

Fanxing Li

List of Publications by Year in descending order

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108
papers

6,206
citations

57631

44
h-index

71532

76
g-index

119
all docs

119
docs citations

119
times ranked

3468
citing authors

#	ARTICLE	IF	CITATIONS
1	Chemical looping beyond combustion – a perspective. <i>Energy and Environmental Science</i> , 2020, 13, 772-804.	15.6	325
2	Coke-resistant Ni@SiO ₂ catalyst for dry reforming of methane. <i>Applied Catalysis B: Environmental</i> , 2015, 176-177, 513-521.	10.8	242
3	Clean coal conversion processes – progress and challenges. <i>Energy and Environmental Science</i> , 2008, 1, 248.	15.6	236
4	Recent Advances in Intensified Ethylene Production – A Review. <i>ACS Catalysis</i> , 2019, 9, 8592-8621.	5.5	227
5	Syngas Chemical Looping Gasification Process: Oxygen Carrier Particle Selection and Performance. <i>Energy & Fuels</i> , 2009, 23, 4182-4189.	2.5	196
6	Chemical Looping Technology and Its Fossil Energy Conversion Applications. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 10200-10211.	1.8	181
7	Utilization of chemical looping strategy in coal gasification processes. <i>Particuology</i> , 2008, 6, 131-142.	2.0	167
8	Dynamic Methane Partial Oxidation Using a Fe ₂ O ₃ @La _{0.8} Sr _{0.2} FeO _{3-δ} Core-Shell Redox Catalyst in the Absence of Gaseous Oxygen. <i>ACS Catalysis</i> , 2014, 4, 3560-3569.	5.5	163
9	Perovskites as Geo-inspired Oxygen Storage Materials for Chemical Looping and Three-Way Catalysis: A Perspective. <i>ACS Catalysis</i> , 2018, 8, 8213-8236.	5.5	152
10	Ionic diffusion in the oxidation of iron – effect of support and its implications to chemical looping applications. <i>Energy and Environmental Science</i> , 2011, 4, 876.	15.6	140
11	Role of metal oxide support in redox reactions of iron oxide for chemical looping applications: experiments and density functional theory calculations. <i>Energy and Environmental Science</i> , 2011, 4, 3661.	15.6	138
12	Effect of support on redox stability of iron oxide for chemical looping conversion of methane. <i>Applied Catalysis B: Environmental</i> , 2015, 164, 371-379.	10.8	137
13	One-step synthesis of single-site vanadium substitution in 1T-WS ₂ monolayers for enhanced hydrogen evolution catalysis. <i>Nature Communications</i> , 2021, 12, 709.	5.8	137
14	Biomass direct chemical looping process: Process simulation. <i>Fuel</i> , 2010, 89, 3773-3784.	3.4	131
15	Syngas chemical looping gasification process: Bench-scale studies and reactor simulations. <i>AIChE Journal</i> , 2010, 56, 2186-2199.	1.8	128
16	Iron Oxide with Facilitated O ²⁺ Transport for Facile Fuel Oxidation and CO ₂ Capture in a Chemical Looping Scheme. <i>ACS Sustainable Chemistry and Engineering</i> , 2013, 1, 364-373.	3.2	116
17	Coal-Direct Chemical Looping Gasification for Hydrogen Production: Reactor Modeling and Process Simulation. <i>Energy & Fuels</i> , 2012, 26, 3680-3690.	2.5	114
18	Fe ₂ O ₃ @La _x Sr _{1-x} FeO ₃ Core-Shell Redox Catalyst for Methane Partial Oxidation. <i>ChemCatChem</i> , 2014, 6, 790-799.	1.8	108

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19	Characterization of single-wall carbon nanotubes by N ₂ adsorption. Carbon, 2004, 42, 2375-2383.	5.4	107
20	β-Al ₂ O ₃ sheet-stabilized isolate Co ²⁺ for catalytic propane dehydrogenation. Journal of Catalysis, 2020, 381, 482-492.	3.1	98
21	Perovskite nanocomposites as effective CO ₂ -splitting agents in a cyclic redox scheme. Science Advances, 2017, 3, e1701184.	4.7	97
22	CaA MnO ₃ (A = Sr and Ba) perovskite based oxygen carriers for chemical looping with oxygen uncoupling (CLOU). Applied Energy, 2015, 157, 358-367.	5.1	96
23	Effect of Promoters on Manganese-Containing Mixed Metal Oxides for Oxidative Dehydrogenation of Ethane via a Cyclic Redox Scheme. ACS Catalysis, 2017, 7, 5163-5173.	5.5	96
24	Li-Promoted La _x Sr _{2-x} FeO ₄ Core-Shell Redox Catalysts for Oxidative Dehydrogenation of Ethane under a Cyclic Redox Scheme. ACS Catalysis, 2016, 6, 7293-7302.	5.5	95
25	Effect of core and shell compositions on MeO@LaSr _{1-x} FeO ₃ core-shell redox catalysts for chemical looping reforming of methane. Applied Energy, 2015, 157, 391-398.	5.1	94
26	Perovskite promoted iron oxide for hybrid water-splitting and syngas generation with exceptional conversion. Energy and Environmental Science, 2015, 8, 535-539.	15.6	89
27	Syngas Chemical Looping Process: Design and Construction of a 25 kW _{th} Subpilot Unit. Energy & Fuels, 2012, 26, 2292-2302.	2.5	88
28	Oxidative Dehydrogenation of Ethane: A Chemical Looping Approach. Energy Technology, 2016, 4, 1200-1208.	1.8	88
29	CaMn _{1-x} B _x O ₃ (B = Al, V, Fe, Co, and Ni) perovskite based oxygen carriers for chemical looping with oxygen uncoupling (CLOU). Applied Energy, 2016, 174, 80-87.	5.1	79
30	Methane partial oxidation using FeO _x @La _{0.8} Sr _{0.2} FeO ₃ core-shell catalyst: transient pulse studies. Physical Chemistry Chemical Physics, 2015, 17, 31297-31307.	1.3	75
31	Alkali Metal-Promoted La _x Sr _{2-x} FeO ₄ Redox Catalysts for Chemical Looping Oxidative Dehydrogenation of Ethane. ACS Catalysis, 2018, 8, 1757-1766.	5.5	74
32	Investigation of perovskite supported composite oxides for chemical looping conversion of syngas. Fuel, 2014, 134, 521-530.	3.4	72
33	A hybrid solar-redox scheme for liquid fuel and hydrogen coproduction. Energy and Environmental Science, 2014, 7, 2033-2042.	15.6	65
34	Iron-containing mixed-oxide composites as oxygen carriers for Chemical Looping with Oxygen Uncoupling (CLOU). Fuel, 2015, 139, 1-10.	3.4	62
35	Oxidative dehydrogenation of ethane under a cyclic redox scheme: Process simulations and analysis. Energy, 2017, 119, 1024-1035.	4.5	62
36	A molten carbonate shell modified perovskite redox catalyst for anaerobic oxidative dehydrogenation of ethane. Science Advances, 2020, 6, eaaz9339.	4.7	61

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37	Manganese silicate based redox catalysts for greener ethylene production via chemical looping \hat{a} oxidative dehydrogenation of ethane. <i>Applied Catalysis B: Environmental</i> , 2018, 232, 77-85.	10.8	55
38	Perovskite-structured $AMn_xB_{1-x}O_3$ (A = Ca or Ba; B = Fe or Ni) redox catalysts for partial oxidation of methane. <i>Catalysis Science and Technology</i> , 2016, 6, 4535-4544.	2.1	54
39	Effects of Sodium and Tungsten Promoters on Mg_6MnO_8 -Based Core-Shell Redox Catalysts for Chemical Looping \hat{a} Oxidative Dehydrogenation of Ethane. <i>ACS Catalysis</i> , 2019, 9, 3174-3186.	5.5	52
40	Mixed iron-manganese oxides as redox catalysts for chemical looping \hat{a} oxidative dehydrogenation of ethane with tailorable heat of reactions. <i>Applied Catalysis B: Environmental</i> , 2019, 257, 117885.	10.8	50
41	Rh-promoted mixed oxides for \hat{a} low-temperature \hat{a} methane partial oxidation in the absence of gaseous oxidants. <i>Journal of Materials Chemistry A</i> , 2017, 5, 11930-11939.	5.2	50
42	Municipal solid waste conversion to transportation fuels: a life-cycle estimation of global warming potential and energy consumption. <i>Journal of Cleaner Production</i> , 2014, 70, 145-153.	4.6	49
43	Chemical looping at the nanoscale \hat{a} challenges and opportunities. <i>Current Opinion in Chemical Engineering</i> , 2018, 20, 143-150.	3.8	49
44	A- and B-site Codoped $SrFeO_3$ Oxygen Sorbents for Enhanced Chemical Looping Air Separation. <i>ChemSusChem</i> , 2020, 13, 385-393.	3.6	49
45	Chemical looping gasification of solid fuels using bimetallic oxygen carrier particles \hat{a} Feasibility assessment and process simulations. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 7839-7854.	3.8	46
46	Iron-Doped $BaMnO_3$ for Hybrid Water Splitting and Syngas Generation. <i>ChemSusChem</i> , 2017, 10, 3402-3408.	3.6	46
47	In-situ removal of toluene as a biomass tar model compound using $NiFe_2O_4$ for application in chemical looping gasification oxygen carrier. <i>Energy</i> , 2020, 190, 116360.	4.5	44
48	Intensification of Ethylene Production from Naphtha via a Redox Oxy-Cracking Scheme: Process Simulations and Analysis. <i>Engineering</i> , 2018, 4, 714-721.	3.2	43
49	Modified Ceria for \hat{a} Low \hat{a} Temperature \hat{a} CO_2 Utilization: A Chemical Looping Route to Exploit Industrial Waste Heat. <i>Advanced Energy Materials</i> , 2019, 9, 1901963.	10.2	43
50	Perovskite oxides for redox oxidative cracking of n-hexane under a cyclic redox scheme. <i>Applied Catalysis B: Environmental</i> , 2019, 246, 30-40.	10.8	43
51	Substituted $SrFeO_3$ as robust oxygen sorbents for thermochemical air separation: correlating redox performance with compositional and structural properties. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 8924-8932.	1.3	43
52	Oxygen Vacancy Creation Energy in Mn-Containing Perovskites: An Effective Indicator for Chemical Looping with Oxygen Uncoupling. <i>Chemistry of Materials</i> , 2019, 31, 689-698.	3.2	41
53	Experimental Study of HCl Capture Using CaO Sorbents: Activation, Deactivation, Reactivation, and Ionic Transfer Mechanism. <i>Industrial & Engineering Chemistry Research</i> , 2011, 50, 6034-6043.	1.8	40
54	Calcium cobaltate: a phase-change catalyst for stable hydrogen production from bio-glycerol. <i>Energy and Environmental Science</i> , 2018, 11, 660-668.	15.6	38

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55	Intensified Ethylene Production via Chemical Looping through an Exergetically Efficient Redox Scheme. <i>IScience</i> , 2019, 19, 894-904.	1.9	38
56	A tailored multi-functional catalyst for ultra-efficient styrene production under a cyclic redox scheme. <i>Nature Communications</i> , 2021, 12, 1329.	5.8	35
57	High-throughput oxygen chemical potential engineering of perovskite oxides for chemical looping applications. <i>Energy and Environmental Science</i> , 2022, 15, 1512-1528.	15.6	35
58	Hydrogen production from methane and solar energy â€“ Process evaluations and comparison studies. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 18092-18102.	3.8	32
59	Highly efficient reduction of O ₂ -containing CO ₂ via chemical looping based on perovskite nanocomposites. <i>Nano Energy</i> , 2020, 78, 105320.	8.2	32
60	Oxidative dehydrogenation of ethane using MoO ₃ /Fe ₂ O ₃ catalysts in a cyclic redox mode. <i>Catalysis Today</i> , 2018, 317, 50-55.	2.2	30
61	Perovskite Promoted Mixed Cobaltâ€“Iron Oxides for Enhanced Chemical Looping Air Separation. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 15528-15540.	3.2	30
62	Techno-Economic Analysis of Coal-Based Hydrogen and Electricity Cogeneration Processes with CO ₂ Capture. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 11018-11028.	1.8	28
63	Chemical Looping Air Separation Using a Perovskite-Based Oxygen Sorbent: System Design and Process Analysis. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 12185-12195.	3.2	28
64	Effects of bubbleâ€“liquid twoâ€“phase turbulent hydrodynamics on cell damage in sparged bioreactor. <i>Biotechnology Progress</i> , 2014, 30, 48-58.	1.3	27
65	Manganeseâ€“containing redox catalysts for selective hydrogen combustion under a cyclic redox scheme. <i>AIChE Journal</i> , 2018, 64, 3141-3150.	1.8	27
66	Particulate Formation from a Copper Oxide-Based Oxygen Carrier in Chemical Looping Combustion for CO ₂ Capture. <i>Environmental Science & Technology</i> , 2017, 51, 2482-2490.	4.6	26
67	Sodium tungstate-promoted CaMnO ₃ as an effective, phase-transition redox catalyst for redox oxidative cracking of cyclohexane. <i>Journal of Catalysis</i> , 2020, 385, 213-223.	3.1	26
68	Effect of Sodium Tungstate Promoter on the Reduction Kinetics of CaMn _{0.9} Fe _{0.1} O ₃ for Chemical Looping â€“ Oxidative Dehydrogenation of Ethane. <i>Chemical Engineering Journal</i> , 2020, 398, 125583.	6.6	23
69	Net Electronic Charge as an Effective Electronic Descriptor for Oxygen Release and Transport Properties of SrFeO ₃ -Based Oxygen Sorbents. <i>Chemistry of Materials</i> , 2021, 33, 2446-2456.	3.2	22
70	MoO ₃ /Al ₂ O ₃ catalysts for chemical-looping oxidative dehydrogenation of ethane. <i>Journal of Chemical Physics</i> , 2020, 152, 044713.	1.2	21
71	Co and Mo Co-doped Fe ₂ O ₃ for Selective Ethylene Production via Chemical Looping Oxidative Dehydrogenation. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 8002-8011.	3.2	21
72	Mixed conductive composites for â€“Low-Temperatureâ€“ thermo-chemical CO ₂ splitting and syngas generation. <i>Journal of Materials Chemistry A</i> , 2020, 8, 13173-13182.	5.2	20

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73	Ce stabilized Ni ^x SrO as a catalytic phase transition sorbent for integrated CO ₂ capture and CH ₄ reforming. Journal of Materials Chemistry A, 2022, 10, 3077-3085.	5.2	19
74	Sr _{1-x} Ca _x Fe _{1-y} Co _y O _{3-δ} as facile and tunable oxygen sorbents for chemical looping air separation. JPhys Energy, 2020, 2, 025007.	2.3	18
75	Selective catalytic oxidation of ammonia to nitric oxide via chemical looping. Nature Communications, 2022, 13, 718.	5.8	18
76	Zeolite-assisted core-shell redox catalysts for efficient light olefin production via cyclohexane redox oxidative cracking. Chemical Engineering Journal, 2021, 409, 128192.	6.6	17
77	Selective hydrogen combustion as an effective approach for intensified chemical production via the chemical looping strategy. Fuel Processing Technology, 2021, 218, 106827.	3.7	17
78	Continuous Synthesis of Monodisperse Yolk-Shell Titania Microspheres. Chemistry of Materials, 2018, 30, 8948-8958.	3.2	16
79	Redox oxidative cracking of n-hexane with Fe-substituted barium hexaaluminates as redox catalysts. Catalysis Science and Technology, 2019, 9, 2211-2220.	2.1	14
80	LaNi _x Fe _{1-x} O _{3-δ} as a Robust Redox Catalyst for CO ₂ Splitting and Methane Partial Oxidation. Energy & Fuels, 2021, 35, 13921-13929.	2.5	14
81	Chemical looping air separation with Sr _{0.8} Ca _{0.2} Fe _{0.9} Co _{0.1} O _{3-δ} perovskite sorbent: Packed bed modeling, verification, and optimization. Chemical Engineering Journal, 2022, 429, 132370.	6.6	14
82	Low temperature platinum atomic layer deposition on nylon-6 for highly conductive and catalytic fiber mats. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	0.9	13
83	Zeolite-Perovskite Composites as Effective Redox Catalysts for Autothermal Cracking of n-Hexane. ACS Sustainable Chemistry and Engineering, 2020, 8, 14268-14273.	3.2	13
84	Liquid Metal Shell as an Effective Iron Oxide Modifier for Redox-Based Hydrogen Production at Intermediate Temperatures. ACS Catalysis, 2021, 11, 10228-10238.	5.5	13
85	Ethane to liquids via a chemical looping approach – Redox catalyst demonstration and process analysis. Chemical Engineering Journal, 2021, 417, 128886.	6.6	13
86	CO ₂ Reforming of Ethanol: Density Functional Theory Calculations, Microkinetic Modeling, and Experimental Studies. ACS Catalysis, 2020, 10, 9624-9633.	5.5	12
87	Rh promoted perovskites for exceptional low temperature methane conversion to syngas. Catalysis Today, 2020, 350, 149-155.	2.2	11
88	Spinel oxides as coke-resistant supports for NiO-based oxygen carriers in chemical looping combustion of methane. Catalysis Today, 2023, 424, 112462.	2.2	9
89	Molten-salt-mediated carbon dioxide capture and superequilibrium utilization with ethane oxidative dehydrogenation. Cell Reports Physical Science, 2021, 2, 100503.	2.8	9
90	Modular-scale ethane to liquids via chemical looping oxidative dehydrogenation: Redox catalyst performance and process analysis. Journal of Advanced Manufacturing and Processing, 2019, 1, .	1.4	8

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91	Autothermal Chemical Looping Oxidative Dehydrogenation of Ethane: Redox Catalyst Performance, Longevity, and Process Analysis. <i>Energy & Fuels</i> , 2022, 36, 9736-9744.	2.5	8
92	Reduction Kinetics of Perovskite Oxides for Selective Hydrogen Combustion in the Context of Olefin Production. <i>Energy Technology</i> , 2020, 8, 1900738.	1.8	7
93	Continuous flow synthesis of phase transition-resistant titania microparticles with tunable morphologies. <i>RSC Advances</i> , 2020, 10, 8340-8347.	1.7	7
94	Core-Shell Fe ₂ O ₃ @La _{1-x} Sr _x FeO ₃ Material for Catalytic Oxidations: Coverage of Iron Oxide Core, Oxygen Storage Capacity and Reactivity of Surface Oxygens. <i>Materials</i> , 2021, 14, 7355.	1.3	7
95	Sr ₂ CeO ₄ as a robust high temperature sorbent for CO ₂ capture with near 100% sorbent conversion efficiency. <i>Chemical Engineering Journal</i> , 2022, 441, 135942.	6.6	7
96	Diffusion limitation in fast transient experiments. <i>Chemical Engineering Science</i> , 2004, 59, 5615-5622.	1.9	6
97	Clean coal. <i>Physics World</i> , 2007, 20, 37-41.	0.0	5
98	High efficiency and flexible working distance digital in-line holographic microscopy based on Fresnel zone plate. <i>Measurement Science and Technology</i> , 2017, 28, 055209.	1.4	4
99	Controller hardware-in-loop testbed setup for multi-objective optimization based tuning of inverter controller parameters in a microgrid setting. , 2016, , .		3
100	Perovskite-Based Phase Transition Sorbents for Sorption-Enhanced Oxidative Steam Reforming of Glycerol. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 6434-6445.	3.2	3
101	Preface to Special Issue - CO ₂ Capture, Sequestration, Conversion and Utilization. <i>Aerosol and Air Quality Research</i> , 2014, 14, 451-452.	0.9	2
102	CaMn _{0.9} Ti _{0.1} O ₃ based redox catalysts for chemical looping “Oxidative dehydrogenation of ethane: Effects of Na ₂ MoO ₄ promoter and degree of reduction on the reaction kinetics. <i>Catalysis Today</i> , 2023, 417, 113725.	2.2	2
103	Lensless in-line holographic microscope resolution enhancement method from two intensity measurements based on data interpolation. , 2019, , .		1
104	Flow Synthesis of Single and Mixed Metal Oxides. <i>Chemistry Methods</i> , 0, , .	1.8	1
105	Comparison of microkinetics and Langmuir-Hinshelwood models of the partial oxidation of methane to synthesis gas. <i>Studies in Surface Science and Catalysis</i> , 2004, , 235-240.	1.5	0
106	Positioning control system of three-dimensional wafer stage of lithography. , 2016, , .		0
107	Dynamic three-dimensional shape measurement based on light field imaging. , 2019, , .		0
108	Double-beam laser interference lithography based on optical field modulation. , 2019, , .		0