

# Tian Sheng

## List of Publications by Year in descending order

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90  
papers

4,595  
citations

101384

36  
h-index

106150

65  
g-index

91  
all docs

91  
docs citations

91  
times ranked

6095  
citing authors

#	ARTICLE	IF	CITATIONS
1	Regulating the nanoscale intimacy of metal and acidic sites in Ru/Al <sub>2</sub> O <sub>3</sub> for the selective conversions of lignin-derived phenols to jet fuels. <i>Journal of Energy Chemistry</i> , 2022, 66, 576-586.	7.1	35
2	High activity of step sites on Pd nanocatalysts in electrocatalytic dechlorination. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 3896-3904.	1.3	10
3	Boosting Electrocatalytic Hydrazine Oxidation Reaction on High-Index Faceted Au Concave Trioctahedral Nanocrystals. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 696-702.	3.2	11
4	Outstanding long-cycling lithium-sulfur batteries by core-shell structure of S@Pt composite with ultrahigh sulfur content. <i>Nature Energy</i> , 2022, 1, 100006.		45
5	High CO-Tolerant Ru-Based Catalysts by Constructing an Oxide Blocking Layer. <i>Journal of the American Chemical Society</i> , 2022, 144, 9292-9301.	6.6	29
6	Electrocatalysis CO <sub>2</sub> to Tunable Syngas upon Fe Clusters Catalyst Dispersed on Bamboo-like NCTs. <i>Inorganic Chemistry</i> , 2022, 61, 9375-9380.	1.9	6
7	Li-CO <sub>2</sub> /O <sub>2</sub> battery operating at ultra-low overpotential and low O <sub>2</sub> content on Pt/CNT catalyst. <i>Chemical Engineering Journal</i> , 2022, 448, 137541.	6.6	18
8	Structurally Disordered Phosphorus-Doped Pt as a Highly Active Electrocatalyst for an Oxygen Reduction Reaction. <i>ACS Catalysis</i> , 2021, 11, 355-363.	5.5	79
9	Iron Doped in the Subsurface of CuS Nanosheets by Interionic Redox: Highly Efficient Electrocatalysts toward the Oxygen Evolution Reaction. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 16210-16217.	4.0	31
10	Ultrasmall Pt Nanoparticles-Loaded Crystalline MoO <sub>2</sub> /Amorphous Ni(OH) <sub>2</sub> Hybrid Nanofilms with Enhanced Water Dissociation and Sufficient Hydrogen Spillover for Hydrogen Generation. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 8257-8269.	3.2	18
11	Singlet oxygen triggered by robust bimetallic MoFe/TiO <sub>2</sub> nanospheres of highly efficacy in solar-light-driven peroxydisulfate activation for organic pollutants removal. <i>Applied Catalysis B: Environmental</i> , 2021, 286, 119930.	10.8	110
12	Encapsulating Cobalt into N-Doping Hollow Frameworks for Efficient Cascade Catalysis. <i>Inorganic Chemistry</i> , 2021, 60, 9757-9761.	1.9	10
13	Engineering Electronic Structure of Single-Atom Pd Site on Ti <sub>0.87</sub> O <sub>2</sub> Nanosheet via Charge Transfer Enables C-Br Cleavage for Room-Temperature Suzuki Coupling. <i>CCS Chemistry</i> , 2021, 3, 1453-1462.	4.6	12
14	Stable Radicals with Protective Umbrellas Integrated on the Surface of 2D Layered Materials. <i>Advanced Functional Materials</i> , 2021, 31, 2104246.	7.8	2
15	Shape-dependent catalytic properties of electrochemically synthesized PdPt nanoparticles towards alcohols electrooxidation. <i>Journal of Electroanalytical Chemistry</i> , 2021, 896, 115189.	1.9	6
16	Ru nanoparticles supported on partially reduced TiO <sub>2</sub> as highly efficient catalyst for hydrogen evolution. <i>Nano Energy</i> , 2021, 88, 106211.	8.2	43
17	Titanium nitride nanocrystals anchored evenly on interconnected carbon nanosheets with effective chemisorption and catalytic effects towards polysulfides for long-life lithium-sulfur batteries. <i>Electrochimica Acta</i> , 2021, 395, 139208.	2.6	6
18	High-index faceted Pt-Ru alloy concave nanocubes with enhancing ethanol and CO electro-oxidation. <i>Electrochimica Acta</i> , 2021, 396, 139266.	2.6	8

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19	Efficient electrocatalytic water splitting by bimetallic cobalt iron boride nanoparticles with controlled electronic structure. <i>Journal of Colloid and Interface Science</i> , 2021, 604, 650-659.	5.0	32
20	Nano-Ni-MOFs: High Active Catalysts on the Cascade Hydrogenation of Quinolines. <i>Catalysis Letters</i> , 2021, 151, 2445-2451.	1.4	8
21	Design of Binary Cu <sup>II</sup> /Fe Sites Coordinated with Nitrogen Dispersed in the Porous Carbon for Synergistic CO <sub>2</sub> Electroreduction. <i>Small</i> , 2021, 17, e2006951.	5.2	63
22	Transformation of the sp <sup>2</sup> Carbanion to Carbene with Subsequent 1,1-Migratory Insertion and Nucleophilic Substitution in Rare-Earth Metal Chemistry. <i>Inorganic Chemistry</i> , 2021, 60, 18843-18853.	1.9	4
23	Enhancing electrocatalytic nitrogen reduction to ammonia with rare earths (La, Y, and Sc) on high-index faceted platinum alloy concave nanocubes. <i>Journal of Materials Chemistry A</i> , 2021, 9, 26277-26285.	5.2	20
24	Insights into the Pt/Rh(111) interface for direct ethanol fuel cells. <i>Applied Surface Science</i> , 2020, 502, 144093.	3.1	9
25	Synergetic Effect of Ru and NiO in the Electrocatalytic Decomposition of Li <sub>2</sub> CO <sub>3</sub> to Enhance the Performance of a Li-CO <sub>2</sub> /O <sub>2</sub> Battery. <i>ACS Catalysis</i> , 2020, 10, 1640-1651.	5.5	85
26	An Fe-doped Co <sub>11</sub> (HPO <sub>3</sub> ) <sub>8</sub> (OH) <sub>6</sub> nanosheets array for high-performance water electrolysis. <i>Electrochimica Acta</i> , 2020, 334, 135616.	2.6	13
27	Hydrazine Oxidation Reaction: Porous Carbon Membrane-Supported Atomically Dispersed Pyrrole-Type Fe <sub>3</sub> N <sub>4</sub> as Active Sites for Electrochemical Hydrazine Oxidation Reaction ( <i>Small</i> 31/2020). <i>Small</i> , 2020, 16, 2070171.	5.2	2
28	Insights into ethanol electro-oxidation over solvated Pt(1 0 0): Origin of selectivity and kinetics revealed by DFT. <i>Applied Surface Science</i> , 2020, 533, 147505.	3.1	10
29	Dehydrogenative Coupling of Terminal Alkynes with O/N-Based Monohydrosilanes Catalyzed by Rare-Earth Metal Complexes. <i>Inorganic Chemistry</i> , 2020, 59, 14152-14161.	1.9	11
30	Electrochemically shape-controlled synthesis of great stellated dodecahedral Au nanocrystals with high-index facets for nitrogen reduction to ammonia. <i>Chemical Communications</i> , 2020, 56, 12162-12165.	2.2	15
31	Regulating the Hidden Solvation-Ion-Exchange in Concentrated Electrolytes for Stable and Safe Lithium Metal Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 2000901.	10.2	65
32	PtCo@NCs with Short Heteroatom Active Site Distance for Enhanced Catalytic Properties. <i>Advanced Functional Materials</i> , 2020, 30, 2002281.	7.8	74
33	Porous Carbon Membrane-Supported Atomically Dispersed Pyrrole-Type Fe <sub>3</sub> N <sub>4</sub> as Active Sites for Electrochemical Hydrazine Oxidation Reaction. <i>Small</i> , 2020, 16, e2002203.	5.2	34
34	Fe Single Atoms and Fe <sub>2</sub> O <sub>3</sub> Clusters Liberated from N-Doped Polyhedral Carbon for Chemoselective Hydrogenation under Mild Conditions. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 34122-34129.	4.0	47
35	Suppressing lithium dendrite growth by a synergetic effect of uniform nucleation and inhibition. <i>Journal of Materials Chemistry A</i> , 2020, 8, 4300-4307.	5.2	29
36	Excavated cubic platinum-iridium alloy nanocrystals with high-index facets as highly efficient electrocatalysts in N <sub>2</sub> fixation to NH <sub>3</sub> . <i>Chemical Communications</i> , 2019, 55, 9335-9338.	2.2	48

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37	Fe/Fe <sub>3</sub> C Encapsulated in N-Doped Carbon Tubes: A Recyclable Catalyst for Hydrogenation with High Selectivity. <i>Inorganic Chemistry</i> , 2019, 58, 9469-9475.	1.9	40
38	Concave Cubic Pt-Sm Alloy Nanocrystals with High-Index Facets and Enhanced Electrocatalytic Ethanol Oxidation. <i>ACS Applied Energy Materials</i> , 2019, 2, 7204-7210.	2.5	19
39	High Catalytic Activity of Pt(100) for CH <sub>4</sub> Electrochemical Conversion. <i>ACS Catalysis</i> , 2019, 9, 10159-10165.	5.5	13
40	Does the oxophilic effect serve the same role for hydrogen evolution/oxidation reaction in alkaline media?. <i>Nano Energy</i> , 2019, 62, 601-609.	8.2	68
41	Visualization of facet-dependent pseudo-photocatalytic behavior of TiO <sub>2</sub> nanorods for water splitting using In situ liquid cell TEM. <i>Nano Energy</i> , 2019, 62, 507-512.	8.2	44
42	Pd Nanocrystals with Continuously Tunable High-Index Facets as a Model Nanocatalyst. <i>ACS Catalysis</i> , 2019, 9, 3144-3152.	5.5	68
43	Clarifying the controversial catalytic active sites of Co <sub>3</sub> O <sub>4</sub> for the oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 23191-23198.	5.2	115
44	Regulating locations of active sites: a novel strategy to greatly improve the stability of PtAu electrocatalysts. <i>Chemical Communications</i> , 2019, 55, 13602-13605.	2.2	8
45	Core-Shell Structured S@Co(OH) <sub>2</sub> with a Carbon-Nanofiber Interlayer: A Conductive Cathode with Suppressed Shuttling Effect for High-Performance Lithium-Sulfur Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 4065-4073.	4.0	35
46	Long-Life Room-Temperature Sodium-Sulfur Batteries by Virtue of Transition-Metal-Nanocluster-Sulfur Interactions. <i>Angewandte Chemie</i> , 2019, 131, 1498-1502.	1.6	63
47	Long-Life Room-Temperature Sodium-Sulfur Batteries by Virtue of Transition-Metal-Nanocluster-Sulfur Interactions. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 1484-1488.	7.2	165
48	Ordered platinum-bismuth intermetallic clusters with Pt-skin for a highly efficient electrochemical ethanol oxidation reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 5214-5220.	5.2	48
49	Cu <sup>2+</sup> Dual-Doped Layer-Tunnel Hybrid Na <sub>0.6</sub> Mn <sub>1-x</sub> Cu <sub>x</sub> O <sub>2</sub> as a Cathode of Sodium-Ion Battery with Enhanced Structure Stability, Electrochemical Property, and Air Stability. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 10147-10156.	4.0	98
50	Identifying the key obstacle in photocatalytic oxygen evolution on rutile TiO <sub>2</sub> . <i>Nature Catalysis</i> , 2018, 1, 291-299.	16.1	212
51	Novel Sulfur Host Composed of Cobalt and Porous Graphitic Carbon Derived from MOFs for the High-Performance Li-S Battery. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 13499-13508.	4.0	54
52	Ammonia electrooxidation on dendritic Pt nanostructures in alkaline solutions investigated by in-situ FTIR spectroscopy and online electrochemical mass spectroscopy. <i>Journal of Electroanalytical Chemistry</i> , 2018, 819, 495-501.	1.9	34
53	Effects of atom arrangement and thickness of Pt atomic layers on Pd nanocrystals for electrocatalysis. <i>Electrochimica Acta</i> , 2018, 271, 519-525.	2.6	6
54	Modelling the aqueous and nonaqueous interfaces for CO <sub>2</sub> electro-reduction over Sn catalysts. <i>Applied Surface Science</i> , 2018, 428, 514-519.	3.1	3

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55	Constructing canopy-shaped molecular architectures to create local Pt surface sites with high tolerance to H <sub>2</sub> S and CO for hydrogen electrooxidation. <i>Energy and Environmental Science</i> , 2018, 11, 166-171.	15.6	32
56	Electrostatic Self-Assembly Enabling Integrated Bulk and Interfacial Sodium Storage in 3D Titania-Graphene Hybrid. <i>Nano Letters</i> , 2018, 18, 336-346.	4.5	40
57	Atomic cobalt as an efficient electrocatalyst in sulfur cathodes for superior room-temperature sodium-sulfur batteries. <i>Nature Communications</i> , 2018, 9, 4082.	5.8	305
58	Nickel Complexes with Noninnocent Ligands as Highly Active Electrocatalysts for Hydrogen Evolution. <i>Chinese Journal of Chemistry</i> , 2018, 36, 1161-1164.	2.6	10
59	Edge-Site Engineering of Atomically Dispersed FeN <sub>4</sub> by Selective N Bond Cleavage for Enhanced Oxygen Reduction Reaction Activities. <i>Journal of the American Chemical Society</i> , 2018, 140, 11594-11598.	6.6	603
60	Unexpected effects of zirconium-doping in the high performance sodium manganese-based layer-tunnel cathode. <i>Journal of Materials Chemistry A</i> , 2018, 6, 13934-13942.	5.2	32
61	Novel 3.9 V Layered Na <sub>3</sub> V <sub>3</sub> (PO <sub>4</sub> ) <sub>4</sub> Cathode Material for Sodium Ion Batteries. <i>ACS Applied Energy Materials</i> , 2018, 1, 3603-3606.	2.5	23
62	Insights into the Distinct Lithiation/Sodiation of Porous Cobalt Oxide by in Operando Synchrotron X-ray Techniques and Ab Initio Molecular Dynamics Simulations. <i>Nano Letters</i> , 2017, 17, 953-962.	4.5	30
63	Electrochemical reduction of CO <sub>2</sub> into CO on Cu(100): a new insight into the C-O bond breaking mechanism. <i>Chemical Communications</i> , 2017, 53, 2594-2597.	2.2	39
64	Shape transformation of {hk0}-faceted Pt nanocrystals from a tetrahedron into a truncated ditetragonal prism. <i>Chemical Communications</i> , 2017, 53, 3236-3238.	2.2	17
65	An insight into methanol oxidation mechanisms on RuO <sub>2</sub> (100) under an aqueous environment by DFT calculations. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 7476-7480.	1.3	15
66	Constructing a Triple-Phase Interface in Micropores to Boost Performance of Fe/N/C Catalysts for Direct Methanol Fuel Cells. <i>ACS Energy Letters</i> , 2017, 2, 645-650.	8.8	89
67	Nanocrystal Catalysts of High-Energy Surface and Activity. <i>Studies in Surface Science and Catalysis</i> , 2017, 177, 439-475.	1.5	2
68	Dodecahedral W@WC Composite as Efficient Catalyst for Hydrogen Evolution and Nitrobenzene Reduction Reactions. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 20594-20602.	4.0	28
69	Identifying the significance of proton-electron transfer in CH <sub>4</sub> production on Cu (100) in CO <sub>2</sub> electro-reduction. <i>Journal of Electroanalytical Chemistry</i> , 2017, 793, 184-187.	1.9	10
70	Platinum-Cobalt Bimetallic Nanoparticles with Pt Skin for Electro-Oxidation of Ethanol. <i>ACS Catalysis</i> , 2017, 7, 892-895.	5.5	89
71	Graphitized porous carbon materials with high sulfur loading for lithium-sulfur batteries. <i>Nano Energy</i> , 2017, 32, 503-510.	8.2	118
72	Octahedral PtCu alloy nanocrystals with high performance for oxygen reduction reaction and their enhanced stability by trace Au. <i>Nano Energy</i> , 2017, 33, 65-71.	8.2	139

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73	Urea hydrogen bond donor-mediated synthesis of high-index faceted platinum concave nanocubes grown on multi-walled carbon nanotubes and their enhanced electrocatalytic activity. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 31553-31559.	1.3	16
74	Free energy landscape of electrocatalytic CO <sub>2</sub> reduction to CO on aqueous FeN <sub>4</sub> center embedded graphene studied by ab initio molecular dynamics simulations. <i>Chemical Physics Letters</i> , 2017, 688, 37-42.	1.2	20
75	Designing Pt-Based Electrocatalysts with High Surface Energy. <i>ACS Energy Letters</i> , 2017, 2, 1892-1900.	8.8	46
76	Cu overlayers on tetrahedral Pd nanocrystals with high-index facets for CO <sub>2</sub> electroreduction to alcohols. <i>Chemical Communications</i> , 2017, 53, 8085-8088.	2.2	64
77	Seeds and Potentials Mediated Synthesis of High-Index Faceted Gold Nanocrystals with Enhanced Electrocatalytic Activities. <i>Langmuir</i> , 2017, 33, 6991-6998.	1.6	30
78	Electrochemical interfacial influences on deoxygenation and hydrogenation reactions in CO reduction on a Cu(100) surface. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 15304-15311.	1.3	6
79	Insights into the mechanism of nitrobenzene reduction to aniline over Pt catalyst and the significance of the adsorption of phenyl group on kinetics. <i>Chemical Engineering Journal</i> , 2016, 293, 337-344.	6.6	96
80	Elucidation of the surface structure-selectivity relationship in ethanol electro-oxidation over platinum by density functional theory. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 15501-15504.	1.3	20
81	Hydrogen adsorption-mediated synthesis of concave Pt nanocubes and their enhanced electrocatalytic activity. <i>Nanoscale</i> , 2016, 8, 11559-11564.	2.8	39
82	Structure Design and Performance Tuning of Nanomaterials for Electrochemical Energy Conversion and Storage. <i>Accounts of Chemical Research</i> , 2016, 49, 2569-2577.	7.6	131
83	Insight into the promoting role of Rh doped on Pt(111) in methanol electro-oxidation. <i>Journal of Electroanalytical Chemistry</i> , 2016, 781, 24-29.	1.9	19
84	In-situ FTIR spectroscopic studies of electrocatalytic reactions and processes. <i>Nano Energy</i> , 2016, 29, 414-427.	8.2	108
85	Insight into CO Activation over Cu(100) under Electrochemical Conditions. <i>Electrochimica Acta</i> , 2016, 190, 446-454.	2.6	19
86	Methanol electro-oxidation on platinum modified tungsten carbides in direct methanol fuel cells: a DFT study. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 25235-25243.	1.3	46
87	The origin of high activity but low CO <sub>2</sub> selectivity on binary PtSn in the direct ethanol fuel cell. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 9432-9440.	1.3	56
88	Significance of $\beta$ -dehydrogenation in ethanol electro-oxidation on platinum doped with Ru, Rh, Pd, Os and Ir. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 13248-13254.	1.3	44
89	Role of Water and Adsorbed Hydroxyls on Ethanol Electrochemistry on Pd: New Mechanism, Active Centers, and Energetics for Direct Ethanol Fuel Cell Running in Alkaline Medium. <i>Journal of Physical Chemistry C</i> , 2014, 118, 5762-5772.	1.5	73
90	Engineering Electronic Structure of Single-Atom Pd Site on TiO <sub>2</sub> Nanosheet via Charge Transfer Enables C-Br Cleavage for Room Temperature Suzuki Coupling. <i>CCS Chemistry</i> , 0, , 1-29.	4.6	0