

Tsan Yao Chen

List of Publications by Year in descending order

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109
papers

2,699
citations

186265

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all docs

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docs citations

111
times ranked

4154
citing authors

#	ARTICLE	IF	CITATIONS
1	Mechanism of Arsenic Adsorption on Magnetite Nanoparticles from Water: Thermodynamic and Spectroscopic Studies. <i>Environmental Science & Technology</i> , 2015, 49, 7726-7734.	10.0	314
2	Adsorption mechanism of selenate and selenite on the binary oxide systems. <i>Water Research</i> , 2009, 43, 4412-4420.	11.3	122
3	Platinum-trimer decorated cobalt-palladium core-shell nanocatalyst with promising performance for oxygen reduction reaction. <i>Nature Communications</i> , 2019, 10, 440.	12.8	115
4	Stabilization of Natural Organic Matter by Short-Range-Order Iron Hydroxides. <i>Environmental Science & Technology</i> , 2016, 50, 12612-12620.	10.0	75
5	Accumulation of heavy metals and trace elements in fluvial sediments received effluents from traditional and semiconductor industries. <i>Scientific Reports</i> , 2016, 6, 34250.	3.3	74
6	<i>In operando</i> synchrotron X-ray studies of a novel spinel $(\text{Ni}_{0.2}\text{Co}_{0.2}\text{Mn}_{0.2}\text{Fe}_{0.2}\text{Ti}_{0.2})\text{O}_3\text{O}_4$, high-entropy oxide for energy storage applications. <i>Journal of Materials Chemistry A</i> , 2020, 8, 21756-21770.	10.3	66
7	Arsenate Sorption on Lithium/Aluminum Layered Double Hydroxide Intercalated by Chloride and on Gibbsite: Sorption Isotherms, Envelopes, and Spectroscopic Studies. <i>Environmental Science & Technology</i> , 2006, 40, 7784-7789.	10.0	63
8	Effects of Pt Shell Thicknesses on the Atomic Structure of Pt Core-Shell Nanoparticles for Methanol Electrooxidation Applications. <i>ChemPhysChem</i> , 2010, 11, 2383-2392.	2.1	58
9	Enhancement of electrochemical properties of Pd/C catalysts toward ethanol oxidation reaction in alkaline solution through Ni and Au alloying. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 4474-4482.	7.1	54
10	Structural evolution in LiFePO ₄ -based battery materials: In-situ and ex-situ time-of-flight neutron diffraction study. <i>Journal of Power Sources</i> , 2014, 258, 356-364.	7.8	52
11	Hydrogen Spillover Effect of Pt-Doped Activated Carbon Studied by Inelastic Neutron Scattering. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 2322-2325.	4.6	51
12	Photolysis and photocatalytic decomposition of sulfamethazine antibiotics in an aqueous solution with TiO ₂ . <i>RSC Advances</i> , 2016, 6, 69301-69310.	3.6	48
13	The performance and stability of the oxygen reduction reaction on Pt-M (M = Pd, Ag and Au) nanorods: an experimental and computational study. <i>Chemical Communications</i> , 2015, 51, 6605-6608.	4.1	44
14	Selenium Speciation in Coal Ash Spilled at the Tennessee Valley Authority Kingston Site. <i>Environmental Science & Technology</i> , 2013, 47, 14001-14009.	10.0	43
15	Tetragonal and hexagonal polymorphs of BaTi _{1-x} Fe _x O ₃ multiferroics using x-ray and Raman analyses. <i>Applied Physics Letters</i> , 2011, 99, .	3.3	41
16	Promotion of Ternary Pt-Sn-Ag Catalysts toward Ethanol Oxidation Reaction: Revealing Electronic and Structural Effects of Additive Metals. <i>ACS Energy Letters</i> , 2018, 3, 2550-2557.	17.4	41
17	Graphene-supported Pt and PtPd nanorods with enhanced electrocatalytic performance for the oxygen reduction reaction. <i>Chemical Communications</i> , 2014, 50, 11165-11168.	4.1	39
18	DNA adsorption by nanocrystalline allophane spherules and nanoaggregates, and implications for carbon sequestration in Andisols. <i>Applied Clay Science</i> , 2016, 120, 40-50.	5.2	37

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19	Fractal aggregates of the Pt nanoparticles synthesized by the polyol process and poly(N-vinyl-2-pyrrolidone) reduction. <i>Journal of Applied Crystallography</i> , 2007, 40, s540-s543.	4.5	36
20	Enhanced performance of polymer solar cells using solution-processed tetra-n-alkyl ammonium bromides as electron extraction layers. <i>Journal of Materials Chemistry A</i> , 2013, 1, 2582.	10.3	36
21	Effective anodic oxidation of naproxen by platinum nanoparticles coated FTO glass. <i>Journal of Hazardous Materials</i> , 2014, 277, 110-119.	12.4	35
22	Heterojunction confinement on the atomic structure evolution of near monolayer core-shell nanocatalysts in redox reactions of a direct methanol fuel cell. <i>Journal of Materials Chemistry A</i> , 2015, 3, 1518-1529.	10.3	34
23	Recent Advancements and Future Prospects of Noble Metal-Based Heterogeneous Nanocatalysts for Oxygen Reduction and Hydrogen Evolution Reactions. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 7708.	2.5	34
24	Enhanced CO ₂ Electrochemical Reduction Performance over Cu@AuCu Catalysts at High Noble Metal Utilization Efficiency. <i>Nano Letters</i> , 2021, 21, 9293-9300.	9.1	33
25	Core Dominated Surface Activity of Core-shell Nanocatalysts on Methanol Electrooxidation. <i>Journal of Physical Chemistry C</i> , 2012, 116, 16969-16978.	3.1	32
26	The synergistic effects of combining the high energy mechanical milling and wet milling on Si negative electrode materials for lithium ion battery. <i>Journal of Power Sources</i> , 2017, 349, 111-120.	7.8	30
27	Vanadium-based polyoxometalate as electron/ion sponge for lithium-ion storage. <i>Journal of Power Sources</i> , 2019, 435, 226702.	7.8	30
28	Self-assembled tetraoctylammonium bromide as an electron-injection layer for cathode-independent high-efficiency polymer light-emitting diodes. <i>Journal of Materials Chemistry</i> , 2011, 21, 8715.	6.7	29
29	Mechanistic study of arsenate adsorption on lithium/aluminum layered double hydroxide. <i>Applied Clay Science</i> , 2010, 48, 485-491.	5.2	28
30	Near-Monolayer Platinum Shell on Core-shell Nanocatalysts for High-Performance Direct Methanol Fuel Cell. <i>Journal of Physical Chemistry C</i> , 2014, 118, 2253-2262.	3.1	28
31	Heterogeneous NiO ₂ -to-Pd Epitaxial Structure Performs Outstanding Oxygen Reduction Reaction Activity. <i>Journal of Physical Chemistry C</i> , 2020, 124, 2295-2306.	3.1	28
32	Programming ORR Activity of Ni/NiO _x @Pd Electrocatalysts via Controlling Depth of Surface-Decorated Atomic Pt Clusters. <i>ACS Omega</i> , 2018, 3, 8733-8744.	3.5	27
33	Nitrogen doping in Ta ₂ O ₅ and its implication for photocatalytic H ₂ production. <i>Applied Surface Science</i> , 2018, 459, 477-482.	6.1	27
34	Improving interfacial electron transfer and light harvesting in dye-sensitized solar cells by using Ag nanowire/TiO ₂ nanoparticle composite films. <i>RSC Advances</i> , 2015, 5, 70172-70177.	3.6	26
35	Pt ₃ clusters-decorated Co@Pd and Ni@Pd model core-shell catalyst design for the oxygen reduction reaction: a DFT study. <i>Journal of Materials Chemistry A</i> , 2018, 6, 23326-23335.	10.3	26
36	Enhanced electrochemical degradation of ibuprofen in aqueous solution by PtRu alloy catalyst. <i>Chemosphere</i> , 2017, 175, 76-84.	8.2	25

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37	A highly mismatched NiO ₂ -to-Pd hetero-structure as an efficient nanocatalyst for the hydrogen evolution reaction. <i>Sustainable Energy and Fuels</i> , 2020, 4, 2541-2550.	4.9	24
38	Oxidative precipitation of ruthenium oxide for supercapacitors: Enhanced capacitive performances by adding cetyltrimethylammonium bromide. <i>Journal of Power Sources</i> , 2014, 268, 430-438.	7.8	23
39	Local structure distortion induced by Ti dopants boosting the pseudocapacitance of RuO ₂ -based supercapacitors. <i>Nanoscale</i> , 2015, 7, 15450-15461.	5.6	22
40	Capacitive performance enhancements of RuO ₂ nanocrystals through manipulation of preferential orientation growth originated from the synergy of Pluronic F127 trapping and annealing. <i>Nanoscale</i> , 2014, 6, 2861.	5.6	21
41	Heterogeneous Cu-Pd binary interface boosts stability and mass activity of atomic Pt clusters in the oxygen reduction reaction. <i>Nanoscale</i> , 2017, 9, 7207-7216.	5.6	21
42	Ir-oxide mediated surface restructure and corresponding impacts on durability of bimetallic NiO _x @Pd nanocatalysts in oxygen reduction reaction. <i>Journal of Alloys and Compounds</i> , 2020, 844, 156160.	5.5	21
43	Thermal-induced growth of RuO ₂ nanorods from a binary Ru-Ti oxide composite and alteration in supercapacitive characteristics. <i>Journal of Materials Chemistry A</i> , 2013, 1, 2039-2049.	10.3	20
44	Keplerate-type polyoxometalate {Mo ₇₂ Fe ₃₀ } nanoparticle anodes for high-energy lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2020, 8, 21623-21633.	10.3	20
45	Effects of Pt metal loading on the atomic restructure and oxygen reduction reaction performance of Pt-cluster decorated Cu@Pd electrocatalysts. <i>Sustainable Energy and Fuels</i> , 2019, 3, 1668-1681.	4.9	19
46	Sub-nanometer Pt cluster decoration enhances the oxygen reduction reaction performances of NiO _x supported Pd nano-islands. <i>Sustainable Energy and Fuels</i> , 2020, 4, 809-823.	4.9	19
47	Promoting formic acid oxidation performance of Pd nanoparticles via Pt and Ru atom mediated surface engineering. <i>RSC Advances</i> , 2020, 10, 17302-17310.	3.6	19
48	Interfacial atomic Ni tetragon intercalation in a NiO ₂ -to-Pd hetero-structure triggers superior HER activity to the Pt catalyst. <i>Journal of Materials Chemistry A</i> , 2021, 9, 12019-12028.	10.3	19
49	Submillisecond Laser Annealing Induced Surface and Subsurface Restructuring of Cu-Ni-Pd Trimetallic Nanocatalyst Promotes Thermal CO ₂ Reduction. <i>ACS Applied Energy Materials</i> , 2021, 4, 14043-14058.	5.1	19
50	Mechanism of Sodium Ion Storage in Na ₇ [H ₂ PV ₁₄ O ₄₂] Anode for Sodium-ion Batteries. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800491.	3.7	18
51	Local Structural Disorder Enhances the Oxygen Reduction Reaction Activity of Carbon-Supported Low Pt Loading CoPt Nanocatalysts. <i>Journal of Physical Chemistry C</i> , 2019, 123, 19013-19021.	3.1	18
52	High-Performance and Stable Hydrogen Evolution Reaction Achieved by Pt Trimer Decoration on Ultralow-Metal Loading Bimetallic PtPd Nanocatalysts. <i>ACS Applied Energy Materials</i> , 2020, 3, 11142-11152.	5.1	18
53	Local synergistic collaboration between Pd and local tetrahedral symmetric Ni oxide enables ultra-high-performance CO ₂ thermal methanation. <i>Journal of Materials Chemistry A</i> , 2020, 8, 12744-12756.	10.3	18
54	An electrolyte additive with boron-nitrogen-oxygen alkyl group enabled stable cycling for high voltage LiNi _{0.5} Mn _{1.5} O ₄ cathode in lithium-ion battery. <i>Journal of Power Sources</i> , 2020, 477, 228473.	7.8	17

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55	<i>In-Operando</i> X-ray Studies of High-Performance Lithium-Ion Storage in Keplerate-Type Polyoxometalate Anodes. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 40296-40309.	8.0	17
56	Hybrid Silver Nanowire/Titanium Oxides Nanocomposites as Anode for Dye-Sensitized Solar Cell Application. <i>Journal of the Chinese Chemical Society</i> , 2009, 56, 1244-1249.	1.4	16
57	Correlation between surface state and band edge emission of white light ZnxCd1-xS nanocrystals. <i>Journal of Materials Chemistry C</i> , 2014, 2, 2664.	5.5	16
58	Heterogeneous assembly of Pt-clusters on hierarchically structured CoO _x @SnPd ₂ @SnO ₂ quaternary nanocatalysts manifesting oxygen reduction reaction performance. <i>New Journal of Chemistry</i> , 2020, 44, 9712-9724.	2.8	16
59	Collaboration between a Pt-dimer and neighboring Co-Pd atoms triggers efficient pathways for oxygen reduction reaction. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 1822-1834.	2.8	16
60	Heterogeneous junction engineering on core-shell nanocatalysts boosts the dye-sensitized solar cell. <i>Nanoscale</i> , 2013, 5, 9181.	5.6	15
61	The effect of Mn addition on the promotion of oxygen reduction reaction performance for PtCo/C catalysts. <i>Electrochimica Acta</i> , 2013, 105, 180-187.	5.2	15
62	H ₂ Reduction Annealing Induced Phase Transition and Improvements on Redox Durability of Pt Cluster-Decorated Cu@Pd Electrocatalysts in Oxygen Reduction Reaction. <i>ACS Omega</i> , 2019, 4, 971-982.	3.5	15
63	Conformational Effects of Pt-Shells on Nanostructures and Corresponding Oxygen Reduction Reaction Activity of Au-Cluster-Decorated NiO _x @Pt Nanocatalysts. <i>Nanomaterials</i> , 2019, 9, 1003.	4.1	14
64	NiO _x -supported PtRh nanoalloy enables high-performance hydrogen evolution reaction under universal pH conditions. <i>Sustainable Energy and Fuels</i> , 2021, 5, 5490-5504.	4.9	14
65	A Mechanism Study on the Synthesis of Cu/Pd Nanoparticles with Citric Complexing Agent. <i>Journal of Physical Chemistry C</i> , 2007, 111, 12873-12876.	3.1	13
66	Atomic scale Pt decoration promises oxygen reduction properties of Co@Pd nanocatalysts in alkaline electrolytes for 310k redox cycles. <i>Sustainable Energy and Fuels</i> , 2018, 2, 946-957.	4.9	13
67	The structure modification and activity improvement of Pd-Co/C electrocatalysts by the addition of Au for the oxygen reduction reaction. <i>Catalysis Science and Technology</i> , 2012, 2, 1654.	4.1	12
68	Ruthenium core-activated platinum monolayer shell high redox activity cathodic electrocatalysts for dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , 2013, 1, 5660.	10.3	12
69	Improved Catalytic Performance of Pt Supported on Multi-Wall Carbon Nanotubes as Cathode for Direct Methanol Fuel Cell Applications Prepared by Dual-Stepped Surface Thiolation Processes. <i>Journal of the Chinese Chemical Society</i> , 2009, 56, 1236-1243.	1.4	11
70	Core-dependent growth of platinum shell nanocrystals and their electrochemical characteristics for fuel cells. <i>CrystEngComm</i> , 2013, 15, 982-994.	2.6	11
71	Crystal growth of platinum-ruthenium bimetallic nanocrystallites and their methanol electrooxidation activity. <i>CrystEngComm</i> , 2013, 15, 3932.	2.6	11
72	Gold atomic clusters extracting the valence electrons to shield the carbon monoxide passivation on near-monolayer core-shell nanocatalysts in methanol oxidation reactions. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 15131-15139.	2.8	10

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73	3D Atomic Arrangement at Functional Interfaces Inside Nanoparticles by Resonant High-Energy X-ray Diffraction. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 23265-23277.	8.0	10
74	The size effect of silver nanocubes on gap-mode surface enhanced Raman scattering substrate. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2016, 69, 146-150.	5.3	10
75	Rapid crystal growth of bimetallic PdPt nanocrystals with surface atomic Pt cluster decoration provides promising oxygen reduction activity. <i>RSC Advances</i> , 2017, 7, 55110-55120.	3.6	10
76	X-ray Absorption Spectroscopy and In-Operando Neutron Diffraction Studies on Local Structure Fading Induced Irreversibility in a $18\text{Na}_2/3\text{Fe}_1/3\text{Mn}_2/3\text{O}_2$ Cathode in a Long Cycle Test. <i>Journal of Physical Chemistry C</i> , 2018, 122, 12623-12632.	3.1	10
77	Bifunctional Pt-SnO_x nanorods for enhanced oxygen reduction and hydrogen evolution reactions. <i>Sustainable Energy and Fuels</i> , 2021, 5, 2960-2971.	4.9	10
78	Molecular Structures of Al/Si and Fe/Si Coprecipitates and the Implication for Selenite Removal. <i>Scientific Reports</i> , 2016, 6, 24716.	3.3	9
79	CO-Reductive and O ₂ -Oxidative Annealing Assisted Surface Restructure and Corresponding Formic Acid Oxidation Performance of PdPt and PdRuPt Nanocatalysts. <i>Scientific Reports</i> , 2020, 10, 8457.	3.3	9
80	Mesoporous TiO ₂ film modified with a sol-gel based interconnecting network for boosting the dye-sensitized solar cell performance. <i>Thin Solid Films</i> , 2014, 570, 268-272.	1.8	8
81	Significance of ions with an ordered arrangement for enhancing the electron injection/extraction in polymer optoelectronic devices. <i>Journal of Materials Chemistry C</i> , 2014, 2, 4805-4811.	5.5	8
82	Real-time investigation on the influences of vanadium additives to the structural and chemical state evolutions of LiFePO ₄ for enhancing the electrochemical performance of lithium-ion battery. <i>Journal of Power Sources</i> , 2014, 270, 449-456.	7.8	8
83	Self-aligned synthesis of a NiPt-alloycore@Ptshell nanocrystal with contrivable heterojunction structure and oxygen reduction activity. <i>CrystEngComm</i> , 2016, 18, 5860-5868.	2.6	8
84	Mechanochemical synthesis of Si/Cu ₃ Si-based composite as negative electrode materials for lithium ion battery. <i>Scientific Reports</i> , 2018, 8, 12695.	3.3	8
85	Influence of Glucose Derivatives on Ball-Milled Si for Negative Electrodes with High Area Capacity in Lithium-Ion Batteries. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 2971-2979.	6.7	8
86	Determining the Molecular Orientation on the Metal Nanoparticle Surface through Surface-Enhanced Raman Spectroscopy and Density Functional Theory Simulations. <i>Journal of Physical Chemistry C</i> , 2021, 125, 16289-16295.	3.1	8
87	The structure-dependent quantum yield of ZnCdS nanocrystals. <i>CrystEngComm</i> , 2015, 17, 5032-5037.	2.6	7
88	Structure and magnetism of BaTi _{1-x} Fe _x O ₃ multiferroics. <i>Journal of Applied Physics</i> , 2012, 111, .	2.5	6
89	Oxidation triggered atomic restructures enhancing the electrooxidation activities of carbon supported platinum-ruthenium catalysts. <i>CrystEngComm</i> , 2014, 16, 10066-10079.	2.6	6
90	Crystal shape controlled H ₂ storage rate in nanoporous carbon composite with ultra-fine Pt nanoparticle. <i>Scientific Reports</i> , 2017, 7, 42438.	3.3	6

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91	Characterizing porous microaggregates and soil organic matter sequestered in allophanic paleosols on Holocene tephra using synchrotron-based X-ray microscopy and spectroscopy. <i>Scientific Reports</i> , 2021, 11, 21310.	3.3	6
92	Biogeochemical reductive release of soil embedded arsenate around a crater area (Guandu) in northern Taiwan using X-ray absorption near-edge spectroscopy. <i>Journal of Environmental Sciences</i> , 2013, 25, 626-636.	6.1	5
93	Amide-Functionalized Small Molecules as Solution-Processed Electron Injection Layers in Highly Efficient Polymer Light-Emitting Diodes. <i>Advanced Materials Interfaces</i> , 2016, 3, 1500621.	3.7	5
94	Shell thickness effects on reconfiguration of NiO-core-Pt-shell anodic catalysts in a high current density direct methanol fuel cell. <i>RSC Advances</i> , 2016, 6, 72607-72615.	3.6	5
95	Cyclability evaluation on Si based Negative Electrode in Lithium ion Battery by Graphite Phase Evolution: an operando X-ray diffraction study. <i>Scientific Reports</i> , 2019, 9, 1299.	3.3	5
96	Tri-atomic Pt clusters induce effective pathways in a Co _{core} -Pd _{shell} nanocatalyst surface for a high-performance oxygen reduction reaction. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 18012-18025.	2.8	5
97	Formation of self-aggregated and interconnected silver network within sol-gel silica. <i>Journal of Materials Science</i> , 2013, 48, 850-856.	3.7	4
98	Core-shell nanocrystallite growth via heterogeneous interface manipulation. <i>CrystEngComm</i> , 2015, 17, 8623-8631.	2.6	4
99	Applications of different nano-sized conductive materials in high energy density pouch type lithium ion batteries. <i>Electrochimica Acta</i> , 2020, 362, 137166.	5.2	4
100	Catalyst Improvement of Utilization for Direct Methanol Fuel Cell Using Silane Coupling Agents. <i>Electrochemical and Solid-State Letters</i> , 2006, 9, A549.	2.2	3
101	Lithiation-induced crystal restructuring of hydrothermally prepared Sn/TiO ₂ nanocrystallite with substantially enhanced capacity and cycling performance for lithium-ion battery. <i>RSC Advances</i> , 2016, 6, 48620-48629.	3.6	3
102	Size Effect of Atomic Gold Clusters for Carbon Monoxide Passivation at Ru-core-Pt-shell Nanocatalysts. <i>Journal of Physical Chemistry C</i> , 2016, 120, 7621-7628.	3.1	3
103	Local heterojunctions of atomic Pt clusters boost the oxygen reduction activity of Ru-core@Pt-shell nanocrystallites. <i>Journal of Materials Chemistry A</i> , 2016, 4, 17848-17856.	10.3	3
104	Preferential lattice expansion of polypropylene in a trilayer polypropylene/polyethylene/polypropylene microporous separator in Li-ion batteries. <i>Scientific Reports</i> , 2021, 11, 1929.	3.3	3
105	Controlling Interconnected Silver Network Structure in Sol-Gel Nanocomposite Via Shrinkage-Induced Stress. <i>Advanced Engineering Materials</i> , 2013, 15, 34-39.	3.5	2
106	Polymorphic transition to metastable phases in hollow structured silicon anode in a Li-ions battery. <i>Applied Materials Today</i> , 2022, 26, 101333.	4.3	2
107	Fabricating Nanocomposite Catalysts through Interfacial Fusion of Metallic Nanoparticles. <i>Materials Research Society Symposia Proceedings</i> , 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 LiFePO ₄ of a lithium-ion. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2015, 71, s343-s343.	0.1	0

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109	Effects of Au-Fe Nanocluster on Neuron Differentiation with Electric Stimulation. Biophysical Journal, 2020, 118, 455a.	0.5	0