He Tian

List of Publications by Year in Descending Order

88 papers	6,041 citations	29 h-index	77 g-index
92 ext. papers	7,485 ext. citations	12.4 avg, IF	5.68 L-index

#	Paper	IF	Citations
88	Large-scale synthesis of N-doped carbon capsules supporting atomically dispersed iron for efficient oxygen reduction reaction electrocatalysis. *EScience*, **2022**,		17
87	Functionalized Iron-Nitrogen-Carbon Electrocatalyst Provides a Reversible Electron Transfer Platform for Efficient Uranium Extraction from Seawater. *Advanced Materials*, **2021**, e2106621	24	42
86	Efficient light-emitting diodes based on oriented perovskite nanoplatelets. *Science Advances*, **2021**, 7, eabg8458	14.3	23
85	Efficient and bright warm-white electroluminescence from lead-free metal halides. *Nature Communications*, **2021**, 12, 1421	17.4	38
84	Interface-engineered electron and hole tunneling. *Science Advances*, **2021**, 7,	14.3	3
83	Enhanced hybrid improper ferroelectricity in Fe/Nb cosubstituted Ca3Mn2O7 ceramics. *Journal of the American Ceramic Society*, **2021**, 104, 4000-4013	3.8	1
82	Electric field control of superconductivity at the LaAlO/KTaO(111) interface. *Science*, **2021**, 372, 721-724	33.3	15
81	Room-temperature multiferroic characteristics and unique vortex domain structures of h-Yb1−InxFeO3 solid solutions. *Journal of the American Ceramic Society*, **2021**, 104, 6393	3.8	0
80	Near-equiatomic high-entropy decagonal quasicrystal in Al20Si20Mn20Fe20Ga20. *Science China Materials*, **2021**, 64, 440-447	7.1	5
79	Fe ultra-small particles anchored on carbon aerogels to enhance the oxygen reduction reaction in Zn-air batteries. *Journal of Materials Chemistry A*, **2021**, 9, 6861-6871	13	10
78	Two-Dimensional Superconductivity at the LaAlO_{3}/KTaO_{3}(110) Heterointerface. *Physical Review Letters*, **2021**, 126, 026802	7.4	12
77	Imaging simulation of charged nanowires in TEM with large defocus distance. *Microscopy (Oxford, England)*, **2021**, 70, 388-393	1.3	
76	Univariate Lattice Parameter Modulation of Single-Crystal-like Anatase TiO2 Hierarchical Nanowire Arrays to Improve Photoactivity. *Chemistry of Materials*, **2021**, 33, 1489-1497	9.6	10
75	Fe-Ni Alloy Nanoclusters Anchored on Carbon Aerogels as High-Efficiency Oxygen Electrocatalysts in Rechargeable Zn-Air Batteries. *Small*, **2021**, 17, e2102002	11	7
74	Plasmonic Metal Oxide Nanocrystals via Surface Anchoring of Redox-Active Phosphorus Species. *Chemistry of Materials*, **2021**, 33, 5290-5297	9.6	1
73	Giant room temperature elastocaloric effect in metal-free thin-film perovskites. *Npj Computational Materials*, **2021**, 7,	10.9	2
72	Metal-Free Catalyst with Large Carbon Defects for Efficient Direct Overall Water Splitting in Air at Room Pressure. *ACS Applied Materials & Interfaces*, **2020**, 12, 30280-30288	9.5	15

71	An ultrastable lithium metal anode enabled by designed metal fluoride spansules. *Science Advances* , **2020**, 6, eaaz3112	14.3	104
70	Highly efficient electrocatalytic hydrogen evolution promoted by O-Mo-C interfaces of ultrafine □MoC nanostructures. *Chemical Science*, **2020**, 11, 3523-3530	9.4	29
69	Distribution and concentration of surface oxygen vacancy of TiO2 and its photocatalytic activity. *Journal Physics D: Applied Physics*, **2020**, 53, 424001	3	3
68	Enhanced hybrid improper ferroelectricity in Sr3□BaxSn2O7 ceramics with a Ruddlesden□Popper (R□P) structure. *Applied Physics Letters*, **2020**, 116, 042903	3.4	12
67	Overcoming the Limits of the Interfacial Dzyaloshinskii-Moriya Interaction by Antiferromagnetic Order in Multiferroic Heterostructures. *Advanced Materials*, **2020**, 32, e1904415	24	17
66	Biomacromolecules enabled dendrite-free lithium metal battery and its origin revealed by cryo-electron microscopy. *Nature Communications*, **2020**, 11, 488	17.4	90
65	Polarization screening-induced epitaxial growth and interfacial magnetism of BiFeO3/PbTiO3 nanoplates. *CrystEngComm*, **2020**, 22, 639-645	3.3	1
64	Direct visualization of irreducible ferrielectricity in crystals. *Npj Quantum Materials*, **2020**, 5,	5	3
63	Controlled chelation between tannic acid and Fe precursors to obtain N, S co-doped carbon with high density Fe-single atom-nanoclusters for highly efficient oxygen reduction reaction in Zn□air batteries. *Journal of Materials Chemistry A*, **2020**, 8, 17136-17149	13	23
62	Cu atomic clusters on N-doped porous carbon with tunable oxidation state for the highly-selective electroreduction of CO2. *Materials Advances*, **2020**, 1, 2286-2292	3.3	1
61	Electronic and nanostructure engineering of bifunctional MoS towards exceptional visible-light photocatalytic CO reduction and pollutant degradation. *Journal of Hazardous Materials*, **2020**, 381, 120972	12.8	52
60	A termination-insensitive and robust electron gas at the heterointerface of two complex oxides. *Nature Communications*, **2019**, 10, 4026	17.4	8
59	Surface Defect-Controlled Growth and High Photocatalytic H Production Efficiency of Anatase TiO Nanosheets. *ACS Applied Materials & Interfaces*, **2019**, 11, 37256-37262	9.5	21
58	Tunable Synthesis of Hollow Metal-Nitrogen-Carbon Capsules for Efficient Oxygen Reduction Catalysis in Proton Exchange Membrane Fuel Cells. *ACS Nano*, **2019**, 13, 8087-8098	16.7	68
57	A-site partially ordered La0.5Y0.5FeO3 and its multiferroic characteristics. *Applied Physics Letters*, **2019**, 114, 212904	3.4	4
56	Atomic-Scale Control of Magnetism at the Titanite-Manganite Interfaces. *Nano Letters*, **2019**, 19, 3057-3065	11.5	10
55	Efficient blue light-emitting diodes based on quantum-confined bromide perovskite nanostructures. *Nature Photonics*, **2019**, 13, 760-764	33.9	313
54	Phase-change heterostructure enables ultralow noise and drift for memory operation. *Science*, **2019**, 366, 210-215	33.3	143

53	Light-Enhanced Ion Migration in Two-Dimensional Perovskite Single Crystals Revealed in Carbon Nanotubes/Two-Dimensional Perovskite Heterostructure and Its Photomemory Application. *ACS Central Science*, **2019**, 5, 1857-1865	16.8	23
52	Manipulating topological transformations of polar structures through real-time observation of the dynamic polarization evolution. *Nature Communications*, **2019**, 10, 4864	17.4	29
51	Enabling Full Conversion Reaction with High Reversibility to Approach Theoretical Capacity for Sodium Storage. *Advanced Functional Materials*, **2019**, 29, 1906680	15.6	18
50	Tuning Interfacial Magnetic Ordering via Polarization Control in Ferroelectric SrTiO/PbTiO Heterostructure. *ACS Applied Materials & Interfaces*, **2018**, 10, 10536-10542	9.5	13
49	C□□K+ (Na+) groups in non-doped carbon as active sites for the oxygen reduction reaction. *Journal of Materials Chemistry A*, **2018**, 6, 8955-8961	13	18
48	Growth and structural characterisation of Sr-doped BiSe thin films. *Scientific Reports*, **2018**, 8, 2192	4.9	2
47	A Novel Room-Temperature Multiferroic System of Hexagonal Lu1−InxFeO3. *Advanced Functional Materials*, **2018**, 28, 1706062	15.6	23
46	Single-Crystal BiFeO Nanoplates with Robust Antiferromagnetism. *ACS Applied Materials & Interfaces*, **2018**, 10, 5785-5792	9.5	13
45	Mesopores induced zero thermal expansion in single-crystal ferroelectrics. *Nature Communications*, **2018**, 9, 1638	17.4	23
44	Electrostatic Force-Driven Oxide Heteroepitaxy for Interface Control. *Advanced Materials*, **2018**, 30, e1707017	24	13
43	Towards quantitative mapping of the charge distribution along a nanowire by in-line electron holography. *Ultramicroscopy*, **2018**, 194, 126-132	3.1	3
42	Direct observation of room-temperature out-of-plane ferroelectricity and tunneling electroresistance at the two-dimensional limit. *Nature Communications*, **2018**, 9, 3319	17.4	50
41	Possible structural origin of superconductivity in Sr-doped Bi2Se3. *Physical Review Materials*, **2018**, 2,	3.2	17
40	pH-Dependent growth of atomic Pd layers on trisoctahedral gold nanoparticles to realize enhanced performance in electrocatalysis and chemical catalysis. *Nanoscale*, **2018**, 10, 22302-22311	7.7	9
39	Surface Amorphous Oxides Induced Electron Transfer into Complex Oxide Heterointerfaces. *Advanced Materials Interfaces*, **2018**, 5, 1801216	4.6	8
38	Perovskite light-emitting diodes based on spontaneously formed submicrometre-scale structures. *Nature*, **2018**, 562, 249-253	50.4	1116
37	Ultrathin Anatase TiO Nanosheets for High-Performance Photocatalytic Hydrogen Production. *Small*, **2017**, 13, 1604115	11	57
36	C N-A 2D Crystalline, Hole-Free, Tunable-Narrow-Bandgap Semiconductor with Ferromagnetic Properties. *Advanced Materials*, **2017**, 29, 1605625	24	256

35	Oxygen Reduction Reaction: Tuning Surface Structure and Strain in Pd–Pt Core–Shell Nanocrystals for Enhanced Electrocatalytic Oxygen Reduction (Small 7/2017). *Small*, **2017**, 13,	11	2
34	An In situ TEM study of the surface oxidation of palladium nanocrystals assisted by electron irradiation. *Nanoscale*, **2017**, 9, 6327-6333	7.7	45
33	2D Materials: C3N4: A 2D Crystalline, Hole-Free, Tunable-Narrow-Bandgap Semiconductor with Ferromagnetic Properties (Adv. Mater. 16/2017). *Advanced Materials*, **2017**, 29,	24	4
32	Atomic scale investigation of enhanced ferroelectricity in (Ba,Ca)TiO3. *RSC Advances*, **2017**, 7, 22587-22591	3.7	8
31	Reaction and Capacity-Fading Mechanisms of Tin Nanoparticles in Potassium-Ion Batteries. *Journal of Physical Chemistry C*, **2017**, 121, 12652-12657	3.8	121
30	Interfacial Multiferroics of TiO/PbTiO Heterostructure Driven by Ferroelectric Polarization Discontinuity. *ACS Applied Materials & Interfaces*, **2017**, 9, 1899-1906	9.5	22
29	Efficient and High-Color-Purity Light-Emitting Diodes Based on In Situ Grown Films of CsPbX (X = Br, I) Nanoplates with Controlled Thicknesses. *ACS Nano*, **2017**, 11, 11100-11107	16.7	153
28	Hydroxyl-Group-Dominated Graphite Dots Reshape Laser Desorption/Ionization Mass Spectrometry for Small Biomolecular Analysis and Imaging. *ACS Nano*, **2017**, 11, 9500-9513	16.7	59
27	Balsam-pear-like rutile/anatase core/shell titania nanorod arrays for photoelectrochemical water splitting. *Nanotechnology*, **2017**, 28, 465602	3.4	7
26	Extremely Low Operating Current Resistive Memory Based on Exfoliated 2D Perovskite Single Crystals for Neuromorphic Computing. *ACS Nano*, **2017**, 11, 12247-12256	16.7	201
25	Tuning Surface Structure and Strain in Pd-Pt Core-Shell Nanocrystals for Enhanced Electrocatalytic Oxygen Reduction. *Small*, **2017**, 13, 1603423	11	76
24	Fatigue mechanism of yttrium-doped hafnium oxide ferroelectric thin films fabricated by pulsed laser deposition. *Physical Chemistry Chemical Physics*, **2017**, 19, 3486-3497	3.6	56
23	Enhanced gas-sensing performance of SnO2/Nb2O5 hybrid nanowires. *RSC Advances*, **2016**, 6, 105317-105321	3.7	8
22	Interfacial Oxygen Vacancies as a Potential Cause of Hysteresis in Perovskite Solar Cells. *Chemistry of Materials*, **2016**, 28, 802-812	9.6	102
21	In Situ Observation on Dislocation-Controlled Sublimation of Mg Nanoparticles. *Nano Letters*, **2016**, 16, 1156-60	11.5	20
20	Hydrothermal synthesis and formation mechanism of the single-crystalline Bi4Ti3O12 nanosheets with dominant (010) facets. *CrystEngComm*, **2016**, 18, 2268-2274	3.3	25
19	Perovskite light-emitting diodes based on solution-processed self-organized multiple quantum wells. *Nature Photonics*, **2016**, 10, 699-704	33.9	1206
18	Hierarchical nanosheet-constructed yolk-shell TiO2 porous microspheres for lithium batteries with high capacity, superior rate and long cycle capability. *Nanoscale*, **2015**, 7, 12979-89	7.7	47

17	B11-O-02 Mapping valance and coordination by monochromated STEM EELS. *Microscopy (Oxford, England)*, **2015**, 64, i11.1-i11	1.3	
16	Shaping electron beams for the generation of innovative measurements in the (S)TEM. *Comptes Rendus Physique*, **2014**, 15, 190-199	1.4	22
15	Interface-induced modulation of charge and polarization in thin film Fe(3)O(4). *Advanced Materials*, **2014**, 26, 461-5	24	14
14	How to manipulate nanoparticles with an electron beam?. *Advanced Materials*, **2013**, 25, 1114-7	24	71
13	Degradation process of lead chromate in paintings by Vincent van Gogh studied by means of spectromicroscopic methods. 3. Synthesis, characterization, and detection of different crystal forms of the chrome yellow pigment. *Analytical Chemistry*, **2013**, 85, 851-9	7.8	80
12	Nanoscale Investigation of the Degradation Mechanism of a Historical Chrome Yellow Paint by Quantitative Electron Energy Loss spectroscopy Mapping of Chromium Species. *Angewandte Chemie*, **2013**, 125, 11570-11573	3.6	9
11	Poster: Spin-Related Phenomena **2013**, 589-632		
10	Nanoscale investigation of the degradation mechanism of a historical chrome yellow paint by quantitative electron energy loss spectroscopy mapping of chromium species. *Angewandte Chemie - International Edition*, **2013**, 52, 11360-3	16.4	34
9	A new way of producing electron vortex probes for STEM. *Ultramicroscopy*, **2012**, 113, 83-87	3.1	68
8	Magnetic and electronic properties of the interface between half metallic Fe3O4 and semiconducting ZnO. *Applied Physics Letters*, **2012**, 100, 081603	3.4	13
7	Artificial construction of the layered Ruddlesden-Popper manganite La2Sr2Mn3O10 by reflection high energy electron diffraction monitored pulsed laser deposition. *Journal of the American Chemical Society*, **2012**, 134, 7700-14	16.4	24
6	Degradation process of lead chromate in paintings by Vincent van Gogh studied by means of synchrotron X-ray spectromicroscopy and related methods. 1. Artificially aged model samples. *Analytical Chemistry*, **2011**, 83, 1214-23	7.8	105
5	Fe3O4/ZnO: A high-quality magnetic oxide-semiconductor heterostructure by reactive deposition. *Applied Physics Letters*, **2011**, 98, 012512	3.4	24
4	Nanodiamonds do not provide unique evidence for a Younger Dryas impact. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 40-4	11.5	35
3	Production and application of electron vortex beams. *Nature*, **2010**, 467, 301-4	50.4	579
2	A unique ligand effect in Pt-based core□shell nanocubes to boost oxygen reduction electrocatalysis. *Journal of Materials Chemistry A*,	13	1
1	Co3+□ Bond Elongation Unlocks Co3O4 for Methane Activation under Ambient Conditions. *ACS Catalysis*,7037-7045	13.1	1