering Detection. <i>ACS Applied Nano Materials</i> , 2022, 5, 3878-3888.	5.0	2
58	Identification of a coherent twin relationship from high-resolution reciprocal-space maps. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2022, 78, 158-171.	0.1	2
59	Magnetic properties of multiferroic (1-x)PbTiO <sub>3</sub> -xDyFeO <sub>3</sub> system. <i>Ferroelectrics</i> , 2018, 534, 206-211.	0.6	0
60	Chemical ordering and relaxor properties in a novel solid solution of (1-x)Pb(Mg <sub>1/3</sub> Nb <sub>2/3</sub> )O <sub>3</sub> -xPb(Cd <sub>1/3</sub> Nb <sub>2/3</sub> )O <sub>3</sub> . <i>Ferroelectrics</i> , 2019, 553, 14-25.	0.6	0
61	Evolution of magnetic order in multiferroic Pb(Fe <sub>2/3</sub> W <sub>1/3</sub> )O <sub>3</sub> –BiFeO <sub>3</sub> solid solution. <i>Journal of the American Ceramic Society</i> , 2021, 104, 4585-4593.	3.8	0
62	A decade of development in advanced dielectrics research from JAD's perspectives. <i>Journal of Advanced Dielectrics</i> , 2020, 10, 2001001.	2.4	0
63	Research progress of the investigation of intrinsic and extrinsic origin of piezoelectric materials by X-ray diffraction. <i>Wuli Xuebao/Acta Physica Sinica</i> , 2020, 69, 127711.	0.5	0