

# Yu Luo

## List of Publications by Year in descending order

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101  
papers

3,784  
citations

109321

35  
h-index

138484

58  
g-index

102  
all docs

102  
docs citations

102  
times ranked

2594  
citing authors

#	ARTICLE	IF	CITATIONS
1	Electro-thermal modeling and experimental validation for lithium ion battery. Journal of Power Sources, 2012, 199, 227-238.	7.8	334
2	Numerical analyses on optimizing a heat pipe thermal management system for lithium-ion batteries during fast charging. Applied Thermal Engineering, 2015, 86, 281-291.	6.0	275
3	Electro-thermal cycle life model for lithium iron phosphate battery. Journal of Power Sources, 2012, 217, 509-518.	7.8	135
4	Performance and methane production characteristics of H <sub>2</sub> O/CO <sub>2</sub> co-electrolysis in solid oxide electrolysis cells. International Journal of Hydrogen Energy, 2013, 38, 11104-11109.	7.1	128
5	Performance assessment and optimization of a heat pipe thermal management system for fast charging lithium ion battery packs. International Journal of Heat and Mass Transfer, 2016, 92, 893-903.	4.8	119
6	Numerical modeling of an anode-supported SOFC button cell considering anodic surface diffusion. Journal of Power Sources, 2007, 164, 639-648.	7.8	113
7	Performance improvement of direct carbon fuel cell by introducing catalytic gasification process. Journal of Power Sources, 2010, 195, 4660-4666.	7.8	108
8	Effect of thermal contact resistances on fast charging of large format lithium ion batteries. Electrochimica Acta, 2014, 134, 327-337.	5.2	102
9	Recent advances in high-temperature carbon/air fuel cells. Energy and Environmental Science, 2017, 10, 460-490.	30.8	98
10	Comprehensive modeling of tubular solid oxide electrolysis cell for co-electrolysis of steam and carbon dioxide. Energy, 2014, 70, 420-434.	8.8	96
11	Experimental characterization and modeling of the electrochemical reduction of CO <sub>2</sub> in solid oxide electrolysis cells. Electrochimica Acta, 2013, 88, 644-653.	5.2	92
12	Ru-Based Catalysts for Ammonia Decomposition: A Mini-Review. Energy & Fuels, 2021, 35, 11693-11706.	5.1	89
13	Modeling of an anode-supported Ni/YSZ   Ni/ScSZ   ScSZ   LSM/ScSZ multiple layers SOFC cell. Journal of Power Sources, 2007, 172, 235-245.	7.8	75
14	Mechanism for carbon direct electrochemical reactions in a solid oxide electrolyte direct carbon fuel cell. Journal of Power Sources, 2011, 196, 754-763.	7.8	69
15	Challenges and Opportunities of Ru-Based Catalysts toward the Synthesis and Utilization of Ammonia. ACS Catalysis, 2022, 12, 3938-3954.	11.2	67
16	Exergy analysis of an integrated solid oxide electrolysis cell-methanation reactor for renewable energy storage. Applied Energy, 2018, 215, 371-383.	10.1	66
17	Elementary reaction modeling of CO <sub>2</sub> /H <sub>2</sub> O co-electrolysis cell considering effects of cathode thickness. Journal of Power Sources, 2013, 243, 118-130.	7.8	64
18	Carbon deposition on patterned nickel/yttria stabilized zirconia electrodes for solid oxide fuel cell/solid oxide electrolysis cell modes. Journal of Power Sources, 2015, 276, 26-31.	7.8	57

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19	Theoretical modeling of air electrode operating in SOFC mode and SOEC mode: The effects of microstructure and thickness. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 13738-13750.	7.1	54
20	Elementary reaction kinetic model of an anode-supported solid oxide fuel cell fueled with syngas. <i>Journal of Power Sources</i> , 2010, 195, 2266-2282.	7.8	49
21	A micro tri-generation system based on direct flame fuel cells for residential applications. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 5996-6005.	7.1	49
22	Spatial Confinement of Electron-Rich Ni Nanoparticles for Efficient Ammonia Decomposition to Hydrogen Production. <i>ACS Catalysis</i> , 2021, 11, 10345-10350.	11.2	49
23	Multi-level simulation platform of SOFC-GT hybrid generation system. <i>International Journal of Hydrogen Energy</i> , 2010, 35, 2894-2899.	7.1	48
24	Experimental characterization and mechanistic modeling of carbon monoxide fueled solid oxide fuel cell. <i>Journal of Power Sources</i> , 2011, 196, 5526-5537.	7.8	47
25	A multi-level simulation platform of natural gas internal reforming solid oxide fuel cell-gas turbine hybrid generation system: Part I. Solid oxide fuel cell model library. <i>Journal of Power Sources</i> , 2010, 195, 4871-4892.	7.8	46
26	Reversible solid oxide fuel cell for natural gas/renewable hybrid power generation systems. <i>Journal of Power Sources</i> , 2017, 340, 60-70.	7.8	46
27	Techno-economic analysis and comprehensive optimization of an on-site hydrogen refuelling station system using ammonia: hybrid hydrogen purification with both high H <sub>2</sub> purity and high recovery. <i>Sustainable Energy and Fuels</i> , 2020, 4, 3006-3017.	4.9	46
28	Biogas-fueled flame fuel cell for micro-combined heat and power system. <i>Energy Conversion and Management</i> , 2017, 148, 701-707.	9.2	45
29	Dynamic electro-thermal modeling of co-electrolysis of steam and carbon dioxide in a tubular solid oxide electrolysis cell. <i>Energy</i> , 2015, 89, 637-647.	8.8	42
30	Triggering in-plane defect cluster on MoS <sub>2</sub> for accelerated dinitrogen electroreduction to ammonia. <i>Journal of Energy Chemistry</i> , 2021, 62, 359-366.	12.9	40
31	Elementary reaction modeling and experimental characterization of solid oxide fuel-assisted steam electrolysis cells. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 10359-10373.	7.1	39
32	Using potassium catalytic gasification to improve the performance of solid oxide direct carbon fuel cells: Experimental characterization and elementary reaction modeling. <i>Journal of Power Sources</i> , 2014, 252, 130-137.	7.8	38
33	Start-up and operation characteristics of a flame fuel cell unit. <i>Applied Energy</i> , 2016, 178, 415-421.	10.1	38
34	Numerical simulation of cell-to-cell performance variation within a syngas-fuelled planar solid oxide fuel cell stack. <i>Applied Thermal Engineering</i> , 2017, 114, 653-662.	6.0	37
35	Coupling ammonia catalytic decomposition and electrochemical oxidation for solid oxide fuel cells: A model based on elementary reaction kinetics. <i>Journal of Power Sources</i> , 2019, 423, 125-136.	7.8	37
36	Power and heat co-generation by micro-tubular flame fuel cell on a porous media burner. <i>Energy</i> , 2016, 109, 117-123.	8.8	36

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37	Geometric structure distribution and oxidation state demand of cations in spinel $\text{Ni}_x\text{Fe}_{1-x}\text{Co}_2\text{O}_4$ composite cathodes for solid oxide fuel cells. <i>Chemical Engineering Journal</i> , 2021, 425, 131822.	12.7	36
38	Carbon deposition on nickel cermet anodes of solid oxide fuel cells operating on carbon monoxide fuel. <i>Journal of Power Sources</i> , 2013, 225, 1-8.	7.8	34
39	Elementary reaction modeling of solid oxide electrolysis cells: Main zones for heterogeneous chemical/electrochemical reactions. <i>Journal of Power Sources</i> , 2015, 273, 1-13.	7.8	34
40	Simulation of Electrochemical Impedance Spectra of Solid Oxide Fuel Cells Using Transient Physical Models. <i>Journal of the Electrochemical Society</i> , 2008, 155, B270.	2.9	33
41	Modeling of an anode-supported Ni-YSZ   Ni-ScSZ   ScSZ   LSM-ScSZ multiple layers SOFC cell. <i>Journal of Power Sources</i> , 2007, 172, 246-252.	7.8	32
42	Performance analysis of a reversible solid oxide cell system based on multi-scale hierarchical solid oxide cell modelling. <i>Energy Conversion and Management</i> , 2019, 196, 484-496.	9.2	31
43	Dynamic analysis of a micro CHP system based on flame fuel cells. <i>Energy Conversion and Management</i> , 2018, 163, 268-277.	9.2	29
44	Experimental characterization and elementary reaction modeling of a solid oxide electrolyte direct carbon fuel cell. <i>Journal of Power Sources</i> , 2013, 243, 159-171.	7.8	27
45	Synchronous enhancement of $\text{H}_2\text{O}/\text{CO}_2$ co-electrolysis and methanation for efficient one-step power-to-methane. <i>Energy Conversion and Management</i> , 2018, 165, 127-136.	9.2	26
46	Site-oriented design of spinel $\text{Mg}_x\text{NiMn}_{2-x}\text{O}_4$ as cathode material of intermediate-temperature direct ammonia solid oxide fuel cell. <i>Journal of Power Sources</i> , 2021, 503, 230020.	7.8	26
47	Experimental Characterization and Theoretical Modeling of Methane Production by $\text{H}_2/\text{CO}_2$ Co-Electrolysis in a Tubular Solid Oxide Electrolysis Cell. <i>Journal of the Electrochemical Society</i> , 2015, 162, F1129-F1134.	2.9	23
48	Dynamic Processes of Mode Switching in Reversible Solid Oxide Fuel Cells. <i>Journal of Energy Engineering - ASCE</i> , 2017, 143, .	1.9	23
49	Simulation and evaluation of capacity recovery methods for spiral-wound lithium ion batteries. <i>Journal of Power Sources</i> , 2013, 243, 779-789.	7.8	21
50	An electro-thermal model and its application on a spiral-wound lithium ion battery with porous current collectors. <i>Electrochimica Acta</i> , 2014, 121, 143-153.	5.2	21
51	Reversible $\text{H}_2/\text{H}_2\text{O}$ electrochemical conversion mechanisms on the patterned nickel electrodes. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 25130-25142.	7.1	21
52	A novel solar system integrating concentrating photovoltaic thermal collectors and variable effect absorption chiller for flexible co-generation of electricity and cooling. <i>Energy Conversion and Management</i> , 2020, 206, 112506.	9.2	21
53	Highly-integrated and Cost-efficient Ammonia-fueled fuel cell system for efficient power generation: A comprehensive system optimization and Techno-Economic analysis. <i>Energy Conversion and Management</i> , 2022, 251, 114917.	9.2	20
54	Cu/Fe $3\text{O}_4$ catalyst for water gas shift reaction: Insight into the effect of Fe $^{2+}$ and Fe $^{3+}$ distribution in Fe $3\text{O}_4$ . <i>International Journal of Hydrogen Energy</i> , 2020, 45, 8456-8465.	7.1	19

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55	Optimized coupling of ammonia decomposition and electrochemical oxidation in a tubular direct ammonia solid oxide fuel cell for high-efficiency power generation. <i>Applied Energy</i> , 2022, 307, 118158.	10.1	19
56	Developing an ultrafine Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-<math>\lambda</math></sub> cathode for efficient solid oxide fuel cells. <i>Ceramics International</i> , 2022, 48, 11419-11427.	4.8	18
57	Electronic metal-support interaction enhanced ammonia decomposition efficiency of perovskite oxide supported ruthenium. <i>Chemical Engineering Science</i> , 2022, 257, 117719.	3.8	18
58	Mechanism for reversible CO/CO <sub>2</sub> electrochemical conversion on a patterned nickel electrode. <i>Journal of Power Sources</i> , 2017, 366, 93-104.	7.8	17
59	Pressurized tubular solid oxide H <sub>2</sub> O/CO <sub>2</sub> coelectrolysis cell for direct power-to-methane. <i>AIChE Journal</i> , 2020, 66, e16896.	3.6	17
60	Carbon monoxide/carbon dioxide electrochemical conversion on patterned nickel electrodes operating in fuel cell and electrolysis cell modes. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 3762-3773.	7.1	16
61	Flat-chip flame fuel cell operated on a catalytically enhanced porous media combustor. <i>Energy Conversion and Management</i> , 2019, 196, 443-452.	9.2	16
62	Gas sensing properties of amperometric NH <sub>3</sub> sensors based on Sm <sub>2</sub> Zr <sub>2</sub> O <sub>7</sub> solid electrolyte and SrM <sub>2</sub> O <sub>4</sub> (M = Sm, La, Gd, Y) sensing electrodes. <i>Sensors and Actuators B: Chemical</i> , 2020, 303, 127220.	7.8	16
63	A Cationic Polymerization Strategy to Design Sulfonated Micro/Mesoporous Polymers as Efficient Adsorbents for Ammonia Capture and Separation. <i>Macromolecules</i> , 2021, 54, 7010-7020.	4.8	16
64	Engineering of Ce <sup>3+</sup> -O-Ni structures enriched with oxygen vacancies via Zr doping for effective generation of hydrogen from ammonia. <i>Chemical Engineering Science</i> , 2021, 245, 116818.	3.8	15
65	Simulation of EIS spectra and polarization curves based on Ni/YSZ patterned anode elementary reaction models. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 1037-1043.	7.1	14
66	Power-to-Gas Energy Storage by Reversible Solid Oxide Cell for Distributed Renewable Power Systems. <i>Journal of Energy Engineering - ASCE</i> , 2018, 144, .	1.9	14
67	A flame fuel cell stack powered by a porous media combustor. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 22595-22603.	7.1	14
68	Facile Synthesis and High-Value Utilization of Ammonia. <i>Chinese Journal of Chemistry</i> , 2022, 40, 953-964.	4.9	14
69	Elementary reaction modeling of reversible CO/CO <sub>2</sub> electrochemical conversion on patterned nickel electrodes. <i>Journal of Power Sources</i> , 2018, 379, 298-308.	7.8	13
70	Unraveling the Role of Cu <sup>0</sup> and Cu <sup>+</sup> Sites in Cu/SiO <sub>2</sub> Catalysts for Water-Gas Shift Reaction. <i>ChemCatChem</i> , 2020, 12, 4672-4679.	3.7	13
71	Hydrogen Production via Water-Gas Shift Reaction by Cu/SiO <sub>2</sub> Catalyst: A Case Study of CeO <sub>2</sub> Doping. <i>Energy &amp; Fuels</i> , 2021, 35, 3521-3528.	5.1	13
72	Hydrogen production from ammonia decomposition over Ni/CeO <sub>2</sub> catalyst: Effect of CeO <sub>2</sub> morphology. <i>Journal of Rare Earths</i> , 2023, 41, 1014-1021.	4.8	13

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73	Effects of magnetically induced flow on electrochemical reacting processes in a liquid metal battery. <i>Journal of Power Sources</i> , 2019, 438, 226926.	7.8	12
74	Bridging a bi-directional connection between electricity and fuels in hybrid multienergy systems. , 2021, , 41-84.		12
75	Geometric synergy of Steam/Carbon dioxide Co-electrolysis and methanation in a tubular solid oxide Electrolysis cell for direct Power-to-Methane. <i>Energy Conversion and Management</i> , 2020, 208, 112570.	9.2	11
76	Lithium/bismuth co-functionalized phosphotungstic acid catalyst for promoting dinitrogen electroreduction with high Faradaic efficiency. <i>Cell Reports Physical Science</i> , 2021, 2, 100557.	5.6	11
77	Defect-induced pyrochlore Pr <sub>2</sub> Zr <sub>2</sub> O <sub>7</sub> cathode rich in oxygen vacancies for direct ammonia solid oxide fuel cells. <i>Journal of Power Sources</i> , 2022, 520, 230847.	7.8	11
78	A bifunctional solid oxide electrolysis cell for simultaneous CO <sub>2</sub> utilization and synthesis gas production. <i>Chemical Communications</i> , 2016, 52, 13687-13690.	4.1	10
79	Numerical simulation and experimental characterization of the performance evolution of a liquid antimony anode fuel cell. <i>Journal of Power Sources</i> , 2015, 284, 536-546.	7.8	9
80	Elementary reaction modeling and experimental characterization of solid oxide direct carbon-assisted steam electrolysis cells. <i>Solid State Ionics</i> , 2016, 295, 78-89.	2.7	9
81	Theoretical modeling of a pressurized tubular reversible solid oxide cell for methane production by co-electrolysis. <i>Applied Energy</i> , 2020, 268, 114927.	10.1	8
82	Numerical simulation and thermal stress analysis of direct internal reforming SOFCs. <i>International Journal of Green Energy</i> , 2022, 19, 399-409.	3.8	8
83	Strategy for Renewable Energy Storage in a Dynamic Distributed Generation System. <i>Energy Procedia</i> , 2017, 105, 4458-4463.	1.8	8
84	Mutual information for evaluating renewable power penetration impacts in a distributed generation system. <i>Energy</i> , 2017, 141, 290-303.	8.8	7
85	Mechanism of rate-limiting step switchover for reversible solid oxide cells in H <sub>2</sub> /H <sub>2</sub> O atmosphere. <i>Electrochimica Acta</i> , 2019, 326, 135003.	5.2	7
86	A General Approach for Electrochemical Impedance Spectroscopy Simulation using Transient Mechanistic SOFC Model. <i>ECS Transactions</i> , 2007, 7, 1889-1899.	0.5	5
87	An approximate analytical model of reduction of carbon dioxide in solid oxide electrolysis cell by regular and singular perturbation methods. <i>Electrochimica Acta</i> , 2014, 139, 190-200.	5.2	5
88	Theoretical Modeling of methane production in pressurized micro-tubular R-SOFC. <i>Energy Procedia</i> , 2019, 158, 2164-2169.	1.8	5
89	Mechanistic modeling of NO electrochemical reduction in a micro-tubular cell: Effects of CO <sub>2</sub> /H <sub>2</sub> O components and electrochemical promotion. <i>Chemical Engineering Journal</i> , 2015, 280, 1-8.	12.7	4
90	Methane Synthesis Characteristics of H <sub>2</sub> O/CO <sub>2</sub> Co-Electrolysis in Tubular Solid Oxide Electrolysis Cells. <i>ECS Transactions</i> , 2015, 68, 3465-3474.	0.5	4

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91	Exergy Efficiency Analysis of a Power-to-Methane System Coupling Water Electrolysis and Sabatier Reaction. ECS Transactions, 2017, 78, 2965-2973.	0.5	3
92	Distributed hybrid system and prospect of the future Energy Internet. , 2021, , 9-39.		3
93	Theoretical modeling of NO electrochemical reduction on multifunctional layer electrode by alternating/direct current electrolysis. Electrochimica Acta, 2015, 152, 202-215.	5.2	2
94	Reaction Mechanism and Rate-Determining Step Speculation of Reversible CO/CO <sub>2</sub> Electrochemical Conversion on the Nickel Patterned Electrodes. ECS Transactions, 2017, 78, 1085-1093.	0.5	1
95	Direct ammonia solid oxide fuel cells based on spinel ACo <sub>2</sub> O <sub>4</sub> (A=Zn, Fe, Ni) composite cathodes at intermediate temperature. International Journal of Green Energy, 0, , 1-10.	3.8	1
96	Ammonia: a clean and efficient energy carrier for distributed hybrid system. , 2021, , 141-177.		0
97	Power balance and dynamic stability of a distributed hybrid energy system. , 2021, , 179-206.		0
98	Stabilization of intermittent renewable energy using power-to-X. , 2021, , 113-140.		0
99	Exergy Efficiency Analysis of a Power-to-Methane System Coupling Water Electrolysis and Sabatier Reaction. ECS Meeting Abstracts, 2017, , .	0.0	0
100	Reaction Mechanism and Rate-Determining Step Speculation of Reversible CO/CO <sub>2</sub> Electrochemical Conversion on the Nickel Patterned Electrodes. ECS Meeting Abstracts, 2017, , .	0.0	0
101	Influences of Hydrogen-Natural Gas Mixtures on The Performance of An Internal Reforming Solid Oxide Fuel Cell Unit: A Simulation Study. Journal of the Electrochemical Society, 0, , .	2.9	0