Jihui Gao

List of Publications by Year
in descending order

82 papers	3,146 citations	136885 32 h-index	168321 53 g-index
83 all docs	83 docs citations	83 times ranked	2780 citing authors

#	Article	IF	Citations
1	Hydrogen peroxide generation from O2 electroreduction for environmental remediation: A state-of-the-art review. Chemosphere, 2019, 225, 588-607.	4.2	211
2	In Situ High-Level Nitrogen Doping into Carbon Nanospheres and Boosting of Capacitive Charge Storage in Both Anode and Cathode for a High-Energy 4.5 V Full-Carbon Lithium-Ion Capacitor. Nano Letters, 2018, 18, 3368-3376.	4.5	163
3	In Situ Doping Boron Atoms into Porous Carbon Nanoparticles with Increased Oxygen Graft Enhances both Affinity and Durability toward Electrolyte for Greatly Improved Supercapacitive Performance. Advanced Functional Materials, 2018, 28, 1804190.	7.8	149
4	Carboxylâ€Dominant Oxygen Rich Carbon for Improved Sodium Ion Storage: Synergistic Enhancement of Adsorption and Intercalation Mechanisms. Advanced Energy Materials, 2021, 11, .	10.2	133
5	Activated carbon as effective cathode material in iron-free Electro-Fenton process: Integrated H2O2 electrogeneration, activation, and pollutants adsorption. Electrochimica Acta, 2019, 296, 317-326.	2.6	113
6	Selective H2O2 electrosynthesis by O-doped and transition-metal-O-doped carbon cathodes via O2 electroreduction: A critical review. Chemical Engineering Journal, 2021, 410, 128368.	6.6	110
7	A green trace K2CO3 induced catalytic activation strategy for developing coal-converted activated carbon as advanced candidate for CO2 adsorption and supercapacitors. Chemical Engineering Journal, 2020, 383, 123205.	6.6	92
8	Controllable nitrogen introduction into porous carbon with porosity retaining for investigating nitrogen doping effect on SO 2 adsorption. Chemical Engineering Journal, 2016, 290, 116-124.	6.6	84
9	A high performance lithium ion capacitor achieved by the integration of a Sn-C anode and a biomass-derived microporous activated carbon cathode. Scientific Reports, 2017, 7, 40990.	1.6	79
10	Nitrogen-rich carbon spheres made by a continuous spraying process for high-performance supercapacitors. Nano Research, 2016, 9, 3209-3221.	5.8	78
11	One-step ammonia activation of Zhundong coal generating nitrogen-doped microporous carbon for gas adsorption and energy storage. Carbon, 2016, 109, 747-754.	5.4	75
12	A systematic investigation of SO2 removal dynamics by coal-based activated cokes: The synergic enhancement effect of hierarchical pore configuration and gas components. Applied Surface Science, 2015, 357, 1895-1901.	3.1	73
13	Efficient H2O2 electrogeneration at graphite felt modified via electrode polarity reversal: Utilization for organic pollutants degradation. Chemical Engineering Journal, 2019, 364, 428-439.	6.6	73
14	Drastic enhancement of H2O2 electro-generation by pulsed current for ibuprofen degradation: Strategy based on decoupling study on H2O2 decomposition pathways. Chemical Engineering Journal, 2018, 338, 709-718.	6.6	72
15	Oxygen Functional Group Modification of Cellulose-Derived Hard Carbon for Enhanced Sodium Ion Storage. ACS Sustainable Chemistry and Engineering, 2019, 7, 18554-18565.	3.2	72
16	Adsorption of SO2 by typical carbonaceous material: a comparative study of carbon nanotubes and activated carbons. Adsorption, 2013, 19, 959-966.	1.4	60
17	Rates of H2O2 electrogeneration by reduction of anodic O2 at RVC foam cathodes in batch and flow-through cells. Electrochimica Acta, 2018, 277, 185-196.	2.6	55
18	Inexpensive activated coke electrocatalyst for high-efficiency hydrogen peroxide production: Coupling effects of amorphous carbon cluster and oxygen dopant. Applied Catalysis B: Environmental, 2021, 286, 119860.	10.8	55

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19	H₂O₂ Electrogeneration from O₂ Electroreduction by Nâ€Doped Carbon Materials: A Miniâ€Review on Preparation Methods, Selectivity of N Sites, and Prospects. Advanced Materials Interfaces, 2021, 8, 2002091.	1.9	54
20	Broadening the pore size of coal-based activated carbonviaa washing-free chem-physical activation method for high-capacity dye adsorption. RSC Advances, 2018, 8, 14488-14499.	1.7	51
21	Development of highly effective CaO@Al₂O₃ with hierarchical architecture CO₂ sorbents via a scalable limited-space chemical vapor deposition technique. Journal of Materials Chemistry A, 2018, 6, 3462-3470.	5.2	49
22	Highlighting the role of nitrogen doping in enhancing CO₂ uptake onto carbon surfaces: a combined experimental and computational analysis. Journal of Materials Chemistry A, 2016, 4, 18248-18252.	5.2	48
23	Adjusting the Porosity of Coal-Based Activated Carbons Based on a Catalytic Physical Activation Process for Gas and Liquid Adsorption. Energy & Fuels, 2018, 32, 1255-1264.	2.5	46
24	A new insight into the SO₂ adsorption behavior of oxidized carbon materials using model adsorbents and DFT calculations. Physical Chemistry Chemical Physics, 2019, 21, 9181-9188.	1.3	46
25	â€œFloatingâ€•cathode for efficient H2O2 electrogeneration applied to degradation of ibuprofen as a model pollutant. Electrochemistry Communications, 2018, 96, 37-41.	2.3	42
26	Pore Structure Modified CaO-Based Sorbents with Different Sized Templates for CO₂ Capture. Energy & Fuels, 2019, 33, 5398-5407.	2.5	42
27	Microwave Irradiation Induced High-Efficiency Regeneration for Desulfurized Activated Coke: A Comparative Study with Conventional Thermal Regeneration. Energy & Fuels, 2017, 31, 9693-9702.	2.5	41
28	Strongly coupled calcium carbonate/antioxidative graphite nanosheets composites with high cycling stability for thermochemical energy storage. Applied Energy, 2018, 231, 412-422.	5.1	41
29	High-performance CaO-based composites synthesized using a space-confined chemical vapor deposition strategy for thermochemical energy storage. Solar Energy Materials and Solar Cells, 2020, 206, 110346.	3.0	36
30	Mechanism of SO2 adsorption and desorption on commercial activated coke. Korean Journal of Chemical Engineering, 2011, 28, 2218-2225.	1.2	35
31	A facile trace potassium assisted catalytic activation strategy regulating pore topology of activated coke for combined removal of toluene/SO2/NO. Chemical Engineering Journal, 2020, 389, 124262.	6.6	35
32	Development of dense Ca-based, Al-stabilized composites with high volumetric energy density for thermochemical energy storage of concentrated solar power. Energy Conversion and Management, 2020, 221, 113201.	4.4	34
33	Effect of pore hierarchy and pore size on the combined adsorption of SO2 and toluene in activated coke. Fuel, 2019, 257, 116090.	3.4	33
34	Green electrochemical modification of RVC foam electrode and improved H2O2 electrogeneration by applying pulsed current for pollutant removal. Environmental Science and Pollution Research, 2018, 25, 6015-6025.	2.7	32
35	Recent Advances in Hydroliquefaction of Biomass for Bio-oil Production Using In Situ Hydrogen Donors. Industrial & Engineering Chemistry Research, 2020, 59, 16987-17007.	1.8	32
36	Pulsed electrocatalysis enables the stabilization and activation of carbon-based catalysts towards H2O2 production. Applied Catalysis B: Environmental, 2022, 316, 121688.	10.8	32

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37	Nitrogen-Doped Microporous Carbons Derived from Pyridine Ligand-Based Metalâ€“Organic Complexes as High-Performance SO₂ Adsorption Sorbents. ACS Applied Materials & Interfaces, 2018, 10, 37407-37416.	4.0	31
38	The role of quinone cycle in Fe²⁺â€“H₂O₂ system in the regeneration of Fe²⁺. Environmental Technology (United Kingdom), 2017, 38, 1887-1896.	1.2	30
39	O-doped graphitic granular biochar enables pollutants removal via simultaneous H2O2 generation and activation in neutral Fe-free electro-Fenton process. Separation and Purification Technology, 2021, 262, 118327.	3.9	30
40	Highly efficient H2O2 electrogeneration from O2 reduction by pulsed current: Facilitated release of H2O2 from porous cathode to bulk. Journal of the Taiwan Institute of Chemical Engineers, 2018, 83, 59-63.	2.7	29
41	Catalytic activation preparation of nitrogen-doped hierarchical porous bio-char for efficient adsorption of dichloromethane and toluene. Journal of Analytical and Applied Pyrolysis, 2021, 156, 105150.	2.6	28
42	Janus graphite felt cathode dramatically enhance the H2O2 yield from O2 electroreduction by the hydrophilicity-hydrophobicity regulation. Chemosphere, 2021, 278, 130382.	4.2	28
43	N-Doped Porous Carbon Derived by Direct Carbonization of Metalâ€“Organic Complexes Crystal Materials for SO₂ Adsorption. Crystal Growth and Design, 2019, 19, 1973-1984.	1.4	27
44	Effect of char structures caused by varying the amount of FeCl₃ on the pore development during activation. RSC Advances, 2016, 6, 87478-87485.	1.7	26
45	â€œSelf-cleaningâ€•electrochemical regeneration of dye-loaded activated carbon. Electrochemistry Communications, 2019, 100, 85-89.	2.3	25
46	Pulsed electrocatalysis enables an efficient 2-electron oxygen reduction reaction for H₂O₂production. Journal of Materials Chemistry A, 2021, 9, 15948-15954.	5.2	25
47	Vapor deposition of aluminium oxide into N-rich mesoporous carbon framework as a reversible sulfur host for lithium-sulfur battery cathode. Nano Research, 2021, 14, 131-138.	5.8	24
48	Influence of a reagents addition strategy on the Fenton oxidation of rhodamine B: control of the competitive reaction of Â·OH. RSC Advances, 2016, 6, 108791-108800.	1.7	23
49	Pore Reorganization of Porous Carbon during Trace Calcium-Catalyzed Coal Activation for Adsorption Applications. Energy & Fuels, 2018, 32, 9191-9201.	2.5	21
50	A new insight into SO₂ low-temperature catalytic oxidation in porous carbon materials: non-dissociated O₂ molecule as oxidant. Catalysis Science and Technology, 2019, 9, 4327-4338.	2.1	20
51	Hydrothermal Co-Liquefaction of Lignite and Lignocellulosic Biomass with the Addition of Formic Acid: Study on Product Distribution, Characteristics, and Synergistic Effects. Industrial & Engineering Chemistry Research, 2020, 59, 21663-21675.	1.8	19
52	Fe3+-mediated coal-assisted water electrolysis for hydrogen production: Roles of mineral matter and oxygen-containing functional groups in coal. Energy, 2021, 220, 119677.	4.5	19
53	Natural template derived porous carbon nanoplate architectures with tunable pore configuration for a full-carbon sodium-ion capacitor. Journal of Materials Chemistry A, 2021, 9, 23607-23618.	5.2	19
54	Development of pomegranate-type CaCl2@C composites via a scalable one-pot pyrolysis strategy for solar-driven thermochemical heat storage. Energy Conversion and Management, 2020, 212, 112694.	4.4	18

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55	Energy-Saving Cathodic Hydrogen Production Enabled by Anodic Oxidation of Aqueous Sodium Sulfite Solutions. Energy & Fuels, 2020, 34, 9058-9063.	2.5	17
56	Investigate the Role of Different Inherent Minerals in PEM Based Coal Assisted Water Electrolysis Cell. Journal of the Electrochemical Society, 2019, 166, F949-F955.	1.3	16
57	Understanding the activity origin of oxygen-doped carbon materials in catalyzing the two-electron oxygen reduction reaction towards hydrogen peroxide generation. Journal of Colloid and Interface Science, 2022, 610, 934-943.	5.0	15
58	Preparation and characterization of activated carbons for SO2 adsorption from Taixi anthracite by physical activation with steam. Korean Journal of Chemical Engineering, 2011, 28, 2344-2350.	1.2	13
59	Effects of oxygen functional groups and FeCl₃ on the evolution of physico-chemical structure in activated carbon obtained from Jixi bituminous coal. RSC Advances, 2018, 8, 8569-8579.	1.7	13
60	In-situ catalytic conversion of coal pyrolysis gas to nanoporous carbon rods and superior sodium ion storage performance. Fuel, 2020, 281, 118782.	3.4	13
61	Influence of minerals with different porous structures on thermochemical heat storage performance of CaCl2-based composite sorbents. Solar Energy Materials and Solar Cells, 2022, 243, 111769.	3.0	12
62	Trace Na₂CO₃ Addition to Limestone Inducing High-Capacity SO₂ Capture. Environmental Science & Technology, 2017, 51, 12692-12698.	4.6	11
63	Activity origin of boron doped carbon cluster for thermal catalytic oxidation: Coupling effects of dopants and edges. Journal of Colloid and Interface Science, 2022, 613, 47-56.	5.0	11
64	Coal-Assisted Water Electrolysis for Hydrogen Production: Evolution of Carbon Structure in Different-Rank Coal. Energy & Fuels, 2021, 35, 3512-3520.	2.5	10
65	Introducing catalytic gasification into chemical activation for the conversion of natural coal into hierarchically porous carbons with broadened pore size for enhanced supercapacitive utilization. RSC Advances, 2018, 8, 37880-37889.	1.7	9
66	Compressing Two-Dimensional Graphite-Nanosheet-Supported CaO for Optimizing Porous Structures toward High-Volumetric-Performance Heat Storage. Energy & Fuels, 2021, 35, 10841-10849.	2.5	9
67	Mechanism investigation of carboxyl functional groups catalytic oxidation in coal assisted water electrolysis cell. Energy, 2021, 226, 120243.	4.5	9
68	Tuning porosity of coal-derived activated carbons for CO2 adsorption. Frontiers of Chemical Science and Engineering, 2022, 16, 1345-1354.	2.3	9
69	Computer-Free Group-Addition Method for pK_a Prediction of 73 Amines for CO₂ Capture. Journal of Chemical & Engineering Data, 2017, 62, 111-122.	1.0	8
70	One-step synergistic optimization of hierarchical pore topology and nitrogen dopants in activated coke for efficient catalytic oxidation of nitric oxide. Journal of Cleaner Production, 2022, 335, 130360.	4.6	8
71	Enhancement mechanism of SO2 removal with calcium hydroxide in the presence of NO2. Korean Journal of Chemical Engineering, 2012, 29, 263-269.	1.2	7
72	Scalable Production of EP/CaCl₂@C Multistage Coreâ€“Shell Sorbent for Solar-Driven Sorption Heat Storage Application. Energy & Fuels, 2021, 35, 6845-6857.	2.5	7

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73	Communicationâ€"Oxalic Acid Assisted Water Electrolysis for Less Energy-Intensive Electrochemical Hydrogen Production. Journal of the Electrochemical Society, 2020, 167, 134503.	1.3	7
74	Edge and defect sites in porous activated coke enable highly efficient carbon-assisted water electrolysis for energy-saving hydrogen production. Renewable Energy, 2022, 195, 283-292.	4.3	6
75	Oxidation of Zhundong subbituminous coal by Fe2+/H2O2 system under mild conditions. Korean Journal of Chemical Engineering, 2020, 37, 597-603.	1.2	4
76	Analysis of SO₂ Physisorption by Edge-Functionalized Nanoporous Carbons Using Grand Canonical Monte Carlo Methods and Density Functional Theory: Implications for SO₂ Removal. ACS Omega, 2021, 6, 33735-33746.	1.6	4
77	Transformation and catalytic effects of sodium during coal pyrolysis. International Journal of Energy Research, 2018, 42, 4131-4141.	2.2	3
78	Investigation of advanced NO oxidation process with the delivery of Â·OH from thermal decomposition of H₂O₂. Canadian Journal of Chemical Engineering, 2019, 97, 2419-2425.	0.9	3
79	A novel H2O2-persulfate hybrid system supported by electrochemically induced acidic and alkaline conditions for organic pollutant removal. Journal of Applied Electrochemistry, 2020, 50, 791-797.	1.5	2
80	Agglomeration of particles during coal combustion in multistage spouted fluidized tower. Korean Journal of Chemical Engineering, 2009, 26, 907-912.	1.2	1
81	A Low-Cost Metal-Free Graphite Felt Electrode for Coal-Assisted Water Electrolysis for Hydrogen Production. Journal of the Electrochemical Society, 2022, 169, 056516.	1.3	1
82	Preparation and Characterization of Activated Carbons for SO2 Adsorption from Taixi Anthracite. , 2011, , .		0