Tsan Yao Chen

List of Publications by Year
in descending order

109	2,699	185998	233125
papers	citations	28 h-index	45 g-index

111	111	111	4154
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Mechanism of Arsenic Adsorption on Magnetite Nanoparticles from Water: Thermodynamic and Spectroscopic Studies. Environmental Science & Technology, 2015, 49, 7726-7734.	4.6	314
2	Adsorption mechanism of selenate and selenite on the binary oxide systems. Water Research, 2009, 43, 4412-4420.	5.3	122
3	Platinum-trimer decorated cobalt-palladium core-shell nanocatalyst with promising performance for oxygen reduction reaction. Nature Communications, 2019, 10, 440.	5.8	115
4	Stabilization of Natural Organic Matter by Short-Range-Order Iron Hydroxides. Environmental Science & Technology, 2016, 50, 12612-12620.	4.6	75
5	Accumulation of heavy metals and trace elements in fluvial sediments received effluents from traditional and semiconductor industries. Scientific Reports, 2016, 6, 34250.	1.6	74
6	In operando synchrotron X-ray studies of a novel spinel (Ni_{0.2}Co_{0.2}Mn_{0.2}Fe_{0.2}Ti_{0.2})₃O₄ high-entropy oxide for energy storage applications. Journal of Materials Chemistry A, 2020, 8, 21756-21770.	5.2	66
7	Arsenate Sorption on Lithium/Aluminum Layered Double Hydroxide Intercalated by Chloride and on Gibbsite:Â Sorption Isotherms, Envelopes, and Spectroscopic Studies. Environmental Science & Technology, 2006, 40, 7784-7789.	4.6	63
8	Effects of Pt Shell Thicknesses on the Atomic Structure of Ruâ€“Pt Coreâ€“Shell Nanoparticles for Methanol Electrooxidation Applications. ChemPhysChem, 2010, 11, 2383-2392.	1.0	58
9	Enhancement of electrochemical properties of Pd/C catalysts toward ethanol oxidation reaction in alkaline solution through Ni and Au alloying. International Journal of Hydrogen Energy, 2013, 38, 4474-4482.	3.8	54
10	Structural evolution in LiFePO4-based battery materials: In-situ and ex-situ time-of-flight neutron diffraction study. Journal of Power Sources, 2014, 258, 356-364.	4.0	52
11	Hydrogen Spillover Effect of Pt-Doped Activated Carbon Studied by Inelastic Neutron Scattering. Journal of Physical Chemistry Letters, 2011, 2, 2322-2325.	2.1	51
12	Photolysis and photocatalytic decomposition of sulfamethazine antibiotics in an aqueous solution with TiO₂. RSC Advances, 2016, 6, 69301-69310.	1.7	48
13	The performance and stability of the oxygen reduction reaction on Ptâ€“M (M = Pd, Ag and Au) nanorods: an experimental and computational study. Chemical Communications, 2015, 51, 6605-6608.	2.2	44
14	Selenium Speciation in Coal Ash Spilled at the Tennessee Valley Authority Kingston Site. Environmental Science & Technology, 2013, 47, 14001-14009.	4.6	43
15	Tetragonal and hexagonal polymorphs of BaTi1âˆ’xFexO3âˆ’Î´ multiferroics using x-ray and Raman analyses. Applied Physics Letters, 2011, 99, .	1.5	41
16	Promotion of Ternary Ptâ€“Snâ€“Ag Catalysts toward Ethanol Oxidation Reaction: Revealing Electronic and Structural Effects of Additive Metals. ACS Energy Letters, 2018, 3, 2550-2557.	8.8	41
17	Graphene-supported Pt and PtPd nanorods with enhanced electrocatalytic performance for the oxygen reduction reaction. Chemical Communications, 2014, 50, 11165-11168.	2.2	39
18	DNA adsorption by nanocrystalline allophane spherules and nanoaggregates, and implications for carbon sequestration in Andisols. Applied Clay Science, 2016, 120, 40-50.	2.6	37

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19	Fractal aggregates of the Pt nanoparticles synthesized by the polyol process and poly(N-vinyl-2-pyrrolidone) reduction. Journal of Applied Crystallography, 2007, 40, s540-s543.	1.9	36
20	Enhanced performance of polymer solar cells using solution-processed tetra-n-alkyl ammonium bromides as electron extraction layers. Journal of Materials Chemistry A, 2013, 1, 2582.	5.2	36
21	Effective anodic oxidation of naproxen by platinum nanoparticles coated FTO glass. Journal of Hazardous Materials, 2014, 277, 110-119.	6.5	35
22	Heterojunction confinement on the atomic structure evolution of near monolayer coreâ€“shell nanocatalysts in redox reactions of a direct methanol fuel cell. Journal of Materials Chemistry A, 2015, 3, 1518-1529.	5.2	34
23	Recent Advancements and Future Prospects of Noble Metal-Based Heterogeneous Nanocatalysts for Oxygen Reduction and Hydrogen Evolution Reactions. Applied Sciences (Switzerland), 2020, 10, 7708.	1.3	34
24	Enhanced CO₂ Electrochemical Reduction Performance over Cu@AuCu Catalysts at High Noble Metal Utilization Efficiency. Nano Letters, 2021, 21, 9293-9300.	4.5	33
25	Core Dominated Surface Activity of Coreâ€“Shell Nanocatalysts on Methanol Electrooxidation. Journal of Physical Chemistry C, 2012, 116, 16969-16978.	1.5	32
26	The synergistic effects of combining the high energy mechanical milling and wet milling on Si negative electrode materials for lithium ion battery. Journal of Power Sources, 2017, 349, 111-120.	4.0	30
27	Vanadium-based polyoxometalate as electron/ion sponge for lithium-ion storage. Journal of Power Sources, 2019, 435, 226702.	4.0	30
28	Self-assembled tetraoctylammonium bromide as an electron-injection layer for cathode-independent high-efficiency polymer light-emitting diodes. Journal of Materials Chemistry, 2011, 21, 8715.	6.7	29
29	Mechanistic study of arsenate adsorption on lithium/aluminum layered double hydroxide. Applied Clay Science, 2010, 48, 485-491.	2.6	28
30	Near-Monolayer Platinum Shell on Coreâ€“Shell Nanocatalysts for High-Performance Direct Methanol Fuel Cell. Journal of Physical Chemistry C, 2014, 118, 2253-2262.	1.5	28
31	Heterogeneous NiO₂-to-Pd Epitaxial Structure Performs Outstanding Oxygen Reduction Reaction Activity. Journal of Physical Chemistry C, 2020, 124, 2295-2306.	1.5	28
32	Programming ORR Activity of Ni/NiO_x@Pd Electrocatalysts via Controlling Depth of Surface-Decorated Atomic Pt Clusters. ACS Omega, 2018, 3, 8733-8744.	1.6	27
33	Nitrogen doping in Ta2O5 and its implication for photocatalytic H2 production. Applied Surface Science, 2018, 459, 477-482.	3.1	27
34	Improving interfacial electron transfer and light harvesting in dye-sensitized solar cells by using Ag nanowire/TiO₂ nanoparticle composite films. RSC Advances, 2015, 5, 70172-70177.	1.7	26
35	Pt₃ clusters-decorated Co@Pd and Ni@Pd model coreâ€“shell catalyst design for the oxygen reduction reaction: a DFT study. Journal of Materials Chemistry A, 2018, 6, 23326-23335.	5.2	26
36	Enhanced electrochemical degradation of ibuprofen in aqueous solution by PtRu alloy catalyst. Chemosphere, 2017, 175, 76-84.	4.2	25

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37	A highly mismatched NiO₂-to-Pd hetero-structure as an efficient nanocatalyst for the hydrogen evolution reaction. Sustainable Energy and Fuels, 2020, 4, 2541-2550.	2.5	24
38	Oxidative precipitation of ruthenium oxide for supercapacitors: Enhanced capacitive performances by adding cetyltrimethylammonium bromide. Journal of Power Sources, 2014, 268, 430-438.	4.0	23
39	Local structure distortion induced by Ti dopants boosting the pseudocapacitance of RuO₂-based supercapacitors. Nanoscale, 2015, 7, 15450-15461.	2.8	22
40	Capacitive performance enhancements of RuO2 nanocrystals through manipulation of preferential orientation growth originated from the synergy of Pluronic F127 trapping and annealing. Nanoscale, 2014, 6, 2861.	2.8	21
41	Heterogeneous Cuâ€“Pd binary interface boosts stability and mass activity of atomic Pt clusters in the oxygen reduction reaction. Nanoscale, 2017, 9, 7207-7216.	2.8	21
42	Ir-oxide mediated surface restructure and corresponding impacts on durability of bimetallic NiOx@Pd nanocatalysts in oxygen reduction reaction. Journal of Alloys and Compounds, 2020, 844, 156160.	2.8	21
43	Thermal-induced growth of RuO₂nanorods from a binary Ruâ€“Ti oxide composite and alteration in supercapacitive characteristics. Journal of Materials Chemistry A, 2013, 1, 2039-2049.	5.2	20
44	Keplerate-type polyoxometalate {Mo72Fe30} nanoparticle anodes for high-energy lithium-ion batteries. Journal of Materials Chemistry A, 2020, 8, 21623-21633.	5.2	20
45	Effects of Pt metal loading on the atomic restructure and oxygen reduction reaction performance of Pt-cluster decorated Cu@Pd electrocatalysts. Sustainable Energy and Fuels, 2019, 3, 1668-1681.	2.5	19
46	Sub-nanometer Pt cluster decoration enhances the oxygen reduction reaction performances of NiO_x supported Pd nano-islands. Sustainable Energy and Fuels, 2020, 4, 809-823.	2.5	19
47	Promoting formic acid oxidation performance of Pd nanoparticles via Pt and Ru atom mediated surface engineering. RSC Advances, 2020, 10, 17302-17310.	1.7	19
48	Interfacial atomic Ni tetragon intercalation in a NiO₂-to-Pd hetero-structure triggers superior HER activity to the Pt catalyst. Journal of Materials Chemistry A, 2021, 9, 12019-12028.	5.2	19
49	Submillisecond Laser Annealing Induced Surface and Subsurface Restructuring of Cuâ€“Niâ€“Pd Trimetallic Nanocatalyst Promotes Thermal CO₂ Reduction. ACS Applied Energy Materials, 2021, 4, 14043-14058.	2.5	19
50	Mechanism of Sodium Ion Storage in Na₇[H₂PV₁₄O₄₂] Anode for Sodiumâ€ion Batteries. Advanced Materials Interfaces, 2018, 5, 1800491.	1.9	18
51	Local Structural Disorder Enhances the Oxygen Reduction Reaction Activity of Carbon-Supported Low Pt Loading CoPt Nanocatalysts. Journal of Physical Chemistry C, 2019, 123, 19013-19021.	1.5	18
52	High-Performance and Stable Hydrogen Evolution Reaction Achieved by Pt Trimer Decoration on Ultralow-Metal Loading Bimetallic PtPd Nanocatalysts. ACS Applied Energy Materials, 2020, 3, 11142-11152.	2.5	18
53	Local synergetic collaboration between Pd and local tetrahedral symmetric Ni oxide enables ultra-high-performance CO₂ thermal methanation. Journal of Materials Chemistry A, 2020, 8, 12744-12756.	5.2	18
54	An electrolyte additive with boron-nitrogen-oxygen alkyl group enabled stable cycling for high voltage LiNi0.5Mn1.5O4 cathode in lithium-ion battery. Journal of Power Sources, 2020, 477, 228473.	4.0	17

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55	In Operando X-ray Studies of High-Performance Lithium-Ion Storage in Keplerate-Type Polyoxometalate Anodes. ACS Applied Materials & Interfaces, 2020, 12, 40296-40309.	4.0	17
56	Hybrid Silver Nanowire/Titanium Oxides Nanocomposites as Anode for Dyeâ€Sensitized Solar Cell Application. Journal of the Chinese Chemical Society, 2009, 56, 1244-1249.	0.8	16
57	Correlation between surface state and band edge emission of white light ZnxCd1â^'xS nanocrystals. Journal of Materials Chemistry C, 2014, 2, 2664.	2.7	16
58	Heterogeneous assembly of Pt-clusters on hierarchically structured CoO_x@SnPd₂@SnO₂ quaternary nanocatalysts manifesting oxygen reduction reaction performance. New Journal of Chemistry, 2020, 44, 9712-9724.	1.4	16
59	Collaboration between a Pt-dimer and neighboring Coâ€“Pd atoms triggers efficient pathways for oxygen reduction reaction. Physical Chemistry Chemical Physics, 2021, 23, 1822-1834.	1.3	16
60	Heterogeneous junction engineering on coreâ€“shell nanocatalysts boosts the dye-sensitized solar cell. Nanoscale, 2013, 5, 9181.	2.8	15
61	The effect of Mn addition on the promotion of oxygen reduction reaction performance for PtCo/C catalysts. Electrochimica Acta, 2013, 105, 180-187.	2.6	15
62	H2 Reduction Annealing Induced Phase Transition and Improvements on Redox Durability of Pt Cluster-Decorated Cu@Pd Electrocatalysts in Oxygen Reduction Reaction. ACS Omega, 2019, 4, 971-982.	1.6	15
63	Conformational Effects of Pt-Shells on Nanostructures and Corresponding Oxygen Reduction Reaction Activity of Au-Cluster-Decorated NiOx@Pt Nanocatalysts. Nanomaterials, 2019, 9, 1003.	1.9	14
64	NiO_x-supported PtRh nanoalloy enables high-performance hydrogen evolution reaction under universal pH conditions. Sustainable Energy and Fuels, 2021, 5, 5490-5504.	2.5	14
65	A Mechanism Study on the Synthesis of Cu/Pd Nanoparticles with Citric Complexing Agent. Journal of Physical Chemistry C, 2007, 111, 12873-12876.	1.5	13
66	Atomic scale Pt decoration promises oxygen reduction properties of Co@Pd nanocatalysts in alkaline electrolytes for 310k redox cycles. Sustainable Energy and Fuels, 2018, 2, 946-957.	2.5	13
67	The structure modification and activity improvement of Pdâ€“Co/C electrocatalysts by the addition of Au for the oxygen reduction reaction. Catalysis Science and Technology, 2012, 2, 1654.	2.1	12
68	Ruthenium core-activated platinum monolayer shell high redox activity cathodic electrocatalysts for dye-sensitized solar cells. Journal of Materials Chemistry A, 2013, 1, 5660.	5.2	12
69	Improved Catalytic Performance of Pt Supported on Multiâ€Wall Carbon Nanotubes as Cathode for Direct Methanol Fuel Cell Applications Prepared by Dualâ€Stepped Surface Thiolation Processes. Journal of the Chinese Chemical Society, 2009, 56, 1236-1243.	0.8	11
70	Core-dependent growth of platinum shell nanocrystals and their electrochemical characteristics for fuel cells. CrystEngComm, 2013, 15, 982-994.	1.3	11
71	Crystal growth of platinumâ€“ruthenium bimetallic nanocrystallites and their methanol electrooxidation activity. CrystEngComm, 2013, 15, 3932.	1.3	11
72	Gold atomic clusters extracting the valence electrons to shield the carbon monoxide passivation on near-monolayer coreâ€“shell nanocatalysts in methanol oxidation reactions. Physical Chemistry Chemical Physics, 2015, 17, 15131-15139.	1.3	10

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73	3D Atomic Arrangement at Functional Interfaces Inside Nanoparticles by Resonant High-Energy X-ray Diffraction. ACS Applied Materials & Interfaces, 2015, 7, 23265-23277.	4.0	10
74	The size effect of silver nanocubes on gap-mode surface enhanced Raman scattering substrate. Journal of the Taiwan Institute of Chemical Engineers, 2016, 69, 146-150.	2.7	10
75	Rapid crystal growth of bimetallic PdPt nanocrystals with surface atomic Pt cluster decoration provides promising oxygen reduction activity. RSC Advances, 2017, 7, 55110-55120.	1.7	10
76	X-ray Absorption Spectroscopy and In-Operando Neutron Diffraction Studies on Local Structure Fading Induced Irreversibility in a 18â€¯650 Cell with P2â€“Na₂/3Fe₁/3Mn₂/3O₂ Cathode in a Long Cycle Test. Journal of Physical Chemistry C, 2018, 122, 12623-12632.	1.5	10
77	Bifunctional Ptâ€“SnO_x nanorods for enhanced oxygen reduction and hydrogen evolution reactions. Sustainable Energy and Fuels, 2021, 5, 2960-2971.	2.5	10
78	Molecular Structures of Al/Si and Fe/Si Coprecipitates and the Implication for Selenite Removal. Scientific Reports, 2016, 6, 24716.	1.6	9
79	CO-Reductive and O2-Oxidative Annealing Assisted Surface Restructure and Corresponding Formic Acid Oxidation Performance of PdPt and PdRuPt Nanocatalysts. Scientific Reports, 2020, 10, 8457.	1.6	9
80	Mesoporous TiO2 film modified with a solâ€“gel based interconnecting network for boosting the dye-sensitized solar cell performance. Thin Solid Films, 2014, 570, 268-272.	0.8	8
81	Significance of ions with an ordered arrangement for enhancing the electron injection/extraction in polymer optoelectronic devices. Journal of Materials Chemistry C, 2014, 2, 4805-4811.	2.7	8
82	Real-time investigation on the influences of vanadium additives to theÂstructural and chemical state evolutions of LiFePO 4 for enhancing the electrochemical performance of lithium-ion battery. Journal of Power Sources, 2014, 270, 449-456.	4.0	8
83	Self-aligned synthesis of a NiPt-alloycore@Ptshellnanocrystal with contrivable heterojunction structure and oxygen reduction activity. CrystEngComm, 2016, 18, 5860-5868.	1.3	8
84	Mechanochemical synthesis of Si/Cu3Si-based composite as negative electrode materials for lithium ion battery. Scientific Reports, 2018, 8, 12695.	1.6	8
85	Influence of Glucose Derivatives on Ball-Milled Si for Negative Electrodes with High Area Capacity in Lithium-Ion Batteries. ACS Sustainable Chemistry and Engineering, 2019, 7, 2971-2979.	3.2	8
86	Determining the Molecular Orientation on the Metal Nanoparticle Surface through Surface-Enhanced Raman Spectroscopy and Density Functional Theory Simulations. Journal of Physical Chemistry C, 2021, 125, 16289-16295.	1.5	8
87	The structure-dependent quantum yield of ZnCdS nanocrystals. CrystEngComm, 2015, 17, 5032-5037.	1.3	7
88	Structure and magnetism of BaTi1-xFexO3-Î´ multiferroics. Journal of Applied Physics, 2012, 111, .	1.1	6
89	Oxidation triggered atomic restructures enhancing the electrooxidation activities of carbon supported platinumâ€“ruthenium catalysts. CrystEngComm, 2014, 16, 10066-10079.	1.3	6
90	Crystal shape controlled H2 storage rate in nanoporous carbon composite with ultra-fine Pt nanoparticle. Scientific Reports, 2017, 7, 42438.	1.6	6

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91	Characterizing porous microaggregates and soil organic matter sequestered in allophanic paleosols on Holocene tephras using synchrotron-based X-ray microscopy and spectroscopy. Scientific Reports, 2021, 11, 21310.	1.6	6
92	Biogeochemical reductive release of soil embedded arsenate around a crater area (Guandu) in northern Taiwan using X-ray absorption near-edge spectroscopy. Journal of Environmental Sciences, 2013, 25, 626-636.	3.2	5
93	Amideâ€Functionalized Small Molecules as Solutionâ€Processed Electron Injection Layers in Highly Efficient Polymer Lightâ€Emitting Diodes. Advanced Materials Interfaces, 2016, 3, 1500621.	1.9	5
94	Shell thickness effects on reconfiguration of NiOcoreâ€“Ptshell anodic catalysts in a high current density direct methanol fuel cell. RSC Advances, 2016, 6, 72607-72615.	1.7	5
95	Cyclability evaluation on Si based Negative Electrode in Lithium ion Battery by Graphite Phase Evolution: an operando X-ray diffraction study. Scientific Reports, 2019, 9, 1299.	1.6	5
96	Tri-atomic Pt clusters induce effective pathways in a Co_{core}â€“Pd_{shell} nanocatalyst surface for a high-performance oxygen reduction reaction. Physical Chemistry Chemical Physics, 2021, 23, 18012-18025.	1.3	5
97	Formation of self-aggregated and interconnected silver network within solâ€“gel silica. Journal of Materials Science, 2013, 48, 850-856.	1.7	4
98	Coreâ€“shell nanocrystallite growth via heterogeneous interface manipulation. CrystEngComm, 2015, 17, 8623-8631.	1.3	4
99	Applications of different nano-sized conductive materials in high energy density pouch type lithium ion batteries. Electrochimica Acta, 2020, 362, 137166.	2.6	4
100	Catalyst Improvement of Utilization for Direct Methanol Fuel Cell Using Silane Coupling Agents. Electrochemical and Solid-State Letters, 2006, 9, A549.	2.2	3
101	Lithiation-induced crystal restructuring of hydrothermally prepared Sn/TiO₂ nanocrystallite with substantially enhanced capacity and cycling performance for lithium-ion battery. RSC Advances, 2016, 6, 48620-48629.	1.7	3
102	Size Effect of Atomic Gold Clusters for Carbon Monoxide Passivation at Rucoreâ€“Ptshell Nanocatalysts. Journal of Physical Chemistry C, 2016, 120, 7621-7628.	1.5	3
103	Local heterojunctions of atomic Pt clusters boost the oxygen reduction activity of Rucore@Pdshell nanocrystallites. Journal of Materials Chemistry A, 2016, 4, 17848-17856.	5.2	3
104	Preferential lattice expansion of polypropylene in a trilayer polypropylene/polyethylene/polypropylene microporous separator in Li-ion batteries. Scientific Reports, 2021, 11, 1929.	1.6	3
105	Controlling Interconnected Silver Network Structure in Solâ€“Gel Nanocomposite Via Shrinkageâ€Induced Stress. Advanced Engineering Materials, 2013, 15, 34-39.	1.6	2
106	Polymorphic transition to metastable phases in hollow structured silicon anode in a Li-ions battery. Applied Materials Today, 2022, 26, 101333.	2.3	2
107	Fabricating Nanocomposite Catalysts through Interfacial Fusion of Metallic Nanoparticles. Materials Research Society Symposia Proceedings, 2009, 1217, 1.	0.1	1
108	Real-time XRD and XAS investigation on the influences of vanadium additives to the structural chemical state evolutions of LiFePO4of a lithium-ion. Acta Crystallographica Section A: Foundations and Advances, 2015, 71, s343-s343.	0.0	0

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109	Effects of Au-Fe Nanocluster on Neuron Differentiation with Electric Stimulation. Biophysical Journal, 2020, 118, 455a.	0.2	0