Bin Chen

List of Publications by Year
in descending order

72 papers	3,566 citations	136950 32 h-index	138484 58 g-index
72 all docs	72 docs citations	72 times ranked	3090 citing authors

#	Article	IF	Citations
1	A rational design of FeNi alloy nanoparticles and carbonate-decorated perovskite as a highly active and coke-resistant anode for solid oxide fuel cells. Chemical Engineering Journal, 2022, 430, 132615.	12.7	22
2	Materials development and prospective for protonic ceramic fuel cells. International Journal of Energy Research, 2022, 46, 2212-2240.	4.5	29
3	Achieving high energy efficiency of alkaline hybrid zinc battery by using the optimized Coâ€“Mn spinel cathode. International Journal of Hydrogen Energy, 2022, 47, 27470-27480.	7.1	5
4	Efficiently optimizing the oxygen catalytic properties of the birnessite type manganese dioxide for zinc-air batteries. Journal of Alloys and Compounds, 2021, 852, 157012.	5.5	26
5	A-site deficient perovskite nanofibers boost oxygen evolution reaction for zinc-air batteries. Applied Surface Science, 2021, 536, 147806.	6.1	39
6	Robust Anodeâ€Supported Cells with Fast Oxygen Release Channels for Efficient and Stable CO₂ Electrolysis at Ultrahigh Current Densities. Small, 2021, 17, e2007211.	10.0	13
7	Thermal-expansion offset for high-performance fuel cell cathodes. Nature, 2021, 591, 246-251.	27.8	328
8	Cu-modified Ni foams as three-dimensional outer anodes for high-performance hybrid direct coal fuel cells. Chemical Engineering Journal, 2021, 410, 128239.	12.7	20
9	Copperâ^'iron dimer for selective Câ€“C coupling in electrochemical CO2 reduction. Electrochimica Acta, 2021, 380, 138188.	5.2	9
10	Mn-based spinels evolved from layered manganese dioxides at mild temperature for the robust flexible quasi-solid-state zinc-air batteries. Chemical Engineering Journal, 2021, 417, 129179.	12.7	20
11	Elucidating the mechanism of discharge performance improvement in zinc-air flow batteries: A combination of experimental and modeling investigations. Journal of Energy Storage, 2021, 40, 102779.	8.1	11
12	Self-supported metal sulfide electrode for flexible quasi-solid-state zinc-air batteries. Journal of Alloys and Compounds, 2021, 878, 160434.	5.5	10
13	Autothermal reforming of methane over an integrated solid oxide fuel cell reactor for power and syngas co-generation. Journal of Power Sources, 2021, 513, 230536.	7.8	28
14	Toward the rational design of cathode and electrolyte materials for aprotic Liâ€CO ₂ batteries: A numerical investigation. International Journal of Energy Research, 2020, 44, 496-507.	4.5	15
15	All-solid-state flexible zinc-air battery with polyacrylamide alkaline gel electrolyte. Journal of Power Sources, 2020, 450, 227653.	7.8	108
16	A-site deficient/excessive effects of LaMnO3 perovskite as bifunctional oxygen catalyst for zinc-air batteries. Electrochimica Acta, 2020, 333, 135566.	5.2	71
17	Low-energy-consumption electrochemical CO2 capture driven by biomimetic phenazine derivatives redox medium. Applied Energy, 2020, 259, 114119.	10.1	37
18	Coal pretreatment and Ag-infiltrated anode for high-performance hybrid direct coal fuel cell. Applied Energy, 2020, 260, 114197.	10.1	24

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19	Thermo-economic modeling and analysis of an NG-fueled SOFC-WGS-TSA-PEMFC hybrid energy conversion system for stationary electricity power generation. Energy, 2020, 192, 116613.	8.8	50
20	Dynamic modeling and operation strategy of natural gas fueled SOFC-Engine hybrid power system with hydrogen addition by metal hydride for vehicle applications. ETransportation, 2020, 5, 100074.	14.8	27
21	Low-Energy Electrochemical Carbon Dioxide Capture Based on a Biological Redox Proton Carrier. Cell Reports Physical Science, 2020, 1, 100046.	5.6	21
22	Achieving a stable zinc electrode with ultralong cycle life by implementing a flowing electrolyte. Journal of Power Sources, 2020, 453, 227856.	7.8	31
23	Techno-economic evaluation and technology roadmap of the MWe-scale SOFC-PEMFC hybrid fuel cell system for clean power generation. Journal of Cleaner Production, 2020, 255, 120225.	9.3	26
24	Electricity generation by a novel CO2 mineralization cell based on organic proton-coupled electron transfer. Applied Energy, 2020, 261, 114414.	10.1	2
25	Towards online optimisation of solid oxide fuel cell performance: Combining deep learning with multi-physics simulation. Energy and AI, 2020, 1, 100003.	10.6	61
26	Highly dispersed CuFe-nitrogen active sites electrode for synergistic electrochemical CO2 reduction at low overpotential. Applied Energy, 2020, 269, 115029.	10.1	36
27	Cation-Substitution-Tuned Oxygen Electrocatalyst of Spinel Cobaltite MCo₂O₄ (M = Fe, Co, and Ni) Hexagonal Nanoplates for Rechargeable Zn-Air Batteries. Journal of the Electrochemical Society, 2019, 166, A3448-A3455.	2.9	8
28	The thermal effects of all porous solid oxide fuel cells. Journal of Power Sources, 2019, 440, 227102.	7.8	20
29	Achieving high energy density and efficiency through integration: progress in hybrid zinc batteries. Journal of Materials Chemistry A, 2019, 7, 15564-15574.	10.3	54
30	Modelling of a hybrid system for on-site power generation from solar fuels. Applied Energy, 2019, 240, 709-718.	10.1	11
31	Integration of reversible solid oxide cells with methane synthesis (ReSOC-MS) in grid stabilization: A dynamic investigation. Applied Energy, 2019, 250, 558-567.	10.1	17
32	Optimizing strontium titanate anode in solid oxide fuel cells by ytterbium doping. International Journal of Hydrogen Energy, 2019, 44, 13728-13736.	7.1	11
33	Exploring oxygen electrocatalytic activity and pseudocapacitive behavior of Co3O4 nanoplates in alkaline solutions. Electrochimica Acta, 2019, 310, 86-95.	5.2	21
34	Performance analysis of a novel SOFC-HCCI engine hybrid system coupled with metal hydride reactor for H2 addition by waste heat recovery. Energy Conversion and Management, 2019, 191, 119-131.	9.2	48
35	Combined methane reforming by carbon dioxide and steam in proton conducting solid oxide fuel cells for syngas/power co-generation. International Journal of Hydrogen Energy, 2019, 44, 15313-15321.	7.1	28
36	Synthesis of Fe₂O₃ Nanoparticle-Decorated N-Doped Reduced Graphene Oxide as an Effective Catalyst for Zn-Air Batteries. Journal of the Electrochemical Society, 2019, 166, A616-A622.	2.9	19

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37	Dynamic modeling and operation strategy of an NG-fueled SOFC-WGS-TSA-PEMFC hybrid energy conversion system for fuel cell vehicle by using MATLAB/SIMULINK. Energy, 2019, 175, 567-579.	8.8	41
38	A high-performance Zn battery based on self-assembled nanostructured NiCo2O4 electrode. Journal of Power Sources, 2019, 421, 6-13.	7.8	87
39	Toward a new generation of low cost, efficient, and durable metalâ€“air flow batteries. Journal of Materials Chemistry A, 2019, 7, 26744-26768.	10.3	51
40	In-situ growth of Co3O4 nanowire-assembled clusters on nickel foam for aqueous rechargeable Zn-Co3O4 and Zn-air batteries. Applied Catalysis B: Environmental, 2019, 241, 104-112.	20.2	167
41	Plastic waste fuelled solid oxide fuel cell system for power and carbon nanotube cogeneration. International Journal of Hydrogen Energy, 2019, 44, 1867-1876.	7.1	30
42	Modeling of all-porous solid oxide fuel cells with a focus on the electrolyte porosity design. Applied Energy, 2019, 235, 602-611.	10.1	28
43	Thermal modelling of ethanol-fuelled Solid Oxide Fuel Cells. Applied Energy, 2019, 237, 476-486.	10.1	39
44	Porous Co3O4 nanoplates as the active material for rechargeable Zn-air batteries with high energy efficiency and cycling stability. Energy, 2019, 166, 1241-1248.	8.8	29
45	A direct carbon solid oxide fuel cell fueled with char from wheat straw. International Journal of Energy Research, 2019, 43, 2468-2477.	4.5	38
46	Experimental and modeling study of high performance direct carbon solid oxide fuel cell with in situ catalytic steam-carbon gasification reaction. Journal of Power Sources, 2018, 382, 135-143.	7.8	38
47	Co₃O₄ Nanosheets as Active Material for Hybrid Zn Batteries. Small, 2018, 14, e1800225.	10.0	131
48	Performance improvement of a direct carbon solid oxide fuel cell through integrating an Otto heat engine. Energy Conversion and Management, 2018, 165, 761-770.	9.2	33
49	Syngas/power cogeneration from proton conducting solid oxide fuel cells assisted by dry methane reforming: A thermal-electrochemical modelling study. Energy Conversion and Management, 2018, 167, 37-44.	9.2	44
50	Modeling of all porous solid oxide fuel cells. Applied Energy, 2018, 219, 105-113.	10.1	84
51	Integration of Znâ€“Ag and Znâ€“Air Batteries: A Hybrid Battery with the Advantages of Both. ACS Applied Materials & Interfaces, 2018, 10, 36873-36881.	8.0	70
52	Growth of Al and Co co-doped NiO nanosheets on carbon cloth as the air electrode for Zn-air batteries with high cycling stability. Electrochimica Acta, 2018, 290, 21-29.	5.2	29
53	Nanoporous NiO/Ni(OH)₂Plates Incorporated with Carbon Nanotubes as Active Materials of Rechargeable Hybrid Zinc Batteries for Improved Energy Efficiency and High-Rate Capability. Journal of the Electrochemical Society, 2018, 165, A2119-A2126.	2.9	35
54	Investigation on the electrode design of hybrid Zn-Co3O4/air batteries for performance improvements. Electrochimica Acta, 2018, 283, 1028-1036.	5.2	42

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55	Numerical modeling of a cogeneration system based on a direct carbon solid oxide fuel cell and a thermophotovoltaic cell. Energy Conversion and Management, 2018, 171, 279-286.	9.2	14
56	A feasible way to handle the heat management of direct carbon solid oxide fuel cells. Applied Energy, 2018, 226, 881-890.	10.1	25
57	Two-stage thermoelectric generators for waste heat recovery from solid oxide fuel cells. Energy, 2017, 132, 280-288.	8.8	86
58	A novel design of solid oxide electrolyser integrated with magnesium hydride bed for hydrogen generation and storage â€“ A dynamic simulation study. Applied Energy, 2017, 200, 260-272.	10.1	22
59	Modeling of direct carbon solid oxide fuel cells withÂH2O and CO2 as gasification agents. International Journal of Hydrogen Energy, 2017, 42, 15641-15651.	7.1	48
60	The thermal effect in direct carbon solid oxide fuel cells. Applied Thermal Engineering, 2017, 118, 652-662.	6.0	36
61	Modelling of SOEC-FT reactor: Pressure effects on methanation process. Applied Energy, 2017, 185, 814-824.	10.1	66
62	Performance improvement of a direct carbon solid oxide fuel cell system by combining with a Stirling cycle. Energy, 2017, 140, 979-987.	8.8	37
63	Flexible Znâ€“ and Liâ€“air batteries: recent advances, challenges, and future perspectives. Energy and Environmental Science, 2017, 10, 2056-2080.	30.8	477
64	Application of cascading thermoelectric generator and cooler for waste heat recovery from solid oxide fuel cells. Energy Conversion and Management, 2017, 148, 1382-1390.	9.2	148
65	Numerical investigation of a non-aqueous lithium-oxygen battery based on lithium superoxide as the discharge product. Applied Energy, 2017, 203, 254-266.	10.1	13
66	Modelling of finger-like channelled anode support for SOFCs application. Science Bulletin, 2016, 61, 1324-1332.	9.0	29
67	Modeling of CH4-assisted SOEC for H2O/CO2 co-electrolysis. International Journal of Hydrogen Energy, 2016, 41, 21839-21849.	7.1	65
68	Modelling of One-Step Methanation Process Combining SOECs and Fischer-Tropsch-like Reactor. Journal of the Electrochemical Society, 2016, 163, F3001-F3008.	2.9	27
69	Thermodynamic analysis and performance optimization of solid oxide fuel cell and refrigerator hybrid system based on H2 and CO. Applied Thermal Engineering, 2016, 108, 347-352.	6.0	13
70	Modeling of direct carbon solid oxide fuel cell for CO and electricity cogeneration. Applied Energy, 2016, 178, 353-362.	10.1	77
71	Thermodynamic assessment of an integrated molten carbonate fuel cell and absorption refrigerator hybrid system for combined power and cooling applications. International Journal of Refrigeration, 2016, 70, 1-12.	3.4	28
72	Modeling of Direct Carbon-Assisted Solid Oxide Electrolysis Cell (SOEC) for Syngas Production at Two Different Electrodes. Journal of the Electrochemical Society, 2016, 163, F3029-F3035.	2.9	33