Wei Xu

List of Publications by Year in Descending Order

125 papers	7,683 citations	32 h-index	87 g-index
131 ext. papers	9,533 ext. citations	7.2 avg, IF	5.83 L-index

#	Paper	IF	Citations
125	Balancing oxygen evolution reaction and oxygen reduction reaction processes in Li□2 batteries through tuning the bond distances of RuO2. *Composites Part B: Engineering*, **2022**, 234, 109727	10	0
124	Synergistically optimizing carrier and phonon transport properties in n-type PbTe through I doping and SnSe alloying. *Materials Today Energy*, **2022**, 100983	7	0
123	Multiple emerging nano-phases are at the origin of the low lattice thermal conductivity of SnSe?. *Materials Today Physics*, **2022**, 24, 100656	8	
122	Flexible Bi2Te3-based thermoelectric generator with an ultra-high power density. *Applied Thermal Engineering*, **2021**, 202, 117818	5.8	4
121	A multi-purpose high-pressure and high temperature gas-flow cell for operando optical Raman spectroscopy. *Review of Scientific Instruments*, **2021**, 92, 113003	1.7	
120	Long-range ordering and local structural disordering of BiAgSe and BiAgSeTe thermoelectrics. *Physical Chemistry Chemical Physics*, **2021**, 23, 24328-24335	3.6	0
119	Initial nucleation process in the synthesis of Platinum Nanoparticle from chloroplatinic acid. *Nano Today*, **2021**, 37, 101093	17.9	3
118	Dynamic structural evolution of oxygen vacancies in lithium rich layered composites cathodes for Li-ion batteries. *Materials Today Physics*, **2021**, 18, 100403	8	5
117	Soybean roots-derived N, P Co-doped mesoporous hard carbon for boosting sodium and potassium-ion batteries. *Carbon*, **2021**, 178, 233-242	10.4	19
116	Orbital coupling of hetero-diatomic nickel-iron site for bifunctional electrocatalysis of CO reduction and oxygen evolution. *Nature Communications*, **2021**, 12, 4088	17.4	51
115	Physical insights on the low lattice thermal conductivity of AgInSe2. *Materials Today Physics*, **2021**, 19, 100428	8	9
114	Power generation and thermoelectric cooling enabled by momentum and energy multiband alignments. *Science*, **2021**, 373, 556-561	33.3	79
113	Room-Temperature Thermoelectric Conversion by Dipole-Enhanced Rashba Spin-Orbit Coupling. *Cell Reports Physical Science*, **2021**, 2, 100284	6.1	2
112	Sintering-resistant Au/iron oxide-hydroxyapatite nanocatalysts achieved by tuning strong metal-support interactions. *Catalysis Today*, **2021**, 382, 13-13	5.3	2
111	Engineering Atomic Sites via Adjacent Dual-Metal Sub-Nanoclusters for Efficient Oxygen Reduction Reaction and Zn-Air Battery. *Small*, **2020**, 16, e2004855	11	24
110	Robust [email□protected]x/TiO2 Catalysts for Hydrocarbon Combustion: Effects of Pt-TiOx Interaction and Sulfates. *ACS Catalysis*, **2020**, 10, 13543-13548	13.1	11
109	An effective hybrid electrocatalyst for the alkaline HER: Highly dispersed Pt sites immobilized by a functionalized NiRu-hydroxide. *Applied Catalysis B: Environmental*, **2020**, 269, 118824	21.8	40

108	Unveiling the atomic defects and electronic structure of CuZnSnSeTe (x = 0 to 0.04) by X-ray absorption fine structure spectroscopy. *Physical Chemistry Chemical Physics*, **2020**, 22, 9362-9367	3.6	0
107	Theoretical development and experimental validation on the measurement of temperature by extended X-ray absorption fine structure. *Journal of Synchrotron Radiation*, **2020**, 27, 436-445	2.4	1
106	The electronic-thermal transport properties and the exploration of magneto-thermoelectric properties and the Nernst thermopower of Ag2(1+)Se. *Journal of Solid State Chemistry*, **2020**, 288, 121453	3.3	5
105	Transformation and uptake of silver nanoparticles and silver ions in rice plant (Oryza sativa L.): the effect of iron plaque and dissolved iron. *Environmental Science: Nano*, **2020**, 7, 599-609	7.1	10
104	Identification of the Electronic and Structural Dynamics of Catalytic Centers in Single-Fe-Atom Material. *CheM*, **2020**, 6, 3440-3454	16.2	79
103	Highly Active and Stable Metal Single-Atom Catalysts Achieved by Strong Electronic Metal-Support Interactions. *Journal of the American Chemical Society*, **2019**, 141, 14515-14519	16.4	242
102	Synergistically Optimizing Carrier Concentration and Decreasing Sound Velocity in n-type AgInSe2 Thermoelectrics. *Chemistry of Materials*, **2019**, 31, 8182-8190	9.6	13
101	High thermoelectric performance in low-cost SnSSe crystals. *Science*, **2019**, 365, 1418-1424	33.3	233
100	Proton mediated spin state transition of cobalt heme analogs. *Nature Communications*, **2019**, 10, 2303	17.4	12
99	Effects of temperature and pressure on the optical and vibrational properties of thermoelectric SnSe. *Physical Chemistry Chemical Physics*, **2019**, 21, 8663-8678	3.6	16
98	Large Thermal Conductivity Drops in the Diamondoid Lattice of CuFeS by Discordant Atom Doping. *Journal of the American Chemical Society*, **2019**, 141, 18900-18909	16.4	33
97	Ultrastable Au nanoparticles on titania through an encapsulation strategy under oxidative atmosphere. *Nature Communications*, **2019**, 10, 5790	17.4	56
96	Synergetic tuning of electrical/thermal transport via dual-doping in Bi0.96MgxPb0.06CuSeO. *Journal of the American Ceramic Society*, **2019**, 102, 1541-1547	3.8	3
95	Mg3+δbxBi2 Family: A Promising Substitute for the State-of-the-Art n-Type Thermoelectric Materials near Room Temperature. *Advanced Functional Materials*, **2019**, 29, 1807235	15.6	60
94	Enhanced thermoelectric performance through grain boundary engineering in quaternary chalcogenide Cu2ZnSnSe4. *AIP Advances*, **2018**, 8, 045218	1.5	7
93	Chemical speciation of lead in secondary fly ash using X-ray absorption spectroscopy. *Chemosphere*, **2018**, 197, 362-366	8.4	9
92	Lattice Dynamics and Thermal Conductivity in CuZnCo SnSe. *Inorganic Chemistry*, **2018**, 57, 6051-6056	5.1	11
91	Boosting the thermoelectric performance of Bi2O2Se by isovalent doping. *Journal of the American Ceramic Society*, **2018**, 101, 4634-4644	3.8	26

90	Engineering Cobalt Defects in Cobalt Oxide for Highly Efficient Electrocatalytic Oxygen Evolution. *ACS Catalysis*, **2018**, 8, 3803-3811	13.1	276
89	The chemical speciation, spatial distribution and toxicity of mercury from Tibetan medicine Zuotai, HgS and HgCl in mouse kidney. *Journal of Trace Elements in Medicine and Biology*, **2018**, 45, 104-113	4.1	15
88	Iron oxidation dynamics vs. temperature of synthetic potassic-ferro-richterite: a XANES investigation. *Physical Chemistry Chemical Physics*, **2018**, 20, 21764-21771	3.6	8
87	Coordination of Atomic Co-Pt Coupling Species at Carbon Defects as Active Sites for Oxygen Reduction Reaction. *Journal of the American Chemical Society*, **2018**, 140, 10757-10763	16.4	301
86	Iron Speciation in Insoluble Dust from High-Latitude Snow: An X-ray Absorption Spectroscopy Study. *Condensed Matter*, **2018**, 3, 47	1.8	0
85	Perspectives of XRF and XANES Applications in Cryospheric Sciences Using Chinese SR Facilities. *Condensed Matter*, **2018**, 3, 29	1.8	3
84	The complexity of thermoelectric materials: why we need powerful and brilliant synchrotron radiation sources?. *Materials Today Physics*, **2018**, 6, 68-82	8	13
83	Multi-Scale Microstructural Thermoelectric Materials: Transport Behavior, Non-Equilibrium Preparation, and Applications. *Advanced Materials*, **2017**, 29, 1602013	24	182
82	Zinc-modulated Fe Co Prussian blue analogues with well-controlled morphologies for the efficient sorption of cesium. *Journal of Materials Chemistry A*, **2017**, 5, 3284-3292	13	36
81	A critical point in Sr 2-x IrO 4 and less distorted IrO 6 octahedra induced by deep Sr-vacancies. *Materials Research Bulletin*, **2017**, 90, 1-7	5.1	7
80	Photo- and thermo-chemical transformation of AgCl and AgS in environmental matrices and its implication. *Environmental Pollution*, **2017**, 220, 955-962	9.3	29
79	Electronic Configuration and Ligand Nature of Five-Coordinate Iron Porphyrin Carbene Complexes: An Experimental Study. *Journal of the American Chemical Society*, **2017**, 139, 5023-5026	16.4	37
78	Enhancing thermoelectric performance in hierarchically structured BiCuSeO by increasing bond covalency and weakening carrier phonon coupling. *Energy and Environmental Science*, **2017**, 10, 1590-1599	35.4	94
77	High-Valence-State NiO/Co3O4 Nanoparticles on Nitrogen-Doped Carbon for Oxygen Evolution at Low Overpotential. *ACS Energy Letters*, **2017**, 2, 2177-2182	20.1	150
76	An ultrafast front-end ASIC for APD array detectors in X-ray time-resolved experiments. *Chinese Physics C*, **2017**, 41, 066101	2.2	3
75	Development of an integrated four-channel fast avalanche-photodiode detector system with nanosecond time resolution. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2017**, 870, 43-49	1.2	2
74	Conjugated-Backbone Effect of Organic Small Molecules for n-Type Thermoelectric Materials with ZT over 0.2. *Journal of the American Chemical Society*, **2017**, 139, 13013-13023	16.4	156
73	Design of N-Coordinated Dual-Metal Sites: A Stable and Active Pt-Free Catalyst for Acidic Oxygen Reduction Reaction. *Journal of the American Chemical Society*, **2017**, 139, 17281-17284	16.4	815

72	Uncoordinated Amine Groups of Metal-Organic Frameworks to Anchor Single Ru Sites as Chemoselective Catalysts toward the Hydrogenation of Quinoline. *Journal of the American Chemical Society*, **2017**, 139, 9419-9422	16.4	389
71	Nanoscale Phase Separation and Lattice Complexity in VO2: The Metal□Insulator Transition Investigated by XANES via Auger Electron Yield at the Vanadium L23-Edge and Resonant Photoemission. *Condensed Matter*, **2017**, 2, 38	1.8	14
70	Materials and Breakdown Phenomena: Heterogeneous Molybdenum Metallic Films. *Condensed Matter*, **2017**, 2, 18	1.8	3
69	Magnetism of europium under extreme pressures. *Physical Review B*, **2016**, 93,	3.3	12
68	Structural phase transitions in ionic conductor Bi2O3by temperature dependent XPD and XAS. *Journal of Physics: Conference Series*, **2016**, 712, 012132	0.3	3
67	Role of valence changes and nanoscale atomic displacements in BiS-based superconductors. *Scientific Reports*, **2016**, 6, 37394	4.9	9
66	La-doping effect on spin□rbit coupled Sr2IrO4probed by x-ray absorption spectroscopy. *New Journal of Physics*, **2016**, 18, 093019	2.9	16
65	Synergistically Optimizing Electrical and Thermal Transport Properties of BiCuSeO via a Dual-Doping Approach. *Advanced Energy Materials*, **2016**, 6, 1502423	21.8	135
64	Cd-doping a facile approach for better thermoelectric transport properties of BiCuSeO oxyselenides. *RSC Advances*, **2016**, 6, 33789-33797	3.7	39
63	Enhanced thermoelectric efficiency of Cu2Se□Cu2S composite by incorporating Cu2S nanoparticles. *Ceramics International*, **2016**, 42, 8395-8401	5.1	24
62	Negative dependence of surface magnetocrystalline anisotropy energy on film thickness in Co 33 Fe 67 alloy. *Chinese Physics B*, **2016**, 25, 107501	1.2	
61	Nanoscale heterogeneity in thermoelectrics: the occurrence of phase separation in Fe-doped Ca3Co4O9. *Physical Chemistry Chemical Physics*, **2016**, 18, 14580-7	3.6	9
60	Enhanced Thermoelectricity in High-Temperature □Phase Copper(I) Selenides Embedded with Cu2Te Nanoclusters. *ACS Applied Materials & Interfaces*, **2016**, 8, 15196-204	9.5	30
59	Facile synthesis of iron oxide coupled and doped titania nanocomposites: tuning of physicochemical and photocatalytic properties. *RSC Advances*, **2016**, 6, 72791-72802	3.7	37
58	Single Cobalt Atoms with Precise N-Coordination as Superior Oxygen Reduction Reaction Catalysts. *Angewandte Chemie - International Edition*, **2016**, 55, 10800-5	16.4	1397
57	Charge redistribution and a shortening of the Fe--As bond at the quantum critical point of SmO1-xFxFeAs. *Journal of Synchrotron Radiation*, **2015**, 22, 1030-4	2.4	3
56	Enhanced thermoelectric properties of Ga-doped In2O3 ceramics via synergistic band gap engineering and phonon suppression. *Physical Chemistry Chemical Physics*, **2015**, 17, 11229-33	3.6	37
55	Fabrication of monodispersed hollow flower-like porous In2O3 nanostructures and their application as gas sensors. *RSC Advances*, **2015**, 5, 81407-81414	3.7	13

54	Lattice vibration modes of the layered material BiCuSeO and first principles study of its thermoelectric properties. *New Journal of Physics*, **2015**, 17, 083012	2.9	45
53	A new soft X-ray magnetic circular dichroism facility at the BSRF beamline 4B7B. *Chinese Physics C*, **2015**, 39, 048003	2.2	1
52	Monochromatic X-ray-induced thermal effect on four-reflection tested meV-monochromators: dynamical diffraction theory and finite-element analysis. *Chinese Physics C*, **2015**, 39, 096004	2.2	
51	Enhancement of Thermoelectric Performance in Hierarchical Mesoscopic Oxide Composites of Ca3Co4O9 and La0.8Sr0.2CoO3. *Journal of the American Ceramic Society*, **2015**, 98, 1230-1235	3.8	26
50	AB INITIO INVESTIGATIONS OF THE MAGNETISM IN DILUTED MAGNETIC SEMICONDUCTOR Fe-DOPED GaN. *Modern Physics Letters B*, **2014**, 28, 1450031	1.6	
49	Spectroscopic study and electronic structure of prototypical iron porphyrins and their oxo-dimer derivatives with different functional configurations. *RSC Advances*, **2014**, 4, 46399-46406	3.7	13
48	Percolative superconductivity in La2CuO4.06 by lattice granularity patterns with scanning micro x-ray absorption near edge structure. *Applied Physics Letters*, **2014**, 104, 221903	3.4	31
47	Cr(VI) adsorption and reduction by humic acid coated on magnetite. *Environmental Science & Technology*, **2014**, 48, 8078-85	10.3	299
46	X-ray absorption near-edge spectroscopy study on Ge-doped Li7La3Zr2O12: enhanced ionic conductivity and defect chemistry. *Electrochimica Acta*, **2014**, 115, 581-586	6.7	27
45	Colouration mechanism of underglaze copper-red decoration porcelain (AD 13th-14th century), China. *Journal of Synchrotron Radiation*, **2014**, 21, 751-5	2.4	8
44	Heterogeneous Structural Distortions Induced by In-Plane and Out-of-Plane Doping in Iron-Based Superconductors. *Journal of Superconductivity and Novel Magnetism*, **2014**, 27, 2719-2723	1.5	1
43	Enhancement of thermoelectric performance in Cd-doped Ca3Co4O9via spin entropy, defect chemistry and phonon scattering. *Journal of Materials Chemistry A*, **2014**, 2, 19479-19487	13	55
42	A facile heating cell for in situ transmittance and fluorescence X-ray absorption spectroscopy investigations. *Journal of Synchrotron Radiation*, **2014**, 21, 165-9	2.4	7
41	Endohedral fullerenes: a concurrent characterization by means of synchrotron radiation X-ray and IR spectroscopy. *Journal of Physics: Conference Series*, **2013**, 430, 012069	0.3	
40	Evidence of an interlayer charge transfer route in BiCu1SeO. *Journal of Materials Chemistry A*, **2013**, 1, 12154	13	25
39	Enhanced thermoelectric performance of a BiCuSeO system via band gap tuning. *Chemical Communications*, **2013**, 49, 8075-7	5.8	98
38	Nano-inclusions: a novel approach to tune the thermal conductivity of In2O3. *Physical Chemistry Chemical Physics*, **2013**, 15, 17595-600	3.6	23
37	Electronic structure and hybridization of CaS by means of X-ray absorption spectroscopy at Ca and S K-edges. *Journal of Synchrotron Radiation*, **2013**, 20, 110-5	2.4	8

36	The interaction of CuS and Halothiobacillus HT1 biofilm in microscale using synchrotron radiation-based techniques. *International Journal of Molecular Sciences*, **2013**, 14, 11113-24	6.3	6
35	An analytical model for the polarization of synchrotron radiation in a soft X-ray region. *Chinese Physics C*, **2013**, 37, 038002	2.2	1
34	Strikingly dissimilar effect of Mn and Zn dopants imposed on local structural distortion of Ba0.5K0.5Fe2As2 superconductor. *Journal of Synchrotron Radiation*, **2013**, 20, 455-9	2.4	3
33	Enhanced thermoelectric properties of Pb-doped BiCuSeO ceramics. *Advanced Materials*, **2013**, 25, 5086-90	14	200
32	CopperL-edge spectra: multiplet vs. multiple scattering theory. *Journal of Physics: Conference Series* , **2013**, 430, 012010	0.3	2
31	High-Temperature Transport Property of In2□CexO3 (0□x□0.10) Fine Grained Ceramics. *Journal of the American Ceramic Society*, **2012**, 95, 2568-2572	3.8	20
30	Metal-insulator transition in V(1-x)W(x)O2: structural and electronic origin. *Physical Chemistry Chemical Physics*, **2012**, 14, 15021-8	3.6	24
29	IR and X-ray time-resolved simultaneous experiments: an opportunity to investigate the dynamics of complex systems and non-equilibrium phenomena using third-generation synchrotron radiation sources. *Journal of Synchrotron Radiation*, **2012**, 19, 892-904	2.4	14
28	Abnormal dielectric behaviors in Mn-doped CaCu3Ti4O12 ceramics and their response mechanism. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2012**, 177, 1773-1776	3.1	19
27	Origin of Ferromagnetism in Zn 1□x Co x O Thin Films: Evidences Provided by Hard and Soft X-Ray Absorption Spectroscopy. *Chinese Physics Letters*, **2012**, 29, 127804	1.8	2
26	High-Tc ferromagnetism in a Co-doped ZnO system dominated by the formation of a zinc-blende type Co-rich ZnCoO phase. *Chemical Communications*, **2012**, 48, 91-3	5.8	24
25	Convergence of conduction bands as a means of enhancing thermoelectric performance of n-type Mg2Si(1-x)Sn(x) solid solutions. *Physical Review Letters*, **2012**, 108, 166601	7.4	854
24	Study of an archeological opaque red glass bead from China by XRD, XRF, and XANES. *X-Ray Spectrometry*, **2012**, 41, 363-366	0.9	9
23	Charge redistribution and local lattice structure of (F, Zn)-codoped LaFeAsO superconductor. *New Journal of Physics*, **2012**, 14, 033005	2.9	5
22	High Temperature Transport Property of Copper site Doped La2CuO4. *Journal of the American Ceramic Society*, **2011**, 94, 1471-1476	3.8	4
21	New opportunity to investigate physico-chemical phenomena: time-resolved X-ray and IR concurrent analysis. *Rendiconti Lincei*, **2011**, 22, 59-79	1.7	4
20	Thermoelectric Performance of Zn and Nd Co-doped In2O3 Ceramics. *Journal of Electronic Materials* , **2011**, 40, 1083-1086	1.9	11
19	Quantitative local structure determination in mica crystals: ab initio simulations of polarization XANES at the potassium K-edge. *Journal of Synchrotron Radiation*, **2011**, 18, 418-26	2.4	11

18	Quantum critical point in SmO(1-x)F(x)FeAs and oxygen vacancy induced by high fluorine dopant. *Journal of Synchrotron Radiation*, **2011**, 18, 723-7	2.4	5
17	Remarkable enhancement in thermoelectric performance of BiCuSeO by Cu deficiencies. *Journal of the American Chemical Society*, **2011**, 133, 20112-5	16.4	242
16	Synchrotron X-ray study of filled skutterudites CeFe4Sb12 and Ce0.8Fe3CoSb12. *Physica B: Condensed Matter*, **2011**, 406, 52-55	2.8	8
15	Effect of Transition-Metal Cobalt Doping on the Thermoelectric Performance of In2O3 Ceramics. *Journal of the American Ceramic Society*, **2010**, 93, 2938-2941	3.8	33
14	On the possibility of a new multiband heterostructure at the atomic limit made of alternate CuO2and FeAs superconducting layers. *Superconductor Science and Technology*, **2010**, 23, 052003	3.1	27
13	The interlayer structure of trioctahedral lithian micas: An AXANES spectroscopy study at the potassium K-edge. *American Mineralogist*, **2010**, 95, 1084-1094	2.9	4
12	Local structural disorder in REFeAsO oxypnictides by RE L(3) edge XANES. *Journal of Physics Condensed Matter*, **2010**, 22, 125701	1.8	16
11	Arsenic K-edge XANES study of REFeAsO oxypnictides. *Europhysics Letters*, **2010**, 90, 57001	1.6	12
10	Infrared and X-ray simultaneous spectroscopy: a novel conceptual beamline design for time resolved experiments. *Analytical and Bioanalytical Chemistry*, **2010**, 397, 2095-108	4.4	9
9	XAS study of LiFePO4 synthesized by solid state reactions and hydrothermal method. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2010**, 619, 122-127	1.2	10
8	Local structure of vanadium in doped LiFePO4. *Journal of Synchrotron Radiation*, **2010**, 17, 584-9	2.4	17
7	Potassium doping effect on the lattice softening and electronic structure of Ba(1-x)K(x)Fe(2)As(2) probed by X-ray absorption spectroscopy. *Journal of Synchrotron Radiation*, **2010**, 17, 730-6	2.4	14
6	Dynamical behavior in C82 metal endohedral fullerenes: 2D correlation analysis of x-ray and infrared data. *Journal of Nanophotonics*, **2009**, 3, 031975	1.1	6
5	Synchrotron radiation □a brilliant source for solid-state research in the infrared energy domain. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2009**, 6, 1999-2007		2
4	Application of synchrotron radiation X-ray fluorescence to investigate the distribution of mineral elements in different organs of greenhouse spinach. *Zahradnictvi (Prague, Czech Republic: 1992)*, **2009**, 36, 133-139	1.1	2
3	Time Resolved IR and X-Ray Simultaneous Spectroscopy: New Opportunities for the Analysis of Fast Chemical-Physical Phenomena in Materials Science. *Acta Physica Polonica A*, **2009**, 115, 489-500	0.6	16
2	Carbon-based single atom catalysts for tailoring the ORR pathway: a concise review. *Journal of Materials Chemistry A*,	13	11
1	Rationally optimized carrier effective mass and carrier density leads to high average ZT value in n-type PbSe. *Journal of Materials Chemistry A*,	13	5