

Wenguo Xiang

List of Publications by Year in descending order

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75
papers

2,358
citations

147566

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all docs

75
docs citations

75
times ranked

1740
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhanced Fe ₂ O ₃ /Al ₂ O ₃ Oxygen Carriers for Chemical Looping Steam Reforming of Methane with Different Mg Ratios. <i>Industrial & Engineering Chemistry Research</i> , 2022, 61, 1022-1031.	1.8	8
2	Modification of Metal (Fe, Al) Doping on Reaction Properties of a NiO Oxygen Carrier with CO during Chemical Looping Combustion. <i>ACS Omega</i> , 2022, 7, 4381-4388.	1.6	5
3	Integration of molten carbonate fuel cell and chemical looping air separation for high-efficient power generation and CO ₂ capture. <i>Energy</i> , 2022, 254, 124184.	4.5	5
4	Chemometric modelling on element compositions and product distributions of cellulose and lignin. <i>Biomass Conversion and Biorefinery</i> , 2021, 11, 2233-2246.	2.9	4
5	Application of incremental support vector regression based on optimal training subset and improved particle swarm optimization algorithm in real-time sensor fault diagnosis. <i>Applied Intelligence</i> , 2021, 51, 3323-3338.	3.3	9
6	Classification and prediction of gas turbine gas path degradation based on deep neural networks. <i>International Journal of Energy Research</i> , 2021, 45, 10513-10526.	2.2	8
7	Thermodynamic analysis of oxy-fuel combustion integrated with the sCO ₂ Brayton cycle for combined heat and power production. <i>Energy Conversion and Management</i> , 2021, 232, 113869.	4.4	15
8	Evolution of Sm-doped Fe ₂ O ₃ /CeO ₂ Oxygen Carriers in Chemical Looping Hydrogen Generation. <i>Energy Technology</i> , 2021, 9, 2100535.	1.8	2
9	Ni, Co and Cu-promoted iron-based oxygen carriers in methane-fueled chemical looping hydrogen generation process. <i>Fuel Processing Technology</i> , 2021, 221, 106917.	3.7	40
10	Boosting the surface oxygen activity for high performance Iron-based perovskite oxide. <i>Science of the Total Environment</i> , 2021, 795, 148904.	3.9	11
11	Investigations on fluid dynamics of binary particles in a dual fluidized bed reactor system for enhanced calcium looping gasification process. <i>Powder Technology</i> , 2020, 361, 803-811.	2.1	8
12	Promoting effect of ZrO ₂ /CeO ₂ addition on Fe/CaO catalyst for hydrogen gas production in the gasification process. <i>Biomass and Bioenergy</i> , 2020, 142, 105712.	2.9	4
13	Synergistic Effects of the Zr and Sm Co-doped Fe ₂ O ₃ /CeO ₂ Oxygen Carrier for Chemical Looping Hydrogen Generation. <i>Energy & Fuels</i> , 2020, 34, 10256-10267.	2.5	21
14	Fe-terminated LaFeO ₃ perovskite oxide surface for low temperature toluene oxidation. <i>Journal of Cleaner Production</i> , 2020, 277, 123224.	4.6	32
15	Hydrogen-rich syngas production via sorption-enhanced steam gasification of sewage sludge. <i>Biomass and Bioenergy</i> , 2020, 138, 105607.	2.9	38
16	Sintering and agglomeration of Fe ₂ O ₃ -MgAl ₂ O ₄ oxygen carriers with different Fe ₂ O ₃ loadings in chemical looping processes. <i>Fuel</i> , 2020, 265, 116983.	3.4	32
17	Chemical looping oxidative steam reforming of methanol: A new pathway for auto-thermal conversion. <i>Applied Catalysis B: Environmental</i> , 2020, 269, 118758.	10.8	57
18	Oxygen vacancy induced performance enhancement of toluene catalytic oxidation using LaFeO ₃ perovskite oxides. <i>Chemical Engineering Journal</i> , 2020, 387, 124101.	6.6	121

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19	Highly efficient methane decomposition to H ₂ and CO ₂ reduction to CO via redox looping of Ca ₂ Fe _x Al _{2-x} O ₅ supported Ni _y Fe _{3-y} O ₄ nanoparticles. Applied Catalysis B: Environmental, 2020, 271, 118938.	10.8	24
20	Synergistic enhancement of chemical looping-based CO ₂ splitting with biomass cascade utilization using cyclic stabilized Ca ₂ Fe ₂ O ₅ aerogel. Journal of Materials Chemistry A, 2019, 7, 1216-1226.	5.2	43
21	Investigation of a dual cold-flow fluidized bed for calcium looping gasification process. Powder Technology, 2019, 353, 10-19.	2.1	10
22	Improved iron oxide oxygen carriers for chemical looping hydrogen generation using colloidal crystal templated method. International Journal of Hydrogen Energy, 2019, 44, 13175-13184.	3.8	6
23	Investigation of synergistic effects and high performance of La-Co composite oxides for toluene catalytic oxidation at low temperature. Environmental Science and Pollution Research, 2019, 26, 12123-12135.	2.7	36
24	Thermodynamic assessment and optimization of a pressurized fluidized bed oxy-fuel combustion power plant with CO ₂ capture. Energy, 2019, 175, 445-455.	4.5	47
25	Chemical looping dry reforming of methane with hydrogen generation on Fe ₂ O ₃ /Al ₂ O ₃ oxygen carrier. Chemical Engineering Journal, 2019, 368, 812-823.	6.6	67
26	Enhanced sintering resistance of Fe ₂ O ₃ /CeO ₂ oxygen carrier for chemical looping hydrogen generation using core-shell structure. International Journal of Hydrogen Energy, 2019, 44, 6491-6504.	3.8	53
27	Solar-Wind-Bio Ecosystem for Biomass Cascade Utilization with Multigeneration of Formic Acid, Hydrogen, and Graphene. ACS Sustainable Chemistry and Engineering, 2019, 7, 2558-2568.	3.2	19
28	Characterization of Fe ₂ O ₃ /CeO ₂ oxygen carriers for chemical looping hydrogen generation. International Journal of Hydrogen Energy, 2018, 43, 3154-3164.	3.8	44
29	Application of chemical looping air separation for MILD oxy-combustion: Identifying a suitable operational region. Applied Thermal Engineering, 2018, 132, 8-17.	3.0	17
30	Improvement of H ₂ -rich gas production with tar abatement from pine wood conversion over bi-functional Ca ₂ Fe ₂ O ₅ catalyst: Investigation of inner-looping redox reaction and promoting mechanisms. Applied Energy, 2018, 212, 931-943.	5.1	89
31	Integration of chemical looping combustion and supercritical CO ₂ cycle for combined heat and power generation with CO ₂ capture. Energy Conversion and Management, 2018, 167, 113-124.	4.4	36
32	Effects of Zr doping on Fe ₂ O ₃ /CeO ₂ oxygen carrier in chemical looping hydrogen generation. Chemical Engineering Journal, 2018, 346, 712-725.	6.6	71
33	Ca ₂ Fe ₂ O ₅ : A promising oxygen carrier for CO/CH ₄ conversion and almost-pure H ₂ production with inherent CO ₂ capture over a two-step chemical looping hydrogen generation process. Applied Energy, 2018, 211, 431-442.	5.1	119
34	Hydrogen rich syngas production from biomass gasification using synthesized Fe/CaO active catalysts. Journal of the Energy Institute, 2018, 91, 805-816.	2.7	63
35	Enhanced Hydrogen Generation for Fe ₂ O ₃ /CeO ₂ Oxygen Carrier via Rare-Earth (Y, Sm, and La) Doping in Chemical Looping Process. Energy & Fuels, 2018, 32, 11362-11374.	2.5	22
36	Elucidation of syngas composition from catalytic steam gasification of lignin, cellulose, actual and simulated biomasses. Biomass and Bioenergy, 2018, 115, 210-222.	2.9	16

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37	Application of chemical looping air separation for MILD oxy-fuel combustion in the supercritical power plant with CO ₂ capture. Energy Science and Engineering, 2018, 6, 490-505.	1.9	6
38	Effects of supports on reduction activity and carbon deposition of iron oxide for methane chemical looping hydrogen generation. Applied Energy, 2018, 225, 912-921.	5.1	43
39	Carbon formation on iron-based oxygen carriers during CH ₄ reduction period in Chemical Looping Hydrogen Generation process. Chemical Engineering Journal, 2017, 325, 322-331.	6.6	59
40	Biomass pyrolysis-gasification over Zr promoted CaO-HZSM-5 catalysts for hydrogen and bio-oil co-production with CO ₂ capture. International Journal of Hydrogen Energy, 2017, 42, 16031-16044.	3.8	33
41	Thermogravimetric and kinetics investigation of pine wood pyrolysis catalyzed with alkali-treated CaO/ZSM-5. Energy Conversion and Management, 2017, 146, 182-194.	4.4	57
42	Effects of supports on hydrogen production and carbon deposition of Fe-based oxygen carriers in chemical looping hydrogen generation. International Journal of Hydrogen Energy, 2017, 42, 11006-11016.	3.8	60
43	Steam gasification of sewage sludge with CaO as CO ₂ sorbent for hydrogen-rich syngas production. Biomass and Bioenergy, 2017, 107, 52-62.	2.9	52
44	Process integration of coal fueled chemical looping hydrogen generation with SOFC for power production and CO ₂ capture. International Journal of Hydrogen Energy, 2017, 42, 28732-28746.	3.8	19
45	Effects of CeO ₂ , ZrO ₂ , and Al ₂ O ₃ Supports on Iron Oxygen Carrier for Chemical Looping Hydrogen Generation. Energy & Fuels, 2017, 31, 8001-8013.	2.5	63
46	Improvements of CaO-based sorbents for cyclic CO ₂ capture using a wet mixing process. Chemical Engineering Journal, 2016, 286, 320-328.	6.6	18
47	Simulation of the calcium looping process (CLP) for hydrogen, carbon monoxide and acetylene poly-generation with CO ₂ capture and COS reduction. Applied Energy, 2016, 169, 642-651.	5.1	21
48	Sorption enhanced coal gasification for hydrogen production using a synthesized CaO-MgO-molecular sieve sorbent. International Journal of Hydrogen Energy, 2016, 41, 17323-17333.	3.8	23
49	Coal gasification integration with solid oxide fuel cell and chemical looping combustion for high-efficiency power generation with inherent CO ₂ capture. Applied Energy, 2015, 146, 298-312.	5.1	92
50	Reduction Behavior of Iron Oxide for Chemical-Looping Hydrogen Generation in a Compact Fluidized Fuel Reactor. , 2014, , .		0
51	Energy and exergy analysis of a new hydrogen-fueled power plant based on calcium looping process. International Journal of Hydrogen Energy, 2013, 38, 5389-5400.	3.8	26
52	Hydrodynamic Analysis of a Three-Fluidized Bed Reactor Cold Flow Model for Chemical Looping Hydrogen Generation: Pressure Characteristics. , 2013, , 1351-1359.		1
53	Nonlinear system identification with modified differential evolution and RBF networks. , 2012, , .		3
54	Design and Fluid Dynamic Analysis of a Three-Fluidized-Bed Reactor System for Chemical-Looping Hydrogen Generation. Industrial & Engineering Chemistry Research, 2012, 51, 4267-4278.	1.8	22

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55	An integrated system combining chemical looping hydrogen generation process and solid oxide fuel cell/gas turbine cycle for power production with CO ₂ capture. Journal of Power Sources, 2012, 215, 89-98.	4.0	42
56	A new neuro-fuzzy approach for nonlinear system identification based on differential evolution. , 2012, , .		0
57	Incorporating IGCC and CaO sorption-enhanced process for power generation with CO ₂ capture. Applied Energy, 2012, 95, 285-294.	5.1	59
58	Hydrogen and electricity co-production plant integrating steam-iron process and chemical looping combustion. International Journal of Hydrogen Energy, 2012, 37, 8204-8216.	3.8	23
59	Experimental investigation of chemical-looping hydrogen generation using Al ₂ O ₃ or TiO ₂ -supported iron oxides in a batch fluidized bed. International Journal of Hydrogen Energy, 2011, 36, 8915-8926.	3.8	101
60	Calcium looping gasification for high-concentration hydrogen production with CO ₂ capture in a novel compact fluidized bed: Simulation and operation requirements. International Journal of Hydrogen Energy, 2011, 36, 4887-4899.	3.8	54
61	Experimental investigation of chemical looping hydrogen generation using iron oxides in a batch fluidized bed. Proceedings of the Combustion Institute, 2011, 33, 2691-2699.	2.4	39
62	On-line identification of thermal process using a modified ts-type neuro-fuzzy system. , 2011, , .		2
63	Investigation of coal fueled chemical looping combustion using Fe ₃ O ₄ as oxygen carrier: Influence of variables. Journal of Thermal Science, 2010, 19, 266-275.	0.9	15
64	Experimental study on catalytic steam gasification of natural coke in a fluidized bed. Fuel Processing Technology, 2010, 91, 805-809.	3.7	18
65	Investigation of coal gasification hydrogen and electricity co-production plant with three-reactors chemical looping process. International Journal of Hydrogen Energy, 2010, 35, 8580-8591.	3.8	96
66	Modeling and Simulation of the Low-Pressure Rectification Column in an IGCC Power Plant. , 2009, , .		0
67	Gaisfier Following-Based Coordinated Control for the IGCC Power Plant. , 2009, , .		2
68	Dynamic modeling and control of the air separation unit in an IGCC power plant. , 2009, , .		1
69	Online coal quality analyzer-based decentralized PID control for the ALSTOM gasifier. , 2009, , .		3
70	Model predictive control for nonlinear boiler-turbine system based on fuzzy gain scheduling. , 2008, , .		8
71	Robust Constrained Fuzzy Affine Model Predictive Control With Application to a Fluidized Bed Combustion Plant. IEEE Transactions on Control Systems Technology, 2008, 16, 1047-1056.	3.2	29
72	Fuzzy dynamic modeling and predictive load following control of a solid oxide fuel cell power system. , 2008, , .		2

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73	Investigation of Gasification Chemical Looping Combustion Combined Cycle Performance. Energy & Fuels, 2008, 22, 961-966.	2.5	35
74	Performance improvement of combined cycle power plant based on the optimization of the bottom cycle and heat recuperation. Journal of Thermal Science, 2007, 16, 84-89.	0.9	27
75	Thermodynamic Analysis and Optimization of an Oxyfuel Fluidized Bed Combustion Power Plant for CO ₂ Capture. Industrial & Engineering Chemistry Research, 0, , .	1.8	2