Siyuan Zhang

List of Publications by Year
in descending order

54 papers	2,157 citations	236925 25 h-index	233421 45 g-index
57 all docs	57 docs citations	57 times ranked	3099 citing authors

#	Article	IF	Citations
1	Forging strengthâ€“ductility unity in a high entropy steel. Journal of Materials Science and Technology, 2022, 113, 158-165.	10.7	5
2	Exploring stability of a nanoscale complex solid solution thin film by in situ heating transmission electron microscopy. MRS Bulletin, 2022, 47, 371-378.	3.5	3
3	Perovskiteâ€“organic tandem solar cells with indium oxide interconnect. Nature, 2022, 604, 280-286.	27.8	181
4	Enhancing the Photon Absorption and Charge Carrier Dynamics of BaSnO₃ Photoanodes via Intrinsic and Extrinsic Defects. Chemistry of Materials, 2022, 34, 4320-4335.	6.7	8
5	Dynamic doping and Cottrell atmosphere optimize the thermoelectric performance of n-type PbTe over a broad temperature interval. Nano Energy, 2022, 101, 107576.	16.0	16
6	Self-toughened high entropy alloy with a body-centred cubic structure. Nanoscale, 2021, 13, 3602-3612.	5.6	8
7	Parallel Dislocation Networks and Cottrell Atmospheres Reduce Thermal Conductivity of PbTe Thermoelectrics. Advanced Functional Materials, 2021, 31, 2101214.	14.9	41
8	Monitoring the Structure Evolution of Titanium Oxide Photocatalysts: From the Molecular Form via the Amorphous State to the Crystalline Phase. Chemistry - A European Journal, 2021, 27, 11600-11608.	3.3	5
9	Investigation of selective oxidation during cooling of hot-rolled iron-manganese-silicon alloys. Corrosion Science, 2021, 186, 109466.	6.6	8
10	Dislocations Stabilized by Point Defects Increase Brittleness in PbTe. Advanced Functional Materials, 2021, 31, 2108006.	14.9	25
11	Segmentation of Static and Dynamic Atomic-Resolution Microscopy Data Sets with Unsupervised Machine Learning Using Local Symmetry Descriptors. Microscopy and Microanalysis, 2021, , 1-11.	0.4	1
12	Correlation between Structural Studies and the Cathodoluminescence of Individual Complex Niobate Particles. ACS Applied Electronic Materials, 2021, 3, 461-467.	4.3	2
13	Direct MoB MBene domain formation in magnetron sputtered MoAlB thin films. Nanoscale, 2021, 13, 18077-18083.	5.6	18
14	Stabilization of nanosized MgFe2O4 nanoparticles in phenylene-bridged KIT-6-type ordered mesoporous organosilica (PMO). Microporous and Mesoporous Materials, 2020, 293, 109783.	4.4	5
15	Revealing nano-chemistry at lattice defects in thermoelectric materials using atom probe tomography. Materials Today, 2020, 32, 260-274.	14.2	73
16	Rational strain engineering in delafossite oxides for highly efficient hydrogen evolution catalysis in acidic media. Nature Catalysis, 2020, 3, 55-63.	34.4	124
17	Could face-centered cubic titanium in cold-rolled commercially-pure titanium only be a Ti-hydride?. Scripta Materialia, 2020, 178, 39-43.	5.2	36
18	Sn-Doped Hematite for Photoelectrochemical Water Splitting: The Effect of Sn Concentration. Zeitschrift Fur Physikalische Chemie, 2020, 234, 683-698.	2.8	10

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19	Different Photostability of BiVO₄ in Near-pH-Neutral Electrolytes. ACS Applied Energy Materials, 2020, 3, 9523-9527.	5.1	41
20	V(III)-Doped Nickel Oxide-Based Nanocatalysts for Electrochemical Water Splitting: Influence of Phase, Composition, and Doping on the Electrocatalytic Activity. Chemistry of Materials, 2020, 32, 10394-10406.	6.7	14
21	Large magnetoelectric coupling in multiferroic oxide heterostructures assembled via epitaxial lift-off. Nature Communications, 2020, 11, 3190.	12.8	48
22	High-throughput characterization of Agâ€“Vâ€“O nanostructured thin-film materials libraries for photoelectrochemical solar water splitting. International Journal of Hydrogen Energy, 2020, 45, 12037-12047.	7.1	10
23	Structural Evolution of Ni-Based Co-Catalysts on [Ca2Nb3O10]âˆ’ Nanosheets during Heating and Their Photocatalytic Properties. Catalysts, 2020, 10, 13.	3.5	9
24	Nanocrystalline Gaâ€“Zn Oxynitride Materials: Minimized Defect Density for Improved Photocatalytic Activity?. Zeitschrift Fur Physikalische Chemie, 2020, 234, 1133-1153.	2.8	5
25	Photocurrent Recombination Through Surface Segregation in Alâ€“Crâ€“Feâ€“O Photocathodes. Zeitschrift Fur Physikalische Chemie, 2020, 234, 605-614.	2.8	3
26	Oxygen Evolution Reaction on Tin Oxides Supported Iridium Catalysts: Do We Need Dopants?. ChemElectroChem, 2020, 7, 2330-2339.	3.4	48
27	3D cold pressure welded components â€“ From the bonding mechanisms to the production of high strength joints. Materialwissenschaft Und Werkstofftechnik, 2019, 50, 913-923.	0.9	1
28	Dissolution of BiVO₄ Photoanodes Revealed by Time-Resolved Measurements under Photoelectrochemical Conditions. Journal of Physical Chemistry C, 2019, 123, 23410-23418.	3.1	47
29	Insight into the impact of atomic- and nano-scale indium distributions on the optical properties of InGaN/GaN quantum well structures grown on m-plane freestanding GaN substrates. Journal of Applied Physics, 2019, 125, 225704.	2.5	5
30	Enhanced Photoelectrochemical Water Oxidation Performance by Fluorine Incorporation in BiVO₄ and Mo:BiVO₄ Thin Film Photoanodes. ACS Applied Materials & Interfaces, 2019, 11, 16430-16442.	8.0	52
31	Ti and its alloys as examples of cryogenic focused ion beam milling of environmentally-sensitive materials. Nature Communications, 2019, 10, 942.	12.8	89
32	Degradation of iridium oxides <i>via</i> oxygen evolution from the lattice: correlating atomic scale structure with reaction mechanisms. Energy and Environmental Science, 2019, 12, 3548-3555.	30.8	147
33	Ag-Segregation to Dislocations in PbTe-Based Thermoelectric Materials. ACS Applied Materials & Interfaces, 2018, 10, 3609-3615.	8.0	74
34	Atomic-scale insights into surface species of electrocatalysts in three dimensions. Nature Catalysis, 2018, 1, 300-305.	34.4	161
35	Tailoring Thermoelectric Transport Properties of Ag-Alloyed PbTe: Effects of Microstructure Evolution. ACS Applied Materials & Interfaces, 2018, 10, 38994-39001.	8.0	17
36	Time-resolved analysis of dissolution phenomena in photoelectrochemistry â€“ A case study of WO3 photocorrosion. Electrochemistry Communications, 2018, 96, 53-56.	4.7	34

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37	Why Tinâ€Doping Enhances the Efficiency of Hematite Photoanodes for Water Splittingâ€"The Full Picture. Advanced Functional Materials, 2018, 28, 1804472.	14.9	53
38	Evaluation of EELS spectrum imaging data by spectral components and factors from multivariate analysis. Microscopy (Oxford, England), 2018, 67, i133-i141.	1.5	59
39	Superior solar-to-hydrogen energy conversion efficiency by visible light-driven hydrogen production <i>via</i> highly reduced Ti²⁺/Ti³⁺ states in a blue titanium dioxide photocatalyst. Catalysis Science and Technology, 2018, 8, 4657-4664.	4.1	30
40	The atomic structure of polar and non-polar InGaN quantum wells and the green gap problem. Ultramicroscopy, 2017, 176, 93-98.	1.9	24
41	Mo-doped BiVO₄ thin films â€" high photoelectrochemical water splitting performance achieved by a tailored structure and morphology. Sustainable Energy and Fuels, 2017, 1, 1830-1846.	4.9	72
42	The microstructure of non-polar a-plane (112Â¯0) InGaN quantum wells. Journal of Applied Physics, 2016, 119, .	2.5	22
43	Nano-cathodoluminescence reveals the effect of electron damage on the optical properties of nitride optoelectronics and the damage threshold. Journal of Applied Physics, 2016, 120, 165704.	2.5	10
44	Photoelectrochemical water splitting strongly enhanced in fast-grown ZnO nanotree and nanocluster structures. Journal of Materials Chemistry A, 2016, 4, 10203-10211.	10.3	67
45	Difference in linear polarization of biaxially strained<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">I</mml:mi><mml:msub><mml:mi mathvariant="normal">n</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:mi mathvariant="normal">G</mml:mi><mml:msub><mml:mi mathvariant="normal">a</mml:mi><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^'</mml:mo><mml:mi>x</mml:mi></mml:mrow></	3.2	3
46	Nanocathodoluminescence Reveals Mitigation of the Stark Shift in InGaN Quantum Wells by Si Doping. Nano Letters, 2015, 15, 7639-7643.	9.1	33
47	Direct Observation of Depth-Dependent Atomic Displacements Associated with Dislocations in Gallium Nitride. Physical Review Letters, 2014, 113, 135503.	7.8	25
48	Defects in epitaxial ScGaN: Dislocations, stacking faults, and cubic inclusions. Applied Physics Letters, 2014, 104, .	3.3	17
49	ScGaN and ScAlN: emerging nitride materials. Journal of Materials Chemistry A, 2014, 2, 6042-6050.	10.3	96
50	Elastic constants and critical thicknesses of ScGaN and ScAlN. Journal of Applied Physics, 2013, 114, .	2.5	93
51	Tunable optoelectronic and ferroelectric properties in Sc-based III-nitrides. Journal of Applied Physics, 2013, 114, .	2.5	124
52	Interfacial Structure and Chemistry of GaN on Ge(111). Physical Review Letters, 2013, 111, 256101.	7.8	5
53	The dissociation of the [<i>aâ€‰</i>+â€‰<i>c</i>] dislocation in GaN. Philosophical Magazine, 2013, 93, 3925-3938.	1.6	35
54	Growth, microstructure and morphology of epitaxial ScGaN films. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 33-40.	1.8	15