Zhi Gen Yu

List of Publications by Year
in descending order

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66 papers	3,096 citations	172207 29 h-index	161609 54 g-index
66 all docs	66 docs citations	66 times ranked	4692 citing authors

#	Article	IF	Citations
1	Defect Engineering of Oxygenâ€Deficient Manganese Oxide to Achieve Highâ€Performing Aqueous Zinc Ion Battery. Advanced Energy Materials, 2019, 9, 1803815.	10.2	504
2	Artificial Synapses Based on Multiterminal Memtransistors for Neuromorphic Application. Advanced Functional Materials, 2019, 29, 1901106.	7.8	192
3	p -type conduction in unintentional carbon-doped ZnO thin films. Applied Physics Letters, 2007, 91, .	1.5	143
4	Metalâ€“organic framework-derived hierarchical MoS₂/CoS₂ nanotube arrays as pH-universal electrocatalysts for efficient hydrogen evolution. Journal of Materials Chemistry A, 2019, 7, 13339-13346.	5.2	133
5	A Fully Printed Flexible MoS₂ Memristive Artificial Synapse with Femtojoule Switching Energy. Advanced Electronic Materials, 2019, 5, 1900740.	2.6	123
6	Full Defects Passivation Enables 21% Efficiency Perovskite Solar Cells Operating in Air. Advanced Energy Materials, 2020, 10, 2001958.	10.2	117
7	Materializing efficient methanol oxidation via electron delocalization in nickel hydroxide nanoribbon. Nature Communications, 2020, 11, 4647.	5.8	117
8	Simultaneously enhancing the ultimate strength and ductility of high-entropy alloys via short-range ordering. Nature Communications, 2021, 12, 4953.	5.8	116
9	Direct n- to p-Type Channel Conversion in Monolayer/Few-Layer WS₂ Field-Effect Transistors by Atomic Nitrogen Treatment. ACS Nano, 2018, 12, 2506-2513.	7.3	107
10	Hall-Petch and inverse Hall-Petch relations in high-entropy CoNiFeAlxCu1-x alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 773, 138873.	2.6	93
11	An Anomalous Formation Pathway for Dislocation-Sulfur Vacancy Complexes in Polycrystalline Monolayer MoS₂. Nano Letters, 2015, 15, 6855-6861.	4.5	90
12	A Moistureâ€Hungry Copper Complex Harvesting Air Moisture for Potable Water and Autonomous Urban Agriculture. Advanced Materials, 2020, 32, e2002936.	11.1	81
13	Strain stabilized nickel hydroxide nanoribbons for efficient water splitting. Energy and Environmental Science, 2020, 13, 229-237.	15.6	78
14	Robust Direct Bandgap Characteristics of One- and Two-Dimensional ReS2. Scientific Reports, 2015, 5, 13783.	1.6	68
15	Unravelling V₆O₁₃ Diffusion Pathways via CO₂ Modification for High-Performance Zinc Ion Battery Cathode. ACS Nano, 2021, 15, 1273-1281.	7.3	67
16	Simultaneous edge and electronic control of MoS₂ nanosheets through Fe doping for an efficient oxygen evolution reaction. Nanoscale, 2018, 10, 20113-20119.	2.8	63
17	Wafer-scale solution-processed 2D material analog resistive memory array for memory-based computing. Nature Communications, 2022, 13, .	5.8	60
18	Strain and defect engineered monolayer Ni-MoS₂ for pH-universal hydrogen evolution catalysis. Nanoscale, 2019, 11, 18329-18337.	2.8	56

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19	A comparative density functional study on electrical properties of layered penta-graphene. Journal of Applied Physics, 2015, 118, .	1.1	54
20	Control of p- and n-type conductivities in P doped ZnO thin films by using radio-frequency sputtering. Applied Physics Letters, 2006, 88, 132114.	1.5	52
21	Shallow defects levels and extract detrapped charges to stabilize highly efficient and hysteresis-free perovskite photovoltaic devices. Nano Energy, 2020, 71, 104556.	8.2	51
22	Chemical-Affinity Disparity and Exclusivity Drive Atomic Segregation, Short-Range Ordering, and Cluster Formation in High-Entropy Alloys. Acta Materialia, 2021, 206, 116638.	3.8	45
23	Boosted electrochemical properties from the surface engineering of ultrathin interlaced Ni(OH)₂ nanosheets with Co(OH)₂ quantum dot modification. Nanoscale, 2018, 10, 10554-10563.	2.8	44
24	Electronic-reconstruction-enhanced hydrogen evolution catalysis in oxide polymorphs. Nature Communications, 2019, 10, 3149.	5.8	42
25	Nitrogen-Doped Cobalt Phosphide for Enhanced Hydrogen Evolution Activity. ACS Applied Materials & Interfaces, 2019, 11, 17359-17367.	4.0	40
26	Dopant Sources Choice for Formation of p-Type ZnO:â€‰ Phosphorus Compound Sources. Chemistry of Materials, 2005, 17, 852-855.	3.2	39
27	Lattice dynamics and electrical properties of wurtzite ZnO determined by a density functional theory method. Journal of Crystal Growth, 2006, 287, 199-203.	0.7	37
28	Strain-Robust and Electric Field Tunable Band Alignments in van der Waals WSe₂â€“Graphene Heterojunctions. Journal of Physical Chemistry C, 2016, 120, 22702-22709.	1.5	34
29	Deciphering NH₃ Adsorption Kinetics in Ternary Niâ€“Cuâ€“Fe Oxyhydroxide toward Efficient Ammonia Oxidation Reaction. Small, 2021, 17, e2005616.	5.2	34
30	Machineâ€Learningâ€Assisted Autonomous Humidity Management System Based on Solarâ€Regenerated Super Hygroscopic Complex. Advanced Science, 2021, 8, 2003939.	5.6	34
31	Ultrasensitive and robust two-dimensional indium selenide flexible electronics and sensors for human motion detection. Nano Energy, 2020, 76, 105020.	8.2	28
32	oâ€Benzenediolâ€Functionalized Carbon Nanosheets as Low Selfâ€Discharge Aqueous Supercapacitors. ChemSusChem, 2018, 11, 3307-3314.	3.6	27
33	Interlayer Engineering of MnO₂ with High Charge Density Bi³⁺ for High Rate and Stable Aqueous Supercapacitor. Batteries and Supercaps, 2020, 3, 519-526.	2.4	27
34	Highly Stable New Organicâ€“Inorganic Hybrid 3D Perovskite CH₃NH₃PdI₃ and 2D Perovskite (CH₃NH₃)₃Pd₂I₇: DFT Analysis, Synthesis, Structure, Transition Behavior, and Physical Properties. Journal of Physical Chemistry Letters, 2018, 9, 5862-5872.	2.1	26
35	Two-dimensional van der Waals C60 molecular crystal. Scientific Reports, 2015, 5, 12221.	1.6	24
36	Chemical insights into the roles of nanowire cores on the growth and supercapacitor performances of Ni-Co-O/Ni(OH)2 core/shell electrodes. Scientific Reports, 2016, 6, 21566.	1.6	24

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37	Study on anomalous n-type conduction of P-doped ZnO using P2O5 dopant source. Applied Physics Letters, 2005, 86, 212105.	1.5	23
38	Phosphorene-based nanogenerator powered by cyclic molecular doping. Nano Energy, 2016, 23, 34-39.	8.2	19
39	Realizing Indirect-to-Direct Band Gap Transition in Few-Layer Two-Dimensional MX₂ (M =) Tj ETQq1 1 0.784314 rgBT /Ov	2.5	19
40	Tuning deep dopants to shallow ones in 2D semiconductors by substrate screening: The case of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">X</mml:mi><mml:mi mathvariant="normal">S</mml:mi></mml:msub></mml:math> (X = Cl, Br, I) in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mm Physical Review B, 2017, 95, .	1.1	18
41	Defects in codoped NiO with gigantic dielectric response. Physical Review B, 2009, 79, .	1.1	12
42	A new carbon allotrope: T5-carbon. Scripta Materialia, 2020, 189, 72-77.	2.6	12
43	A first-principles-based high fidelity, high throughput approach for the design of high entropy alloys. Scientific Reports, 2022, 12, .	1.6	12
44	Electronic properties of mutually embedded h-BN and graphene: A first principles study. Chemical Physics Letters, 2016, 666, 33-37.	1.2	11
45	Recent progress on 2D materials-based artificial synapses. Critical Reviews in Solid State and Materials Sciences, 2022, 47, 665-690.	6.8	11
46	Generalized small set of ordered structures method for the solid-solution phase of high-entropy alloys. Physical Review B, 2020, 102, .	1.1	10
47	Band gap engineering of graphene with inter-layer embedded BN: From first principles calculations. Diamond and Related Materials, 2015, 54, 103-108.	1.8	9
48	Effect of spin-orbit coupling on formation of native defects in Weyl fermion semimetals: The case of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>T</mml:mi><mml:mi>X</mml:mi></mml:mrow></mml:ma <mml:math		

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55	Modified embedded-atom method potentials for the plasticity and fracture behaviors of unary fcc metals. Physical Review B, 2021, 103, .	1.1	5
56	Nonvolatile Logicâ€inâ€Memory Computing based on Solutionâ€Processed CuI Memristor. Advanced Electronic Materials, 2022, 8, .	2.6	4
57	Significant improvement in electronic properties of transparent amorphous indium zinc oxide through yttrium doping. Europhysics Letters, 2014, 106, 17006.	0.7	3
58	Ultrasensitive Flexible Strain Sensor based on Two-Dimensional InSe for Human Motion Surveillance. , 2019, , .		3
59	CVD Polycrystalline Graphene as Sensing Film of Extended-Gate ISFET for Low-Drift pH Sensor. Journal of the Electrochemical Society, 2021, 168, 067520.	1.3	3
60	Formaldehyde assisted reduction achieved p-type orthorhombic tin oxide film prepared by an inexpensive chemical method. Materials Research Express, 2017, 4, 116411.	0.8	2
61	Modified Embeddedâ€Atom Method Potentials for the Plasticity and Fracture Behaviors of Unary HCP Metals. Advanced Theory and Simulations, 2022, 5, 2100377.	1.3	2
62	A universal theoretical approach for examining the efficiency of doping processes in semiconductors. Journal of Applied Physics, 2009, 105, 113711.	1.1	1
63	Synergizing Cu dimers and N atoms in graphene towards an active catalyst for hydrogen evolution reaction. Nanoscale Advances, 2021, 3, 5332-5338.	2.2	1
64	Dopant Sources Choice for Formation of p-Type ZnO: Phosphorus Compound Sources.. ChemInform, 2005, 36, no.	0.1	0
65	Study on p -type ZnO: a potential new source of solid state lighting. , 2005, 5941, 83.		0
66	Selection guidelines for ionic dielectrics with gigantic dielectric response (GDR) based on polaronic phase transition criteria. Materials Research Society Symposia Proceedings, 2013, 1535, 6701.	0.1	0