

# 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	Recent progress on 2D materials-based artificial synapses. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2022, 47, 665-690.	6.8	11
2	Modified Embedded-Atom Method Potentials for the Plasticity and Fracture Behaviors of Unary HCP Metals. <i>Advanced Theory and Simulations</i> , 2022, 5, 2100377.	1.3	2
3	Wafer-scale solution-processed 2D material analog resistive memory array for memory-based computing. <i>Nature Communications</i> , 2022, 13, .	5.8	60
4	A first-principles-based high fidelity, high throughput approach for the design of high entropy alloys. <i>Scientific Reports</i> , 2022, 12, .	1.6	12
5	Nonvolatile Logic-in-Memory Computing based on Solution-Processed CuI Memristor. <i>Advanced Electronic Materials</i> , 2022, 8, .	2.6	4
6	A first-principles study on strain engineering of monolayer stanene for enhanced catalysis of CO <sub>2</sub> reduction. <i>Chemosphere</i> , 2021, 268, 129317.	4.2	7
7	Unravelling V <sub>6</sub> O <sub>13</sub> Diffusion Pathways via CO <sub>2</sub> Modification for High-Performance Zinc Ion Battery Cathode. <i>ACS Nano</i> , 2021, 15, 1273-1281.	7.3	67
8	Deciphering NH <sub>3</sub> Adsorption Kinetics in Ternary Ni-Cu-Fe Oxyhydroxide toward Efficient Ammonia Oxidation Reaction. <i>Small</i> , 2021, 17, e2005616.	5.2	34
9	Synergizing Cu dimers and N atoms in graphene towards an active catalyst for hydrogen evolution reaction. <i>Nanoscale Advances</i> , 2021, 3, 5332-5338.	2.2	1
10	Machine-Learning-Assisted Autonomous Humidity Management System Based on Solar-Regenerated Super Hygroscopic Complex. <i>Advanced Science</i> , 2021, 8, 2003939.	5.6	34
11	Chemical-Affinity Disparity and Exclusivity Drive Atomic Segregation, Short-Range Ordering, and Cluster Formation in High-Entropy Alloys. <i>Acta Materialia</i> , 2021, 206, 116638.	3.8	45
12	Modified embedded-atom method potentials for the plasticity and fracture behaviors of unary fcc metals. <i>Physical Review B</i> , 2021, 103, .	1.1	5
13	CVD Polycrystalline Graphene as Sensing Film of Extended-Gate ISFET for Low-Drift pH Sensor. <i>Journal of the Electrochemical Society</i> , 2021, 168, 067520.	1.3	3
14	Simultaneously enhancing the ultimate strength and ductility of high-entropy alloys via short-range ordering. <i>Nature Communications</i> , 2021, 12, 4953.	5.8	116
15	Bct-C5: A new body-centered tetragonal carbon allotrope. <i>Diamond and Related Materials</i> , 2021, 119, 108571.	1.8	6
16	Hall-Petch and inverse Hall-Petch relations in high-entropy CoNiFeAl <sub>x</sub> Cu <sub>1-x</sub> alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 773, 138873.	2.6	93
17	Strain stabilized nickel hydroxide nanoribbons for efficient water splitting. <i>Energy and Environmental Science</i> , 2020, 13, 229-237.	15.6	78
18	A new carbon allotrope: T5-carbon. <i>Scripta Materialia</i> , 2020, 189, 72-77.	2.6	12

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19	Remarkably high thermal-driven MoS <sub>2</sub> grain boundary migration mobility and its implications on defect healing. <i>Nanoscale</i> , 2020, 12, 17746-17753.	2.8	6
20	A Moisture-Hungry Copper Complex Harvesting Air Moisture for Potable Water and Autonomous Urban Agriculture. <i>Advanced Materials</i> , 2020, 32, e2002936.	11.1	81
21	Full Defects Passivation Enables 21% Efficiency Perovskite Solar Cells Operating in Air. <i>Advanced Energy Materials</i> , 2020, 10, 2001958.	10.2	117
22	Materializing efficient methanol oxidation via electron delocalization in nickel hydroxide nanoribbon. <i>Nature Communications</i> , 2020, 11, 4647.	5.8	117
23	Generalized small set of ordered structures method for the solid-solution phase of high-entropy alloys. <i>Physical Review B</i> , 2020, 102, .	1.1	10
24	Ultrasensitive and robust two-dimensional indium selenide flexible electronics and sensors for human motion detection. <i>Nano Energy</i> , 2020, 76, 105020.	8.2	28
25	Shallow defects levels and extract detrapped charges to stabilize highly efficient and hysteresis-free perovskite photovoltaic devices. <i>Nano Energy</i> , 2020, 71, 104556.	8.2	51
26	Interlayer Engineering of MnO <sub>2</sub> with High Charge Density Bi <sup>3+</sup> for High Rate and Stable Aqueous Supercapacitor. <i>Batteries and Supercaps</i> , 2020, 3, 519-526.	2.4	27
27	First Demonstration of a Fully-Printed Mos2Rram on Flexible Substrate with Ultra-Low Switching Voltage and its Application as Electronic Synapse. , 2019, , .		8
28	Electronic-reconstruction-enhanced hydrogen evolution catalysis in oxide polymorphs. <i>Nature Communications</i> , 2019, 10, 3149.	5.8	42
29	A Fully Printed Flexible MoS <sub>2</sub> Memristive Artificial Synapse with Femtojoule Switching Energy. <i>Advanced Electronic Materials</i> , 2019, 5, 1900740.	2.6	123
30	Artificial Synapses Based on Multiterminal Memtransistors for Neuromorphic Application. <i>Advanced Functional Materials</i> , 2019, 29, 1901106.	7.8	192
31	Metal-organic framework-derived hierarchical MoS <sub>2</sub> /CoS <sub>2</sub> nanotube arrays as pH-universal electrocatalysts for efficient hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2019, 7, 13339-13346.	5.2	133
32	Nitrogen-Doped Cobalt Phosphide for Enhanced Hydrogen Evolution Activity. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 17359-17367.	4.0	40
33	Defect Engineering of Oxygen-Deficient Manganese Oxide to Achieve High-Performing Aqueous Zinc Ion Battery. <i>Advanced Energy Materials</i> , 2019, 9, 1803815.	10.2	504
34	Ultrasensitive Flexible Strain Sensor based on Two-Dimensional InSe for Human Motion Surveillance. , 2019, , .		3
35	Strain and defect engineered monolayer Ni-MoS <sub>2</sub> for pH-universal hydrogen evolution catalysis. <i>Nanoscale</i> , 2019, 11, 18329-18337.	2.8	56
36	Direct n- to p-Type Channel Conversion in Monolayer/Few-Layer WS <sub>2</sub> Field-Effect Transistors by Atomic Nitrogen Treatment. <i>ACS Nano</i> , 2018, 12, 2506-2513.	7.3	107

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37	Simultaneous edge and electronic control of MoS <sub>2</sub> nanosheets through Fe doping for an efficient oxygen evolution reaction. <i>Nanoscale</i> , 2018, 10, 20113-20119.	2.8	63
38	Highly Stable New Organic-Inorganic Hybrid 3D Perovskite CH <sub>3</sub> NH <sub>3</sub> Pd <sub>3</sub> and 2D Perovskite (CH <sub>3</sub> NH <sub>3</sub> ) <sub>3</sub> Pd <sub>2</sub> I <sub>7</sub> : DFT Analysis, Synthesis, Structure, Transition Behavior, and Physical Properties. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 5862-5872.	2.1	26
39	Boosted electrochemical properties from the surface engineering of ultrathin interlaced Ni(OH) <sub>2</sub> nanosheets with Co(OH) <sub>2</sub> quantum dot modification. <i>Nanoscale</i> , 2018, 10, 10554-10563.	2.8	44
40	Realizing Indirect-to-Direct Band Gap Transition in Few-Layer Two-Dimensional MX <sub>2</sub> (M = Tj ETQq0 0 0 pgBT /Overlock 10 T	2.5	19
41	Benzenediol-Functionalized Carbon Nanosheets as Low Self-Discharge Aqueous Supercapacitors. <i>ChemSusChem</i> , 2018, 11, 3307-3314.	3.6	27
42	Formaldehyde assisted reduction achieved p-type orthorhombic tin oxide film prepared by an inexpensive chemical method. <i>Materials Research Express</i> , 2017, 4, 116411.	0.8	2
43	Tuning deep dopants to shallow ones in 2D semiconductors by substrate screening: The case of $X$ $S$ (X = Cl, Br, I) in MoS <sub>2</sub> <i>Physical Review B</i> , 2017, 95, .	1.1	18
44	Strain-Robust and Electric Field Tunable Band Alignments in van der Waals WSe <sub>2</sub> -Graphene Heterojunctions. <i>Journal of Physical Chemistry C</i> , 2016, 120, 22702-22709.	1.5	34
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55	Significant improvement in electronic properties of transparent amorphous indium zinc oxide through yttrium doping. <i>Europhysics Letters</i> , 2014, 106, 17006.	0.7	3
56	Selection guidelines for ionic dielectrics with gigantic dielectric response (GDR) based on polaronic phase transition criteria. <i>Materials Research Society Symposia Proceedings</i> , 2013, 1535, 6701.	0.1	0
57	First-principles investigation of nitrosyl formation in zirconia. <i>Physical Review B</i> , 2012, 85, .	1.1	5
58	Defects in codoped NiO with gigantic dielectric response. <i>Physical Review B</i> , 2009, 79, .	1.1	12
59	A universal theoretical approach for examining the efficiency of doping processes in semiconductors. <i>Journal of Applied Physics</i> , 2009, 105, 113711.	1.1	1
60	p -type conduction in unintentional carbon-doped ZnO thin films. <i>Applied Physics Letters</i> , 2007, 91, .	1.5	143
61	Control of p- and n-type conductivities in P doped ZnO thin films by using radio-frequency sputtering. <i>Applied Physics Letters</i> , 2006, 88, 132114.	1.5	52
62	Lattice dynamics and electrical properties of wurtzite ZnO determined by a density functional theory method. <i>Journal of Crystal Growth</i> , 2006, 287, 199-203.	0.7	37
63	Dopant Sources Choice for Formation of p-Type ZnO: Phosphorus Compound Sources.. <i>ChemInform</i> , 2005, 36, no.	0.1	0
64	Study on anomalous n-type conduction of P-doped ZnO using P2O5 dopant source. <i>Applied Physics Letters</i> , 2005, 86, 212105.	1.5	23
65	Study on p -type ZnO: a potential new source of solid state lighting. , 2005, 5941, 83.		0
66	Dopant Sources Choice for Formation of p-Type ZnO:â€™% Phosphorus Compound Sources. <i>Chemistry of Materials</i> , 2005, 17, 852-855.	3.2	39