Chih-Shan Tan

List of Publications by Year
in descending order

54 papers	6,159 citations	159358 30 h-index	168136 53 g-index
54 all docs	54 docs citations	54 times ranked	7355 citing authors

#	ARTICLE	IF	CITATIONS
1	Accelerated discovery of CO2 electrocatalysts using active machine learning. Nature, 2020, 581, 178-183.	13.7	807
2	Molecular tuning of CO2-to-ethylene conversion. Nature, 2020, 577, 509-513.	13.7	682
3	Enhanced Nitrate-to-Ammonia Activity on Copper–Nickel Alloys via Tuning of Intermediate Adsorption. Journal of the American Chemical Society, 2020, 142, 5702-5708.	6.6	638
4	Copper nanocavities confine intermediates for efficient electrosynthesis of C3 alcohol fuels from carbon monoxide. Nature Catalysis, 2018, 1, 946-951.	16.1	354
5	Metal–Organic Frameworks Mediate Cu Coordination for Selective CO_2 Electroreduction. Journal of the American Chemical Society, 2018, 140, 11378-11386.	6.6	326
6	Catalyst synthesis under CO2 electroreduction favours faceting and promotes renewable fuels electrosynthesis. Nature Catalysis, 2020, 3, 98-106.	16.1	325
7	Perovskite seeding growth of formamidinium-lead-iodide-based perovskites for efficient and stable solar cells. Nature Communications, 2018, 9, 1607.	5.8	309
8	Copper-on-nitride enhances the stable electrosynthesis of multi-carbon products from CO2. Nature Communications, 2018, 9, 3828.	5.8	279
9	Lattice anchoring stabilizes solution-processed semiconductors. Nature, 2019, 570, 96-101.	13.7	208
10	Facet-Dependent Electrical Conductivity Properties of Cu_2O Crystals. Nano Letters, 2015, 15, 2155-2160.	4.5	203
11	2D Metal Oxyhalide–Derived Catalysts for Efficient CO_2 Electroreduction. Advanced Materials, 2018, 30, e1802858.	11.1	200
12	Efficient electrocatalytic conversion of carbon monoxide to propanol using fragmented copper. Nature Catalysis, 2019, 2, 251-258.	16.1	188
13	In Situ Back–Contact Passivation Improves Photovoltage and Fill Factor in Perovskite Solar Cells. Advanced Materials, 2019, 31, e1807435.	11.1	143
14	Suppressed Ion Migration in Reduced-Dimensional Perovskites Improves Operating Stability. ACS Energy Letters, 2019, 4, 1521-1527.	8.8	130
15	Efficient upgrading of CO to C3 fuel using asymmetric C-C coupling active sites. Nature Communications, 2019, 10, 5186.	5.8	127
16	Chloride Passivation of ZnO Electrodes Improves Charge Extraction in Colloidal Quantum Dot Photovoltaics. Advanced Materials, 2017, 29, 1702350.	11.1	126
17	Strong Facet Effects on Interfacial Charge Transfer Revealed through the Examination of Photocatalytic Activities of Various Cu_2O–ZnO Heterostructures. Advanced Functional Materials, 2017, 27, 1604635.	7.8	112
18	A Facet–Specific Quantum Dot Passivation Strategy for Colloid Management and Efficient Infrared Photovoltaics. Advanced Materials, 2019, 31, e1805580.	11.1	87

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19	Surface plasmon resonance enhancement of production of H2 from ammonia borane solution with tunable Cu2−xS nanowires decorated by Pd nanoparticles. Nano Energy, 2017, 31, 57-63.	8.2	65
20	Facet-Dependent Electrical Conductivity Properties of PbS Nanocrystals. Chemistry of Materials, 2016, 28, 1574-1580.	3.2	56
21	Contactless measurements of photocarrier transport properties in perovskite single crystals. Nature Communications, 2019, 10, 1591.	5.8	55
22	Facet-dependent optical properties of Pd–Cu_2O core–shell nanocubes and octahedra. Nanoscale, 2015, 7, 11135-11141.	2.8	51
23	Enhanced Open-Circuit Voltage in Colloidal Quantum Dot Photovoltaics via Reactivity-Controlled Solution-Phase Ligand Exchange. Advanced Materials, 2017, 29, 1703627.	11.1	49
24	Metal-like Band Structures of Ultrathin Si {111} and {112} Surface Layers Revealed through Density Functional Theory Calculations. Chemistry - A European Journal, 2017, 23, 11866-11871.	1.7	49
25	Facet-Dependent Electrical Conductivity Properties of Silver Oxide Crystals. Chemistry - an Asian Journal, 2017, 12, 293-297.	1.7	48
26	Surfactant-Directed Fabrication of Supercrystals from the Assembly of Polyhedral Au–Pd Core–Shell Nanocrystals and Their Electrical and Optical Properties. Journal of the American Chemical Society, 2015, 137, 2265-2275.	6.6	47
27	Silicon Wafers with Facet-Dependent Electrical Conductivity Properties. Angewandte Chemie - International Edition, 2017, 56, 15339-15343.	7.2	46
28	Density Functional Theory Calculations Revealing Metal-like Band Structures for Ultrathin Germanium (111) and (211) Surface Layers. Chemistry - an Asian Journal, 2018, 13, 1972-1976.	1.7	41
29	Density Functional Theory Calculations Revealing Metal-like Band Structures and Work Function Variation for Ultrathin Gallium Arsenide (111) Surface Layers. Chemistry - an Asian Journal, 2019, 14, 2316-2321.	1.7	36
30	Polyhedral Cu_2O to Cu pseudomorphic conversion for stereoselective alkyne semihydrogenation. Chemical Science, 2018, 9, 2517-2524.	3.7	34
31	Sequential Cation Exchange Generated Superlattice Nanowires Forming Multiple p–n Heterojunctions. ACS Nano, 2014, 8, 9422-9426.	7.3	29
32	Magnetic MoS_2 Interface Monolayer on a CdS Nanowire by Cation Exchange. Journal of Physical Chemistry C, 2016, 120, 23055-23060.	1.5	24
33	Strain Control of a NO Gas Sensor Based on Ga-Doped ZnO Epilayers. ACS Applied Electronic Materials, 2020, 2, 1365-1372.	2.0	24
34	Surface-dependent band structure variations and bond-level deviations in Cu_2O. Inorganic Chemistry Frontiers, 2021, 8, 4200-4208.	3.0	24
35	Enhancement of perpendicular coercivity in L11 CoPt thin films by replacement of Co with Cu. Journal of Applied Physics, 2010, 108, 113909.	1.1	20
36	Facet-Dependent Surface Trap States and Carrier Lifetimes of Silicon. Nano Letters, 2020, 20, 1952-1958.	4.5	20

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37	Current Rectification and Photo-Responsive Current Achieved through Interfacial Facet Control of Cu_2O–Si Wafer Heterojunctions. ACS Central Science, 2021, 7, 1929-1937.	5.3	19
38	Reliability study on deep-ultraviolet photodetectors based on $ZnGa_2O_4$ epilayers grown by MOCVD. Applied Surface Science, 2021, 555, 149657.	3.1	18
39	Lattice–Symmetry–Driven Epitaxy of Hierarchical GaN Nanotripods. Advanced Functional Materials, 2017, 27, 1604854.	7.8	17
40	Energy-Saving $ZnGa_2O_4$ Phototransistor Improved by Thermal Annealing. ACS Applied Electronic Materials, 2020, 2, 3515-3521.	2.0	15
41	Large Facet-Specific Built-in Potential Differences Affecting Trap State Densities and Carrier Lifetimes of GaAs Wafers. Journal of Physical Chemistry C, 2020, 124, 21577-21582.	1.5	15
42	Germanium Possessing Facet-Specific Trap States and Carrier Lifetimes. Journal of Physical Chemistry C, 2020, 124, 13304-13309.	1.5	15
43	Heterogeneous Supersaturation in Mixed Perovskites. Advanced Science, 2020, 7, 1903166.	5.6	13
44	Silicon Wafers with Facet–Dependent Electrical Conductivity Properties. Angewandte Chemie, 2017, 129, 15541-15545.	1.6	12
45	Power Saving High Performance Deep-Ultraviolet Phototransistors Made of $ZnGa_2O_4$ Epilayers. ACS Applied Electronic Materials, 2020, 2, 590-596.	2.0	10
46	Surface-dependent band structure variations and bond deviations of GaN. Physical Chemistry Chemical Physics, 2022, 24, 9135-9140.	1.3	10
47	Wearable Devices Made of a Wireless Vertical-Type Light-Emitting Diode Package on a Flexible Polyimide Substrate with a Conductive Layer. ACS Applied Electronic Materials, 2021, 3, 979-987.	2.0	9
48	Pentafluoropyridine functionalized novel heteroatom-doped with hierarchical porous 3D cross-linked graphene for supercapacitor applications. RSC Advances, 2021, 11, 26892-26907.	1.7	8
49	Lead-Free Ultra-Wide Direct Bandgap Perovskite $EACaI_3$. IEEE Nanotechnology Magazine, 2022, 21, 66-70.	1.1	8
50	Density Functional Theory Study of Metallic Silicon (111) Plane Structures. ACS Omega, 2022, 7, 5385-5392.	1.6	8
51	Transition Metal Ions in Methylammonium Chloride Perovskites. ACS Omega, 2022, 7, 1412-1419.	1.6	7
52	Intermediates in the cation reactions in solution probed by an in situ surface enhanced Raman scattering method. Scientific Reports, 2015, 5, 13759.	1.6	6
53	Optoelectronic Properties Prediction of Lead-Free Methylammonium Alkaline-Earth Perovskite Based on DFT Calculations. ACS Omega, 2022, 7, 16204-16210.	1.6	6
54	Synthesis, characterization, and band gap tunability in Ternary $Zn_xCd_{1-x}S$ ($0 \leq x \leq 1$) alloyed nanowires. , 2014, , .		1