

# Jie Xiao

## List of Publications by Year in descending order

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109  
papers

3,219  
citations

147801

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docs citations

109  
times ranked

4666  
citing authors

#	ARTICLE	IF	CITATIONS
1	BM-RCGL: Benchmarking Approach for Localization of Reliability-Critical Gates in Combinational Logic Blocks. IEEE Transactions on Computers, 2022, 71, 1063-1076.	3.4	9
2	A novel Chinese parasol leaf biochar fuelled direct carbon solid oxide fuel cell for high performance electricity generation. International Journal of Hydrogen Energy, 2022, 47, 1172-1182.	7.1	16
3	Flower-like three-dimensional bifunctional cathode catalyst for high-performance Li <sup>+</sup> O <sub>2</sub> batteries: ZIF-67@3D-N/rGO. Ceramics International, 2022, 48, 5601-5608.	4.8	5
4	Identifying Reliability-Critical Primary Inputs of Combinational Circuits Based on the Model of Gate-Sensitive Attributes. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 4708-4720.	2.7	6
5	Structural and functional biomarkers of the insula subregions predict sex differences in aggression subscales. Human Brain Mapping, 2022, 43, 2923-2935.	3.6	3
6	Accelerating stochastic $\epsilon$ -based reliability estimation for combinational circuits at RTL using GPU parallel computing. International Journal of Intelligent Systems, 2022, 37, 8309-8326.	5.7	1
7	Investigation on the formation mechanism of twinned crystals of hypoxanthine-doped beta-phase anhydrous guanine microplatelets. CrystEngComm, 2021, 23, 3444-3452.	2.6	7
8	Uniform non-Bernoulli sequences oriented locating method for reliability-critical gates. Tsinghua Science and Technology, 2021, 26, 24-35.	6.1	7
9	Stable Acidic Water Oxidation with a Cobalt <sup>II</sup> -Iron <sup>III</sup> -Lead Oxide Catalyst Operating via a Cobalt <sup>II</sup> -Selective Self-Healing Mechanism. Angewandte Chemie - International Edition, 2021, 60, 15821-15826.	13.8	23
10	Stable Acidic Water Oxidation with a Cobalt <sup>II</sup> -Iron <sup>III</sup> -Lead Oxide Catalyst Operating via a Cobalt <sup>II</sup> -Selective Self-Healing Mechanism. Angewandte Chemie, 2021, 133, 15955-15960.	2.0	3
11	Nafion <sup>®</sup> -Induced Reduction of Manganese and its Impact on the Electrocatalytic Properties of a Highly Active MnFeNi Oxide for Bifunctional Oxygen Conversion**. ChemElectroChem, 2021, 8, 2979-2983.	3.4	13
12	Highly efficient utilization of industrial barium slag for carbon gasification in direct carbon solid oxide fuel cells. International Journal of Hydrogen Energy, 2021, 46, 37029-37038.	7.1	8
13	Sex-related Difference in Mental Rotation Performance is Mediated by the special Functional Connectivity Between the Default Mode and Salience Networks. Neuroscience, 2021, 478, 65-74.	2.3	5
14	A Microtubular Direct Carbon Solid Oxide Fuel Cell Operated on the Biochar Derived from Pepper Straw. Energy Technology, 2020, 8, 1901077.	3.8	18
15	In-Situ X-ray Spectroscopy of the Electric Double Layer around TiO <sub>2</sub> Nanoparticles Dispersed in Aqueous Solution: Implications for H <sub>2</sub> Generation. ACS Applied Nano Materials, 2020, 3, 264-273.	5.0	15
16	Performance improvement of a direct carbon solid oxide fuel cell via strontium-catalyzed carbon gasification. International Journal of Hydrogen Energy, 2020, 45, 23368-23377.	7.1	14
17	Facile synthesis of cobalt nanoparticles encapsulated in nitrogen-doped carbon nanotubes for use as a highly efficient bifunctional catalyst in rechargeable Zn-Air batteries. Journal of Alloys and Compounds, 2020, 842, 155791.	5.5	16
18	Blends based P(VDF-CTFE) with quenching in ice water and PLZST modification with high energy storage performance. Polymer, 2020, 202, 122727.	3.8	4

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19	Improving Robustness of Interdependent Networks by Reducing Key Unbalanced Dependency Links. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 3187-3191.	3.0	9
20	Characterization of the soft X-ray spectrometer PEAXIS at BESSYâ€¦II. Journal of Synchrotron Radiation, 2020, 27, 238-249.	2.4	23
21	A Stochastic-Based Reliability Calculation Method for RTL Circuits. , 2020, , .		0
22	Facile design of ultrafine CuFe <sub>2</sub> O <sub>4</sub> nanocrystallines coupled porous carbon nanowires: Highly effective electrocatalysts for hydrogen peroxide reduction and the oxygen evolution reaction. Journal of Alloys and Compounds, 2019, 809, 151766.	5.5	36
23	Effect of pre-calcined ceramic powders at different temperatures on Ni-YSZ anode-supported SOFC cell/stack by low pressure injection molding. Ceramics International, 2019, 45, 20066-20072.	4.8	23
24	A novel strategy for realizing high nitrogen doping in Fe <sub>3</sub> C-embedded nitrogen and phosphorus-co-doped porous carbon nanowires: efficient oxygen reduction reaction catalysis in acidic electrolytes. Journal of Materials Chemistry A, 2019, 7, 17923-17936.	10.3	47
25	Circuit reliability prediction based on deep autoencoder network. Neurocomputing, 2019, 370, 140-154.	5.9	5
26	New insights into carbon deposition mechanism of nickel/yttrium-stabilized zirconia cermet from methane by in situ investigation. Applied Energy, 2019, 256, 113910.	10.1	24
27	Comparative Study of Yttria-Stabilized Zirconia Synthesis by Co-Precipitation and Solvothermal Methods. Jom, 2019, 71, 3806-3813.	1.9	7
28	Low Remanent Polarization for High Energy Density by Poly(vinylidene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 387 Td (fluoride-co-chloro Materials, 2019, 48, 8172-8180.	2.2	4
29	A Locating Method for Reliability-Critical Gates with a Parallel-Structured Genetic Algorithm. Journal of Computer Science and Technology, 2019, 34, 1136-1151.	1.5	8
30	Evolution of Oxygenâ€“Metal Electron Transfer and Metal Electronic States During Manganese Oxide Catalyzed Water Oxidation Revealed with Inâ€“Situ Soft Xâ€“Ray Spectroscopy. Angewandte Chemie, 2019, 131, 2.0 3464-3470.		28
31	Influence of surface chemistry on optical, chemical and electronic properties of blue luminescent carbon dots. Nanoscale, 2019, 11, 2056-2064.	5.6	94
32	Uncovering the Charge Transfer between Carbon Dots and Water by In Situ Soft X-ray Absorption Spectroscopy. Journal of Physical Chemistry Letters, 2019, 10, 3843-3848.	4.6	13
33	A high performance direct carbon solid oxide fuel cell â€“ A green pathway for brown coal utilization. Applied Energy, 2019, 248, 679-687.	10.1	74
34	Generalized Synchronization Between Chen System and Rucklidge System. IEEE Access, 2019, 7, 8519-8526.	4.2	11
35	A Fast and Effective Sensitivity Calculation Method for Circuit Input Vectors. IEEE Transactions on Reliability, 2019, 68, 938-953.	4.6	14
36	Evolution of Oxygenâ€“Metal Electron Transfer and Metal Electronic States During Manganese Oxide Catalyzed Water Oxidation Revealed with Inâ€“Situ Soft Xâ€“Ray Spectroscopy. Angewandte Chemie - International Edition, 2019, 58, 3426-3432.	13.8	52

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37	Blockchain Architecture Reliability-Based Measurement for Circuit Unit Importance. IEEE Access, 2018, 6, 15326-15334.	4.2	9
38	Enhanced electrokinetic remediation of lead- and cadmium-contaminated paddy soil by composite electrolyte of sodium chloride and citric acid. Journal of Soils and Sediments, 2018, 18, 1915-1924.	3.0	40
39	Co-precipitation synthesis of alumina doped yttria stabilized zirconia. Journal of Alloys and Compounds, 2018, 731, 1080-1088.	5.5	22
40	Honeycomb-like Hard Carbon Derived from Pine Pollen as High-Performance Anode Material for Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 42796-42803.	8.0	129
41	Link prediction based on local major path degree. Modern Physics Letters B, 2018, 32, 1850348.	1.9	7
42	Laplacian Centrality Peaks Clustering Based on Potential Entropy. IEEE Access, 2018, 6, 55462-55472.	4.2	1
43	Effective and environmentally friendly recycling process designed for LiCoO <sub>2</sub> cathode powders of spent Li-ion batteries using mixture of mild organic acids. Waste Management, 2018, 78, 51-57.	7.4	55
44	A Novel Trust Evaluation Method for Logic Circuits in IoT Applications Based on the E-PTM Model. IEEE Access, 2018, 6, 35683-35696.	4.2	6
45	Innovative Savonius rotors evolved by genetic algorithm based on 2D-DCT encoding. Soft Computing, 2018, 22, 8001-8010.	3.6	10
46	Thermal-aware SoC Test Scheduling with Voltage/Frequency Scaling and Test Partition. Journal of Electronic Testing: Theory and Applications (JETTA), 2018, 34, 447-460.	1.2	1
47	Insight into pH-Dependent Formation of Manganese Oxide Phases in Electrodeposited Catalytic Films Probed by Soft X-ray Absorption Spectroscopy. ChemPlusChem, 2018, 83, 721-727.	2.8	5
48	Chemical bonding in aqueous hexacyano cobaltate from photon- and electron-detection perspectives. Scientific Reports, 2017, 7, 40811.	3.3	14
49	Multiscale Photo-Based In-Situ and Operando Spectroscopies in Time and Energy Landscapes. Synchrotron Radiation News, 2017, 30, 14-19.	0.8	2
50	TiO <sub>2</sub> @MoS <sub>2</sub> hybrid nano composites with 3D network architecture as binder-free flexible electrodes for lithium ion batteries. Journal of Materials Science: Materials in Electronics, 2017, 28, 9519-9527.	2.2	21
51	In Situ L-Edge XAS Study of a Manganese Oxide Water Oxidation Catalyst. Journal of Physical Chemistry C, 2017, 121, 12003-12009.	3.1	40
52	Introducing Ionic-Current Detection for X-ray Absorption Spectroscopy in Liquid Cells. Journal of Physical Chemistry Letters, 2017, 8, 2087-2092.	4.6	16
53	Combustion synthesized macroporous structure MFe <sub>2</sub> O <sub>4</sub> (M= Zn, Co) as anode materials with excellent electrochemical performance for lithium ion batteries. Journal of Alloys and Compounds, 2017, 699, 401-407.	5.5	38
54	Bulk-Sensitive Detection of the Total Ion Yield for X-ray Absorption Spectroscopy in Liquid Cells. Journal of Physical Chemistry Letters, 2017, 8, 5136-5140.	4.6	10

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55	IrO <sub>2</sub> nanoparticles highly dispersed on nitrogen-doped carbon nanotubes as an efficient cathode catalyst for high-performance Li-O <sub>2</sub> batteries. <i>Ceramics International</i> , 2017, 43, 14082-14089.	4.8	46
56	A Method of Gate-level Circuit Yield Calculation Based on PTM. <i>Procedia Computer Science</i> , 2017, 107, 674-684.	2.0	0
57	X-ray Absorption Spectroscopy of TiO <sub>2</sub> Nanoparticles in Water Using a Holey Membrane-Based Flow Cell. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700755.	3.7	11
58	Effects of doping alumina on the electrical and sintering performances of yttrium-stabilized-zirconia. <i>Solid State Ionics</i> , 2016, 289, 28-34.	2.7	40
59	Circuit reliability estimation based on an iterative PTM model with hybrid coding. <i>Microelectronics Journal</i> , 2016, 52, 117-123.	2.0	12
60	An investigation on the kinetics of direct carbon solid oxide fuel cells. <i>Journal of Solid State Electrochemistry</i> , 2016, 20, 2207-2216.	2.5	34
61	Undistorted X-ray Absorption Spectroscopy Using s-Core-Orbital Emissions. <i>Journal of Physical Chemistry A</i> , 2016, 120, 2808-2814.	2.5	21
62	Characterization of symmetrical SrFe <sub>0.75</sub> Mo <sub>0.25</sub> O <sub>3</sub> electrodes in direct carbon solid oxide fuel cells. <i>Journal of Alloys and Compounds</i> , 2016, 688, 939-945.	5.5	61
63	Analysis of the Electronic Structure of Aqueous Urea and Its Derivatives: A Systematic Soft X-ray-EDFT Approach. <i>Chemistry - A European Journal</i> , 2016, 22, 12040-12049.	3.3	6
64	Joint Analysis of Radiative and Non-Radiative Electronic Relaxation Upon X-ray Irradiation of Transition Metal Aqueous Solutions. <i>Scientific Reports</i> , 2016, 6, 24659.	3.3	38
65	Influence of the Outer Ligands on Metal-to-Ligand Charge Transfer in Solvated Manganese Porphyrins. <i>Inorganic Chemistry</i> , 2016, 55, 22-28.	4.0	10
66	Chemical Speciation and Bond Lengths of Organic Solutes by Core-Level Spectroscopy: pH and Solvent Influence on <i>p</i> -Aminobenzoic Acid. <i>Chemistry - A European Journal</i> , 2015, 21, 7256-7263.	3.3	15
67	Valence holes observed in nanodiamonds dispersed in water. <i>Nanoscale</i> , 2015, 7, 2987-2991.	5.6	33
68	Local Energy Gap Opening Induced by Hemin Dimerization in Aqueous Solution. <i>Journal of Physical Chemistry B</i> , 2015, 119, 3058-3062.	2.6	11
69	Electrolysis of Carbon Dioxide in a Solid Oxide Electrolyzer with Silver-Gadolinium-Doped Ceria Cathode. <i>Journal of the Electrochemical Society</i> , 2015, 162, F397-F402.	2.9	47
70	Enhancing Catalytic Activity by Narrowing Local Energy Gaps—X-ray Studies of a Manganese Water Oxidation Catalyst. <i>ChemSusChem</i> , 2015, 8, 872-877.	6.8	7
71	Unraveling the Electronic Structure of Photocatalytic Manganese Complexes by L-Edge X-ray Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2015, 119, 19192-19200.	3.1	40
72	On the Origin of the Improvement of Electrodeposited MnO <sub>x</sub> Films in Water Oxidation Catalysis Induced by Heat Treatment. <i>ChemSusChem</i> , 2015, 8, 1980-1985.	6.8	20

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73	Intermolecular bonding of hemin in solution and in solid state probed by N K-edge X-ray spectroscopies. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 29000-29006.	2.8	9
74	Co(III) protoporphyrin IX chloride in solution: spin-state and metal coordination revealed from resonant inelastic X-ray scattering and electronic structure calculations. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 3409-3414.	2.8	12
75	Electrochemical gas-to-electricity cogeneration through direct carbon solid oxide fuel cells. <i>Journal of Power Sources</i> , 2015, 277, 1-8.	7.8	52
76	Coverage- and Temperature-Dependent Metalation and Dehydrogenation of Tetraphenylporphyrin on Cu(111). <i>Chemistry - A European Journal</i> , 2014, 20, 8948-8953.	3.3	19
77	Behavior of strontium- and magnesium-doped gallate electrolyte in direct carbon solid oxide fuel cells. <i>Journal of Alloys and Compounds</i> , 2014, 608, 272-277.	5.5	40
78	Abrupt Coverage-Induced Enhancement of the Self-Metalation of Tetraphenylporphyrin with Cu(111). <i>Journal of Physical Chemistry C</i> , 2014, 118, 1661-1667.	3.1	51
79	Coordination Reactions and Layer Exchange Processes at a Buried Metal-Organic Interface. <i>Journal of Physical Chemistry C</i> , 2014, 118, 8501-8507.	3.1	19
80	Electronic Structure of Hemin in Solution Studied by Resonant X-ray Emission Spectroscopy and Electronic Structure Calculations. <i>Journal of Physical Chemistry B</i> , 2014, 118, 9938-9943.	2.6	16
81	Deactivation of nickel-based anode in solid oxide fuel cells operated on carbon-containing fuels. <i>Journal of Power Sources</i> , 2014, 268, 508-516.	7.8	66
82	Assistance of the Iron Porphyrin Ligands to the Binding Interaction between the Fe Center and Small Molecules in Solution. <i>Journal of Physical Chemistry B</i> , 2014, 118, 9371-9377.	2.6	7
83	Combined Photoemission and Scanning Tunneling Microscopy Study of the Surface-Assisted Ullmann Coupling Reaction. <i>Journal of Physical Chemistry C</i> , 2014, 118, 6820-6830.	3.1	84
84	Wet Chemical Synthesis of Graphene. <i>Advanced Materials</i> , 2013, 25, 3583-3587.	21.0	453
85	Coordination and Metalation Bifunctionality of Cu with 5,10,15,20-Tetra(4-pyridyl)porphyrin: Toward a Mixed-Valence Two-Dimensional Coordination Network. <i>Journal of the American Chemical Society</i> , 2012, 134, 6401-6408.	13.7	199
86	Altering the Static Dipole on Surfaces through Chemistry: Molecular Films of Zwitterionic Quinonoids. <i>Journal of the American Chemical Society</i> , 2012, 134, 8494-8506.	13.7	37
87	Surface state engineering of molecule-molecule interactions. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 4971.	2.8	56
88	Temperature-Dependent Chemical and Structural Transformations from 2H-tetraphenylporphyrin to Copper(II)-Tetraphenylporphyrin on Cu(111). <i>Journal of Physical Chemistry C</i> , 2012, 116, 12275-12282.	3.1	68
89	Weak screening of a large dipolar molecule adsorbed on graphene. <i>Carbon</i> , 2012, 50, 1981-1986.	10.3	16
90	A Method of Gate-Level Circuit Reliability Estimation Based on Iterative PTM Model. , 2011, , .		8

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91	Diffusion, Rotation, and Surface Chemical Bond of Individual 2 <i>H</i> -Tetraphenylporphyrin Molecules on Cu(111). <i>Journal of Physical Chemistry C</i> , 2011, 115, 24172-24177.	3.1	74
92	Surface charging at the (100) surface of Cu doped and undoped Li <sub>2</sub> B <sub>4</sub> O <sub>7</sub> . <i>Applied Surface Science</i> , 2011, 257, 3399-3403.	6.1	9
93	Electrochemical Performance of Cone-Shaped Tubular Anode Supported Solid Oxide Fuel Cells Fabricated by Low-Pressure Injection Moulding Technique. <i>ECS Transactions</i> , 2011, 35, 609-614.	0.5	2
94	The off-axis pyroelectric effect observed for lithium tetraborate. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2010, 374, 891-895.	2.1	18
95	The surface core level shift for lithium at the surface of lithium borate. <i>Physica B: Condensed Matter</i> , 2010, 405, 461-464.	2.7	13
96	The Electronic Structure and Secondary Pyroelectric Properties of Lithium Tetraborate. <i>Materials</i> , 2010, 3, 4550-4579.	2.9	24
97	The interface bonding and orientation of a quinonoid zwitterion. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 10329.	2.8	30
98	Graphene/Substrate Charge Transfer Characterized by Inverse Photoelectron Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2010, 114, 21618-21624.	3.1	61
99	Self-Assembly and Properties of Nonmetalated Tetraphenyl-Porphyrin on Metal Substrates. <i>Journal of Physical Chemistry C</i> , 2010, 114, 9408-9415.	3.1	101
100	Franck-Condon Coupling in Anthracene Isomer Self-Assembled Layers and Symmetry Effects on the High Resolution Ultraviolet Photoemission Spectra. <i>Journal of Physical Chemistry C</i> , 2010, 114, 1015-1018.	3.1	3
101	Selective nanoshaving of self-assembled monolayers of 2-(4-pyridylethyl)triethoxysilane. <i>Materials Letters</i> , 2009, 63, 961-964.	2.6	20
102	Adsorbate/absorbate interactions with organic ferroelectric polymers. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2009, 174, 10-21.	1.7	16
103	Halofom adsorption on crystalline copolymer films of vinylidene fluoride with trifluoroethylene. <i>Surface Science</i> , 2009, 603, 513-517.	1.9	4
104	The role of the interface in the electronic structure of adsorbed metal(II) (Co, Ni, Cu) phthalocyanines. <i>Journal of Materials Chemistry</i> , 2009, 19, 2172.	6.7	36
105	Electronic structure evidence for all-trans poly(methylvinylidene cyanide). <i>Polymer Engineering and Science</i> , 2008, 48, 1649-1654.	3.1	4
106	Different approaches to adjusting band offsets at intermolecular interfaces. <i>Applied Surface Science</i> , 2008, 254, 4238-4244.	6.1	15
107	The Electronic Structures of Co and Ni Tetraazaannulenes. <i>Journal of Physical Chemistry B</i> , 2006, 110, 26180-26184.	2.6	10
108	Comparison of the electronic structure of two polymers with strong dipole ordering. <i>Journal of Physics Condensed Matter</i> , 2006, 18, L155-L161.	1.8	26

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109	Crystalline Ice Grown on the Surface of the Ferroelectric Polymer Poly(vinylidene fluoride) (70%) and Trifluoroethylene (30%). Journal of the American Chemical Society, 2005, 127, 17261-17265.	13.7	18