Xin Li

List of Publications by Year in descending order

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62	1,731	331670 21	276875 41
papers	citations	h-index	g-index

62	62	62	1232
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Energy and exergy analysis of solar power tower plants. Applied Thermal Engineering, 2011, 31, 3904-3913.	6.0	256
2	Sensitivity analysis of the numerical study on the thermal performance of a packed-bed molten salt thermocline thermal storage system. Applied Energy, 2012, 92, 65-75.	10.1	212
3	Thermal model and thermodynamic performance of molten salt cavity receiver. Renewable Energy, 2010, 35, 981-988.	8.9	166
4	Effects of solid particle properties on the thermal performance ofÂaÂpacked-bed molten-salt thermocline thermal storage system. Applied Thermal Engineering, 2013, 57, 69-80.	6.0	103
5	Enhanced heat transfer in a parabolic trough solar receiver by inserting rods and using molten salt as heat transfer fluid. Applied Energy, 2018, 220, 337-350.	10.1	80
6	Parametric study and standby behavior of a packed-bed molten salt thermocline thermal storage system. Renewable Energy, 2012, 48, 1-9.	8.9	78
7	Allowable flux density on a solar central receiver. Renewable Energy, 2014, 62, 747-753.	8.9	71
8	Modeling and dynamic simulation of the collector and receiver system of 1MWe DAHAN solar thermal power tower plant. Renewable Energy, 2012, 43, 18-29.	8.9	50
9	Comparative study of the transient natural convection in an underground water pit thermal storage. Applied Energy, 2017, 208, 1162-1173.	10.1	47
10	Enhancing CO₂ methanation over a metal foam structured catalyst by electric internal heating. Chemical Communications, 2020, 56, 205-208.	4.1	42
11	Dynamic test model for the transient thermal performance of parabolic trough solar collectors. Solar Energy, 2013, 95, 65-78.	6.1	39
12	Experimental study on the high performance of Zr doped LaCoO3 for solar thermochemical CO production. Chemical Engineering Journal, 2020, 389, 124426.	12.7	38
13	CaCo_{0.05}Mn_{0.95}O_{3â^Î´}: A Promising Perovskite Solid Solution for Solar Thermochemical Energy Storage. ACS Applied Materials & Interfaces, 2021, 13, 3856-3866.	8.0	34
14	Dynamic thermal performance prediction model for the flat-plate solar collectors based on the two-node lumped heat capacitance method. Solar Energy, 2016, 135, 769-779.	6.1	32
15	Efficient sulfur resistance of Fe, La and Ce doped hierarchically structured catalysts for low-temperature methanation integrated with electric internal heating. Fuel, 2021, 283, 118984.	6.4	31
16	An experimental study: Thermal performance of molten salt cavity receivers. Applied Thermal Engineering, 2013, 50, 334-341.	6.0	29
17	Theoretical analysis and experimental verification of a new dynamic test method for solar collectors. Solar Energy, 2012, 86, 398-406.	6.1	26
18	A comparison of three test methods for determining the thermal performance of parabolic trough solar collectors. Solar Energy, 2014, 99, 11-27.	6.1	25

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19	Modeling and simulation of a molten salt cavity receiver with Dymola. Energy, 2015, 93, 1373-1384.	8.8	23
20	Experimental study on flux mapping for a novel 84 kWe high flux solar simulator. Applied Thermal Engineering, 2019, 162, 114319.	6.0	23
21	Solar fuels production via two-step thermochemical cycle based on Fe3O4/Fe with methane reduction. Solar Energy, 2019, 177, 772-781.	6.1	23
22	The Design and Numerical Study of a 2MWh Molten Salt Thermocline Tank. Energy Procedia, 2015, 69, 779-789.	1.8	22
23	The effect of the physical boundary conditions on the thermal performance of molten salt thermocline tank. Renewable Energy, 2016, 96, 190-202.	8.9	22
24	Numerical simulation on the thermal performance of a solar molten salt cavity receiver. Renewable Energy, 2014, 69, 324-335.	8.9	20
25	Mechanism of CO production around oxygen vacancy of LaMnO₃: an efficient and rapid evaluation of the doping effect on the kinetics and thermodynamic driving force of CO₂-splitting. Journal of Materials Chemistry A, 2020, 8, 1709-1716.	10.3	19
26	Experimental and theoretical analysis of a dynamic test method for molten salt cavity receiver. Renewable Energy, 2013, 50, 214-221.	8.9	18
27	A comparative thermodynamic analysis of isothermal and non-isothermal CeO2-based solar thermochemical cycle with methane-driven reduction. Renewable Energy, 2019, 143, 915-921.	8.9	18
28	Analysis of mechanical-fluid-thermal performance of heat pipeline system with structural deformation effects. International Journal of Heat and Mass Transfer, 2019, 128, 12-23.	4.8	17
29	Numerical study on the directly-irradiated vortex reactor for solar CO2 coal gasification. Solar Energy, 2019, 188, 573-585.	6.1	16
30	Water-splitting mechanism analysis of Sr/Ca doped LaFeO3 towards commercial efficiency of solar thermochemical H2 production. International Journal of Hydrogen Energy, 2021, 46, 1634-1641.	7.1	16
31	Machine learning-assisted multiphysics coupling performance optimization in a photocatalytic hydrogen production system. Energy Conversion and Management, 2020, 216, 112935.	9.2	13
32	Phase change of molten salt during the cold filling of a receiver tube. Solar Energy, 2014, 101, 254-264.	6.1	11
33	Multi-objective optimal analysis on the distributed energy system with solar driven metal oxide redox cycle based fuel production. Journal of Cleaner Production, 2019, 233, 765-781.	9.3	10
34	Solar thermochemical CO₂ splitting with doped perovskite LaCo_{0.7}Zr_{0.3}O₃: thermodynamic performance and solar-to-fuel efficiency. RSC Advances, 2020, 10, 35740-35752.	3.6	9
35	Transient Analysis of a Molten Salt Cavity Receiver. Energy Procedia, 2014, 49, 599-606.	1.8	8
36	Theoretical assessment of hydrogen production and multicycle energy conversion via solar thermochemical cycle based on nonvolatile SnO2. Journal of Energy Chemistry, 2019, 38, 177-184.	12.9	8

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37	Approximate analytical characterization and multi-parametric optimization design of single-tank thermocline heat storage system. Applied Thermal Engineering, 2020, 181, 116010.	6.0	8
38	Hydrogen production via a novel two-step solar thermochemical cycle based on non-volatile GeO2. Solar Energy, 2019, 179, 30-36.	6.1	6
39	Thermodynamic analysis of novel vanadium redox materials for solar thermochemical ammonia synthesis from N2 and CH4. International Journal of Hydrogen Energy, 2020, 45, 2569-2577.	7.1	6
40	Mechanism of oxygen vacancy assisted water-splitting of LaMnO₃: inorganic perovskite prediction for fast solar thermochemical H₂ production. Inorganic Chemistry Frontiers, 2020, 7, 2381-2387.	6.0	6
41	Effectiveness of Zr and Hf incorporation into LaCoO₃ towards fast and thermodynamically favorable solar thermochemical CO production studied with density functional theory. Sustainable Energy and Fuels, 2020, 4, 1515-1521.	4.9	5
42	The Power Performance Experiment of Dish-Stirling Solar Thermal Power System. , 2008, , 1858-1862.		4
43	Thermodynamic assessment of solar-aided carbon dioxide conversion into fuels via Tin oxides. Science China Technological Sciences, 2018, 61, 1779-1787.	4.0	4
44	Mechanism and thermodynamic study of solar H2 production on LaFeO3 defected surface: Effect of H2O to H2 conversion ratio and kinetics on optimization of energy conversion efficiency. Journal of Cleaner Production, 2020, 268, 122293.	9.3	4
45	Chemical formula input relied intelligent identification of an inorganic perovskite for solar thermochemical hydrogen production. Inorganic Chemistry Frontiers, 2021, 8, 2097-2102.	6.0	4
46	Bi-level optimization for the energy conversion efficiency improvement in a photocatalytic-hydrogen-production system. Energy, 2022, 253, 124138.	8.8	4
47	Concentrating Solar Power Development in China. Journal of Solar Energy Engineering, Transactions of the ASME, 2010, 132, .	1.8	3
48	The Experimental Analysis on Thermal Performance of a Solar Dish Concentrator. , 2008, , 644-650.		3
49	Numerical simulation of cleanliness of glass window in solar CO₂ coal gasification reactor. Chinese Science Bulletin, 2019, 64, 621-623.	0.7	3
50	Thermodynamic analysis of titanium dioxide-based isothermal methanothermal and carbothermal redox cycles for solar fuel production. Energy Conversion and Management, 2022, 254, 115254.	9.2	3
51	Numerical study of cold filling and tube deformation in the molten salt receiver. AIP Conference Proceedings, 2017, , .	0.4	2
52	Cavity receiver thermal performance analysis based on total heat loss coefficient and efficiency factor. International Journal of Energy Research, 2018, 42, 2284-2289.	4.5	2
53	Function testing and failure analysis of control system for molten salt receiver system. Renewable Energy, 2018, 115, 260-268.	8.9	2
54	Preliminary discussion on test method for time constant of molten salt receiver based on two-lumped-elements model. Solar Energy, 2020, 195, 552-564.	6.1	2

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55	Analysis of the turbulent heat transfer in solar power tower molten salt receiver tube. , 2008, , 1701-1705.		1
56	Dynamic modeling of Badaling molten salt tower CSP pilot plant. AIP Conference Proceedings, 2017, , .	0.4	1
57	Preliminary comparison of two potential test methods for molten salt receiver under uniformly and Gaussian-shape distributed incident power. Solar Energy, 2019, 183, 532-543.	6.1	1
58	The melting process of a freezing molten salt pipe of concentracted solar power plant. Chinese Science Bulletin, 2017, 62, 960-966.	0.7	1
59	Heat transfer and solar absorption analysis of multiscale CeO2 reduction for rapid H2 production prediction. International Journal of Hydrogen Energy, 2022, 47, 21681-21689.	7.1	1
60	The Required Concentration Ratio for Two Stage Water/Steam Cavity Receiver. Energy Procedia, 2015, 69, 434-443.	1.8	0
61	Numerical simulation study on the contamination of window glass of solar CO2 coal gasification reactor. AIP Conference Proceedings, 2019, , .	0.4	0
62	A screening method based on projection pursuit and analytic hierarchy process for solar thermochemical metal oxides fuel production cycles. Chinese Science Bulletin, 2017, 62, 3262-3268.	0.7	0