Xingbo Liu

List of Publications by Year
in descending order

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116	4,787	76326	110387
papers	citations	40 h-index	64 g-index

119	119	119	4489
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Surface decorations to abrupt change performance, robustness, and stability of electrodes for solid oxide cells. Journal of the American Ceramic Society, 2023, 106, 133-156.	3.8	3
2	Protonic ceramic materials for clean and sustainable energy: advantages and challenges. International Materials Reviews, 2023, 68, 272-300.	19.3	16
3	An Investigation of the Electrochemical Activity of (Ba/Sr)FeO_{3-y} Anodes. Journal of the Electrochemical Society, 2022, 169, 034525.	2.9	1
4	Methane Catalytic Pyrolysis by Microwave and Thermal Heating over Carbon Nanotube-Supported Catalysts: Productivity, Kinetics, and Energy Efficiency. Industrial & Engineering Chemistry Research, 2022, 61, 5080-5092.	3.7	13
5	Polyvinyl alcohol coating induced preferred crystallographic orientation in aqueous zinc battery anodes. Nano Energy, 2022, 98, 107269.	16.0	102
6	NiO-based sensor for in situ CO monitoring above 1000ÂÂ°C: behavior and mechanism. Advanced Composites and Hybrid Materials, 2022, 5, 2478-2490.	21.1	8
7	Low-temperature water electrolysis: fundamentals, progress, and new strategies. Materials Advances, 2022, 3, 5598-5644.	5.4	50
8	High-Entropy Perovskite as a High-Performing Chromium-Tolerant Cathode for Solid Oxide Fuel Cells. ACS Applied Materials & Interfaces, 2022, 14, 24363-24373.	8.0	27
9	Engineering stable Zn-MnO2 batteries by synergistic stabilization between the carbon nanofiber core and birnessite-MnO2 nanosheets shell. Chemical Engineering Journal, 2021, 405, 126969.	12.7	74
10	Redox-stable symmetrical solid oxide fuel cells with exceptionally high performance enabled by electrode/electrolyte diffuse interface. Journal of Power Sources, 2021, 488, 229458.	7.8	20
11	Layer-structured triple-conducting electrocatalyst for water-splitting in protonic ceramic electrolysis cells: Conductivities vs. activity. Journal of Power Sources, 2021, 495, 229764.	7.8	16
12	Chromium evaporation and oxidation characteristics of alumina-forming austenitic stainless steels for balance of plant applications in solid oxide fuel cells. International Journal of Hydrogen Energy, 2021, 46, 21619-21633.	7.1	15
13	A review on molten sulfate salts induced hot corrosion. Journal of Materials Science and Technology, 2021, 90, 243-254.	10.7	48
14	Degradation of solid oxide electrolysis cells: Phenomena, mechanisms, and emerging mitigation strategiesâ€"A review. Journal of Materials Science and Technology, 2020, 55, 35-55.	10.7	133
15	A review of electrophoretic deposition of metal oxides and its application in solid oxide fuel cells. Advances in Colloid and Interface Science, 2020, 276, 102102.	14.7	85
16	Comprehensive review of chromium deposition and poisoning of solid oxide fuel cells (SOFCs) cathode materials. Renewable and Sustainable Energy Reviews, 2020, 134, 110320.	16.4	69
17	Deconvolution of Water-Splitting on the Triple-Conducting Ruddlesdenâ€"Popper-Phase Anode for Protonic Ceramic Electrolysis Cells. ACS Applied Materials & Interfaces, 2020, 12, 49574-49585.	8.0	25
18	Bifunctional 3D Hierarchical Hairy Foam toward Ultrastable Lithium/Sulfur Electrochemistry. Advanced Functional Materials, 2020, 30, 2004650.	14.9	29

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19	A high-temperature mixed potential CO gas sensor for in situ combustion control. Journal of Materials Chemistry A, 2020, 8, 20101-20110.	10.3	21
20	Mixed conductive composites for â€˜Low-Temperatureâ€™ thermo-chemical CO₂ splitting and syngas generation. Journal of Materials Chemistry A, 2020, 8, 13173-13182.	10.3	20
21	Understanding of A-site deficiency in layered perovskites: promotion of dual reaction kinetics for water oxidation and oxygen reduction in protonic ceramic electrochemical cells. Journal of Materials Chemistry A, 2020, 8, 14600-14608.	10.3	48
22	Alternating Current Electrophoretic Deposition of Gadolinium Doped Ceria onto Yttrium Stabilized Zirconia: A Study of the Mechanism. ACS Applied Materials & Interfaces, 2020, 12, 11126-11134.	8.0	9
23	Nanosized FeS₂ Particles Caged in the Hollow Carbon Shell as a Robust Polysulfide Adsorbent and Redox Mediator. ACS Sustainable Chemistry and Engineering, 2020, 8, 3261-3272.	6.7	26
24	In Situ Exsolved Nanoparticles on La_{0.5}Sr_{1.5}Fe_{1.5}Mo_{0.5}O_{6-Î´} Anode Enhance the Hydrogen Oxidation Reaction in SOFCs. Journal of the Electrochemical Society, 2020, 167, 024510.	2.9	13
25	Positive Effects of H₂O on the Hydrogen Oxidation Reaction on Sr₂Fe_{1.5}Mo_{0.5}O_{6â^'Î´}-Based Perovskite Anodes for Solid Oxide Fuel Cells. ACS Catalysis, 2020, 10, 5567-5578.	11.2	20
26	Charging activation and desulfurization of MnS unlock the active sites and electrochemical reactivity for Zn-ion batteries. Nano Energy, 2020, 75, 104869.	16.0	66
27	A study on the electrophoretic deposition of gadolinium doped ceria on polypyrrole coated yttrium stabilized zirconia. Journal of Colloid and Interface Science, 2019, 555, 115-123.	9.4	13
28	Programmed Design of a Lithiumâ€“Sulfur Battery Cathode by Integrating Functional Units. Advanced Science, 2019, 6, 1900711.	11.2	44
29	Aqueous electrophoretic deposition of gadolinium doped ceria. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 579, 123717.	4.7	7
30	Reversible In-Situ Exsolution of Fe Catalyst in La_{0.5}Sr_{1.5}Fe_{1.5}Mo_{0.5}O_{6-Î´} Anode for SOFCs. ECS Transactions, 2019, 91, 1701-1710.	0.5	9
31	Reduced Thermal Expansion and Enhanced Redox Reversibility of La_{0.5}Sr_{1.5}Fe_{1.5}Mo_{0.5}O_{6â^'Î´} Anode Material for Solid Oxide Fuel Cells. ACS Applied Energy Materials, 2019, 2, 4244-4254.	5.1	18
32	Investigation of LSM-YSZ Composite Cathode Performance Degradation with a Multistep Charge Transfer Model. Journal of the Electrochemical Society, 2019, 166, F448-F457.	2.9	8
33	Synergistic Coupling of Proton Conductors BaZr_{0.1}Ce_{0.7}Y_{0.1}Yb_{0.1}O_{3â^'Î´} and La₂Ce₂O₇ to Create Chemical Stable, Interface Active Electrolyte for Steam Electrolysis Cells. ACS Applied Materials & Interfaces, 2019, 11, 18323-18330.	8.0	57
34	Advanced Fuel Cell Based on New Nanocrystalline Structure Gd_{0.1}Ce_{0.9}O₂ Electrolyte. ACS Applied Materials & Interfaces, 2019, 11, 10642-10650.	8.0	78
35	Intermediate-temperature solid oxide fuel cells with high performance cobalt-doped Pr0.5Ba0.5FeO3-Î´ anodes. Journal of Alloys and Compounds, 2018, 741, 1091-1097.	5.5	18
36	Sulfur Immobilization by â€œChemical Anchorâ€•to Suppress the Diffusion of Polysulfides in Lithiumâ€“Sulfur Batteries. Advanced Materials Interfaces, 2018, 5, 1701274.	3.7	87

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37	Improving Corrosion Resistance of Ferrous Alloy to Molten Zn by Modifying the Laves Phase Characteristics. Jom, 2018, 70, 2457-2462.	1.9	4
38	Electrophoretic deposition of carbon nanofibers/silicon film with honeycomb structure as integrated anode electrode for lithium-ion batteries. Electrochimica Acta, 2018, 281, 312-322.	5.2	34
39	Performance and stability of large planar solid oxide fuel cells using phosphine contaminated hydrogen fuel. Journal of Power Sources, 2018, 395, 185-194.	7.8	5
40	Combined Experimental and Numerical Analysis of Surface-Modified Solid Oxide Fuel Cell Cathodes. ECS Transactions, 2018, 85, 1289-1305.	0.5	4
41	High performing triple-conductive Pr₂NiO_{4+Î´} anode for proton-conducting steam solid oxide electrolysis cell. Journal of Materials Chemistry A, 2018, 6, 18057-18066.	10.3	101
42	Combined Experimental and Numerical Analysis of Surface-Modified Solid Oxide Fuel Cell Cathodes. ECS Meeting Abstracts, 2018, , .	0.0	0
43	Modeling of the oxygen reduction reaction for dense LSM thin films. Physical Chemistry Chemical Physics, 2017, 19, 30464-30472.	2.8	13
44	A-Site Deficient La_{2-X}NiO_{4+Î´}Infiltrated LSCF Cathode with Improved Performance and Stability. ECS Transactions, 2017, 78, 593-601.	0.5	7
45	A New Insight into the Oxygen Reduction Reaction on High Performance Cation-Ordered PBCO Perovskite as IT-SOFC Cathode. ECS Transactions, 2017, 78, 643-653.	0.5	2
46	Effect of Mg/Mo Ratio in Stoichiometric Sr₂MgMoO_{6-Î´}(SMM)<sub />Redox-Stable Anode. ECS Transactions, 2017, 78, 1205-1215.	0.5	4
47	Investigation of Alternative Mixed-Conducting Oxides for SOFC Anode Applications. ECS Transactions, 2017, 77, 1961-1969.	0.5	2
48	On the bulk transport process and its impact on the electrode behavior of mixed conducting electrodes for SOFCs. Physical Chemistry Chemical Physics, 2017, 19, 23218-23228.	2.8	16
49	Electrophoretic Deposition of Gadoliumâ€doped Ceria as a Barrier Layer on Yttriumâ€stabilized Zirconia Electrolyte for Solid Oxide Fuel Cells. Fuel Cells, 2017, 17, 869-874.	2.4	19
50	Enhanced surface exchange activity and electrode performance of (La2â^'2xSr2x)(Ni1â^'xMnx)O4+Î´ cathode for intermediate temperature solid oxide fuel cells. Journal of Power Sources, 2016, 318, 178-183.	7.8	45
51	Capacity Fade Analysis of Sulfur Cathodes in Lithiumâ€“Sulfur Batteries. Advanced Science, 2016, 3, 1600101.	11.2	213
52	New mechanistic insight into the oxygen reduction reaction on Ruddlesdenâ€“Popper cathodes for intermediate-temperature solid oxide fuel cells. Physical Chemistry Chemical Physics, 2016, 18, 8502-8511.	2.8	26
53	Oxygen Reduction Reaction Kinetics in Sr-Doped La₂NiO_{4+Î´}Ruddlesden-Popper Phase as Cathode for Solid Oxide Fuel Cells. Journal of the Electrochemical Society, 2015, 162, F707-F712.	2.9	38
54	Corrosion fatigue crack growth behavior of oil-grade nickel-base alloy 718. Part 2: Effect of aging treatment. Corrosion Science, 2015, 98, 280-290.	6.6	17

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55	Corrosion behavior and microstructure of electrodeposited nano-layered Niâ€“Cr coatings. Thin Solid Films, 2015, 595, 36-40.	1.8	24
56	Nano-porous sulfurâ€“polyaniline electrodes for lithiumâ€“sulfurbatteries. Nano Energy, 2015, 18, 245-252.	16.0	75
57	Long-Life, High-Efficiency Lithiumâ€“Sulfur Battery from a Nanoassembled Cathode. Chemistry of Materials, 2015, 27, 5080-5087.	6.7	56
58	Nano-assembled Na2FePO4F/carbon nanotube multi-layered cathodes for Na-ion batteries. Electrochemistry Communications, 2015, 56, 46-50.	4.7	47
59	Long-life, high-efficiency lithium/sulfur batteries from sulfurized carbon nanotube cathodes. Journal of Materials Chemistry A, 2015, 3, 10127-10133.	10.3	59
60	Surface Oxygen Exchange Properties of Sr Doped La₂NiO_{4+Î´}as SOFC Cathode: Thin-Film Electrical Conductivity Relaxation Investigation. ECS Transactions, 2015, 68, 801-808.	0.5	15
61	High-Performance Lithiumâ€“Sulfur Batteries with a Cost-Effective Carbon Paper Electrode and High Sulfur-Loading. Chemistry of Materials, 2015, 27, 6394-6401.	6.7	73
62	Development of self-powered wireless high temperature electrochemical sensor for in situ corrosion monitoring of coal-fired power plant. ISA Transactions, 2015, 55, 188-194.	5.7	11
63	Characterization of Doped Yttrium Chromites as Electrodes for Solid Oxide Fuel Cell by Impedance Method. Journal of the Electrochemical Society, 2014, 161, F551-F560.	2.9	19
64	Surface Transport Mechanism and Bi-Pathway ORR Kinetics for Solid Oxide Fuel Cell Cathode. Journal of the Electrochemical Society, 2014, 161, F983-F990.	2.9	9
65	Magnetron-sputtered Mn/Co(40:60) coating on ferritic stainless steel SUS430 for solid oxide fuel cell interconnect applications. International Journal of Hydrogen Energy, 2014, 39, 16061-16066.	7.1	21
66	Effect of temperature on coal ash hot corrosion resistance of Inconel 740 superalloy. Corrosion Science, 2014, 82, 227-238.	6.6	50
67	Recent progress in Li-rich layered oxides as cathode materials for Li-ion batteries. RSC Advances, 2014, 4, 63268-63284.	3.6	167
68	Corrosion fatigue crack growth behavior of oil-grade nickel-base alloy 718. Part 1: Effect of corrosive environment. Corrosion Science, 2014, 89, 146-153.	6.6	33
69	High performance La2NiO4+-infiltrated (La0.6Sr0.4)0.995Co0.2Fe0.8O3â^' cathode for solid oxide fuel cells. Journal of Power Sources, 2014, 269, 412-417.	7.8	44
70	Simulation of Surface-Potential Driven ORR Kinetics on SOFC Cathode with Parallel Reaction Pathways. Journal of the Electrochemical Society, 2014, 161, F344-F353.	2.9	25
71	Influence of surface modifications on pitting corrosion behavior of nickel-base alloy 718. Part 2: Effect of aging treatment. Corrosion Science, 2014, 78, 151-161.	6.6	51
72	Effect of SO2 in flue gas on coal ash hot corrosion of Inconel 740 alloy â€“ A high temperature electrochemical sensor study. Corrosion Science, 2013, 76, 390-402.	6.6	35

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73	H₂ Oxidation on Doped Yttrium Chromites Anode of Solid Oxide Fuel Cell. ECS Transactions, 2013, 57, 1479-1489.	0.5	4
74	Oxygen Transport Kinetics in Infiltrated SOFCs Cathode by Electrical Conductivity Relaxation Technique. Journal of the Electrochemical Society, 2013, 160, F554-F559.	2.9	27
75	H2 oxidation on doped yttrium chromites/yttrium stabilized zirconia anode of solid oxide fuel cell. Journal of Power Sources, 2013, 241, 494-501.	7.8	29
76	Influence of surface modifications on pitting corrosion behavior of nickel-base alloy 718. Part 1: Effect of machine hammer peening. Corrosion Science, 2013, 77, 230-245.	6.6	94
77	Studies on elements diffusion of Mn/Co coated ferritic stainless steel for solid oxide fuel cell interconnects application. International Journal of Hydrogen Energy, 2013, 38, 5075-5083.	7.1	43
78	Surface Exchange and Bulk Diffusivity of LSCF as SOFC Cathode: Electrical Conductivity Relaxation and Isotope Exchange Characterizations. Journal of the Electrochemical Society, 2013, 160, F343-F350.	2.9	67
79	High temperature electrochemical sensor for in situ monitoring of hot corrosion. Corrosion Science, 2012, 65, 1-4.	6.6	17
80	Modeling of oxygen reduction mechanism for 3PB and 2PB pathways at solid oxide fuel cell cathode from multi-step charge transfer. Journal of Power Sources, 2012, 201, 204-218.	7.8	52
81	Corrosion Behavior of Ebrite and SS430 in Coal Syngas with Loaded Current. International Journal of Applied Ceramic Technology, 2011, 8, 60-67.	2.1	2
82	An improved method to increase the predictive accuracy of the ECR technique. Solid State Ionics, 2011, 204-205, 104-110.	2.7	23
83	Electrophoretic deposition of (Mn,Co)3O4 spinel coating for solid oxide fuel cell interconnects. Journal of Power Sources, 2011, 196, 8041-8047.	7.8	61
84	Investigation of Mn/Co coated T441 alloy as SOFC interconnect by on-cell tests. International Journal of Hydrogen Energy, 2011, 36, 4525-4529.	7.1	45
85	Electrochemical characteristics of samaria-doped ceria infiltrated strontium-doped LaMnO3 cathodes with varied thickness for yttria-stabilized zirconia electrolytes. Journal of Power Sources, 2011, 196, 2551-2557.	7.8	31
86	Tolerance tests of H2S-laden biogas fuel on solid oxide fuel cells. Journal of Power Sources, 2010, 195, 4583-4592.	7.8	43
87	Quenching Differential Thermal Analysis and Thermodynamic Calculation to Determine Partition Coefficients of Solute Elements in Simplified Ni-Base Superalloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 487-498.	2.2	13
88	On the Formulation of a Freckling Criterion for Ni-Based Superalloy Vacuum Arc Remelting Ingots. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 2408-2416.	2.2	32
89	The effect of HCl in syngas on Niâ€“YSZ anode-supported solid oxide fuel cells. Journal of Power Sources, 2010, 195, 2149-2158.	7.8	53
90	Oxygen reduction and transportation mechanisms in solid oxide fuel cell cathodes. Journal of Power Sources, 2010, 195, 3345-3358.	7.8	122

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91	Degradation of LaSr2Fe2CrO9â˜Î´ solid oxide fuel cell anodes in phosphine-containing fuels. Journal of Power Sources, 2010, 195, 4013-4021.	7.8	20
92	Compatibility of a seal glass with (Mn,Co)3O4 coated interconnects: Effect of atmosphere. International Journal of Hydrogen Energy, 2010, 35, 7945-7956.	7.1	17
93	Effect of Electrical Current on Solid Oxide Fuel Cells Metallic Interconnect Oxidation in Syngas. International Journal of Applied Ceramic Technology, 2010, 7, 41-48.	2.1	16
94	Tolerance Tests of Co-Feeding Cl2 and H2S Impurities in Biogas on a Ni-YSZ Anode-Supported Solid Oxide Fuel Cell. , 2010, , .		0
95	Recent Development of SOFC Metallic Interconnect. Journal of Materials Science and Technology, 2010, 26, 293-305.	10.7	300
96	The performance of solid oxide fuel cells with Mnâ€“Co electroplated interconnect as cathode current collector. Journal of Power Sources, 2009, 189, 1106-1113.	7.8	100
97	The effect of phosphine in syngas on Niâ€“YSZ anode-supported solid oxide fuel cells. Journal of Power Sources, 2009, 193, 739-746.	7.8	46
98	Energy and environmental issues in manufacturing industries. Jom, 2009, 61, 13-13.	1.9	0
99	Oxidation behavior of metallic interconnects for SOFC in coal syngas. International Journal of Hydrogen Energy, 2009, 34, 1489-1496.	7.1	25
100	The effect of coating crystallization and substrate impurities on magnetron sputtered doped LaCrO3 coatings for metallic solid oxide fuel cell interconnects. International Journal of Hydrogen Energy, 2009, 34, 2408-2415.	7.1	28
101	Evaluation of SmCo and SmCoN magnetron sputtering coatings for SOFC interconnect applications. Journal of Power Sources, 2008, 175, 833-840.	7.8	22
102	Reactive Wetting of an Iron-Base Superalloy MSA2020 and 316L Stainless Steel by Molten Zinc-Aluminum Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 1382-1391.	2.2	6
103	DC electrodeposition of Mnâ€“Co alloys on stainless steels for SOFC interconnect application. Journal of Power Sources, 2008, 177, 376-385.	7.8	92
104	Pulse plating of Mnâ€“Co alloys for SOFC interconnect applications. Electrochimica Acta, 2008, 54, 793-800.	5.2	78
105	Developing TiAlN coatings for intermediate temperature solid oxide fuel cell interconnect applications. International Journal of Hydrogen Energy, 2008, 33, 189-196.	7.1	22
106	Effect of thermal treatment on the fatigue crack propagation behavior of a new Ni-base superalloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 474, 30-38.	5.6	26
107	Sulfur-tolerant anode materials for solid oxide fuel cell application. Journal of Power Sources, 2007, 168, 289-298.	7.8	336
108	Wetting and Reaction Characteristics of Al₂O₃/SiC Composite Refractories by Molten Aluminum and Aluminum Alloy. International Journal of Applied Ceramic Technology, 2007, 4, 514-523.	2.1	5

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109	Liquid Metal Corrosion of 316L Stainless Steel, 410 Stainless Steel, and 1015 Carbon Steel in a Molten Zinc Bath. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 2727-2736.	2.2	31
110	Effect of Sn concentration on the corrosion resistance of Pb-Sn alloys in H2SO4 solution. Journal of Power Sources, 2006, 155, 420-427.	7.8	30
111	Liquid metal corrosion of 316L, Fe3Al, and FeCrSi in molten Zn-Al baths. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 2049-2058.	2.2	50
112	Investigation of the crack growth behavior of Inconel 718 by high temperature MoirÃ© interferometry. Journal of Materials Science, 2004, 39, 1967-1973.	3.7	19
113	Thermodynamic assessment of liquid composition change during solidification and its effect on freckle formation in superalloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 386, 254-261.	5.6	21
114	Thermodynamic assessment of liquid composition change during solidification and its effect on freckle formation in superalloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 386, 254-261.	5.6	6
115	The effect of hold-time on fatigue crack growth behaviors of WASPALOY alloy at elevated temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 340, 8-14.	5.6	33
116	Effect of Î³â€² content on the mechanical behavior of the WASPALOY alloy system. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 308, 1-8.	5.6	39