Qu Zhou

List of Publications by Year
in descending order

107 papers	3,379 citations	126907 33 h-index	168389 53 g-index
109 all docs	109 docs citations	109 times ranked	2056 citing authors

#	Article	IF	Citations
1	High sensitive and low-concentration sulfur dioxide (SO2) gas sensor application of heterostructure NiO-ZnO nanodisks. Sensors and Actuators B: Chemical, 2019, 298, 126870.	7.8	209
2	Pt nanoparticles decorated SnO2 nanoneedles for efficient CO gas sensing applications. Sensors and Actuators B: Chemical, 2018, 256, 656-664.	7.8	200
3	Highly sensitive carbon monoxide (CO) gas sensors based on Ni and Zn doped SnO2 nanomaterials. Ceramics International, 2018, 44, 4392-4399.	4.8	181
4	Adsorption of SF6 decomposition components over Pd (1─1─1): A density functional theory study. Applied Surface Science, 2019, 465, 172-179.	6.1	112
5	Gas sensing performances and mechanism at atomic level of Au-MoS2 microspheres. Applied Surface Science, 2019, 490, 124-136.	6.1	99
6	Adsorption of SO2 molecule on Ni-doped and Pd-doped graphene based on first-principle study. Applied Surface Science, 2020, 517, 146180.	6.1	99
7	Adsorption of SF6 decomposition gases (H2S, SO2, SOF2 and SO2F2) on Sc-doped MoS2 surface: A DFT study. Applied Surface Science, 2021, 549, 149271.	6.1	96
8	Competitive adsorption of SF6 decompositions on Ni-doped ZnO (100) surface: Computational and experimental study. Applied Surface Science, 2019, 479, 185-197.	6.1	93
9	Adsorption of SF6 decomposition components on Pt3-TiO2(1─0─1) surface: A DFT study. Applied Surface Science, 2018, 459, 242-248.	6.1	90
10	Fabrication and characterization of highly sensitive and selective sensors based on porous NiO nanodisks. Sensors and Actuators B: Chemical, 2018, 259, 604-615.	7.8	85
11	Hydrothermal Synthesis of Various Hierarchical ZnO Nanostructures and Their Methane Sensing Properties. Sensors, 2013, 13, 6171-6182.	3.8	78
12	Performance of Intrinsic and Modified Graphene for the Adsorption of H2S and CH4: A DFT Study. Nanomaterials, 2020, 10, 299.	4.1	78
13	The sensing mechanism of N-doped SWCNTs toward SF6 decomposition products: A first-principle study. Applied Surface Science, 2018, 440, 846-852.	6.1	72
14	Synthesis, Characterization and Enhanced Sensing Properties of a NiO/ZnO p─n Junctions Sensor for the SF6 Decomposition Byproducts SO2, SO2F2, and SOF2. Sensors, 2017, 17, 913.	3.8	69
15	Gas sensing mechanism of dissolved gases in transformer oil on Ag─MoS2 monolayer: A DFT study. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 118, 113947.	2.7	59
16	Volatile Organic Compounds Gas Sensors Based on Molybdenum Oxides: A Mini Review. Frontiers in Chemistry, 2020, 8, 339.	3.6	52
17	Adsorption of H2O molecule on TM (Au, Ag) doped-MoS2 monolayer: A first-principles study. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 113, 72-78.	2.7	51
18	The gas-sensing mechanism of Pt3 cluster doped SnS2 monolayer for SF6 decomposition: A DFT study. Applied Surface Science, 2022, 597, 153693.	6.1	49

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19	Electrospun ZnO–SnO2 Composite Nanofibers and Enhanced Sensing Properties to SF6 Decomposition Byproduct H2S. Frontiers in Chemistry, 2018, 6, 540.	3.6	48
20	Ag-modified hexagonal GaN monolayer as an innovative gas detector toward SF6 decomposed species: Insights from the first-principles computations. Applied Surface Science, 2022, 589, 153000.	6.1	46
21	Hydrothermal Synthesis of Hierarchical Ultrathin NiO Nanoflakes for High-Performance CH4 Sensing. Frontiers in Chemistry, 2018, 6, 194.	3.6	44
22	Recent Advances of SnO2-Based Sensors for Detecting Volatile Organic Compounds. Frontiers in Chemistry, 2020, 8, 321.	3.6	43
23	Hierarchically MoS2 nanospheres assembled from nanosheets for superior CO gas-sensing properties. Materials Research Bulletin, 2018, 101, 132-139.	5.2	41
24	A density functional theory study of the adsorption of Cl2, NH3, and NO2 on Ag3-doped WSe2 monolayers. Applied Surface Science, 2021, 563, 150329.	6.1	41
25	Characterization of Reduced Graphene Oxide (rGO)-Loaded SnO2 Nanocomposite and Applications in C2H2 Gas Detection. Applied Sciences (Switzerland), 2017, 7, 19.	2.5	40
26	Hydrothermal Synthesis of SnO2 Nanoneedle-Anchored NiO Microsphere and its Gas Sensing Performances. Nanomaterials, 2019, 9, 1015.	4.1	40
27	Adsorption behavior of Rh-doped MoS2 monolayer towards SO2, SOF2, SO2F2 based on DFT study. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 122, 114224.	2.7	40
28	Molecular Simulation on the Thermal Stability of Meta-Aramid Insulation Paper Fiber at Transformer Operating Temperature. Polymers, 2018, 10, 1348.	4.5	38
29	DFT-based study on H2S and SOF2 adsorption on Si-MoS2 monolayer. Results in Physics, 2019, 13, 102225.	4.1	38
30	Theoretical study on adsorption of SF6 decomposition gas in GIS gas cell based on intrinsic and Ni-doped MoTe2 monolayer. Applied Surface Science, 2022, 591, 153167.	6.1	37
31	Dissolved gas analysis in transformer oil using Sb-doped graphene: A DFT study. Applied Surface Science, 2020, 533, 147509.	6.1	36
32	SWCNTs-based MEMS gas sensor array and its pattern recognition based on deep belief networks of gases detection in oil-immersed transformers. Sensors and Actuators B: Chemical, 2020, 312, 127998.	7.8	36
33	Gas-sensing mechanism of Cr doped SnP3 monolayer to SF6 partial discharge decomposition components. Applied Surface Science, 2021, 546, 149084.	6.1	35
34	Recent Advances of SnO2-Based Sensors for Detecting Fault Characteristic Gases Extracted From Power Transformer Oil. Frontiers in Chemistry, 2018, 6, 364.	3.6	33
35	Detection of Water Content in Transformer Oil Using Multi Frequency Ultrasonic with PCA-GA-BPNN. Energies, 2019, 12, 1379.	3.1	31
36	Nanosheet-assembled flower-like SnO2 hierarchical structures with enhanced gas-sensing performance. Materials Letters, 2015, 161, 499-502.	2.6	30

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37	Experimental and theoretical studies of Zn-doped MoO3 hierarchical microflower with excellent sensing performances to carbon monoxide. Ceramics International, 2020, 46, 29222-29232.	4.8	30
38	Synthesis and Characterization of Highly Sensitive Hydrogen (H2) Sensing Device Based on Ag Doped SnO2 Nanospheres. Materials, 2018, 11, 492.	2.9	29
39	Hierarchical WO$_3$–NiO microflower for high sensitivity detection of SF$_6$ decomposition byproduct H$_2$S. Nanotechnology, 2020, 31, 215701.	2.6	29
40	Morphology controllable synthesis of hierarchical WO3 nanostructures and C2H2 sensing properties. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 109, 253-260.	2.7	28
41	Theoretical study of dissolved gas molecules in transformer oil adsorbed on intrinsic and Cr-doped InP3 monolayer. Applied Surface Science, 2021, 561, 149816.	6.1	27
42	Adsorption properties of InP3 monolayer toward SF6 decomposed gases: A DFT study. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 130, 114689.	2.7	26
43	Ni-CNT Chemical Sensor for SF6 Decomposition Components Detection: A Combined Experimental and Theoretical Study. Sensors, 2018, 18, 3493.	3.8	24
44	Superior Hydrogen Sensing Property of Porous NiO/SnO2 Nanofibers Synthesized via Carbonization. Nanomaterials, 2019, 9, 1250.	4.1	24
45	First-Principles Insight Into Au-Doped MoS2 for Sensing C2H6 and C2H4. Frontiers in Materials, 2020, 7, .	2.4	24
46	First-Principle Insight into Ga-Doped MoS2 for Sensing SO2, SOF2 and SO2F2. Nanomaterials, 2021, 11, 314.	4.1	24
47	Shape control of Co 3 O 4 micro-structures for high-performance gas sensor. Physica E: Low-Dimensional Systems and Nanostructures, 2018, 95, 121-124.	2.7	23
48	Cr doped MN (M = In, Ga) monolayer: A promising candidate to detect and scavenge SF6 decomposition components. Sensors and Actuators A: Physical, 2021, 330, 112854.	4.1	23
49	The Adsorption of H2 and C2H2 on Ge-Doped and Cr-Doped Graphene Structures: A DFT Study. Nanomaterials, 2021, 11, 231.	4.1	22
50	A Novel Measuring Method of Interfacial Tension of Transformer Oil Combined PSO Optimized SVM and Multi Frequency Ultrasonic Technology. IEEE Access, 2019, 7, 182624-182631.	4.2	21
51	Application of WO3 Hierarchical Structures for the Detection of Dissolved Gases in Transformer Oil: A Mini Review. Frontiers in Chemistry, 2020, 8, 188.	3.6	21
52	Low temperature carbon monoxide gas sensor based on Co3O4@TiO2 nanocomposites: Theoretical and experimental analysis. Journal of Alloys and Compounds, 2021, 882, 160710.	5.5	21
53	Molecular dynamics simulations of the effect of shape and size of SiO2 nanoparticle dopants on insulation paper cellulose. AIP Advances, 2016, 6, .	1.3	20
54	Adsorption properties of Cr modified GaN monolayer for H2, CO, C2H2 and C2H4. Chemical Physics, 2021, 550, 111304.	1.9	20

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55	Theoretical screening into Ag-Embedded HfS2 monolayers as gas sensor for detecting SF6 decomposition gases. Journal of Materials Research and Technology, 2022, 18, 1991-2000.	5.8	20
56	Hydrothermal Synthesis and Responsive Characteristics of Hierarchical Zinc Oxide Nanoflowers to Sulfur Dioxide. Journal of Nanotechnology, 2016, 2016, 1-6.	3.4	19
57	Ab Initio Study of SOF_2 and SO_2F_2 Adsorption on $Co\text{-}MoS_2$. ACS Omega, 2019, 4, 2517-2522.	3.5	19
58	A novel porous NiO nanosheet and its H2 sensing performance. Materials Letters, 2019, 245, 166-169.	2.6	19
59	Pristine and Ag decorated In2O3 (110): A gas-sensitive material to selective detect NO2 based on DFT study. Journal of Materials Research and Technology, 2022, 18, 4236-4247.	5.8	19
60	Identification of Power Transformer Winding Mechanical Fault Types Based on Online IFRA by Support Vector Machine. Energies, 2017, 10, 2022.	3.1	18
61	Improved Method to Obtain the Online Impulse Frequency Response Signature of a Power Transformer by Multi Scale Complex CWT. IEEE Access, 2018, 6, 48934-48945.	4.2	17
62	Synthesis of Cr2O3 Nanoparticle-Coated SnO2 Nanofibers and C2H2 Sensing Properties. Frontiers in Materials, 2019, 6, .	2.4	17
63	First-Principles Insight into Pd-Doped C3N Monolayer as a Promising Scavenger for NO, NO2 and SO2. Nanomaterials, 2021, 11, 1267.	4.1	17
64	The influence and mechanism of nano Al_2O_3 to the thermal stability of cellulose insulation paper. Zhongguo Kexue Jishu Kexue/Scientia Sinica Technologica, 2015, 45, 1167-1179.	0.5	16
65	Adsorption Performance of Noble-Metal Decorated InN Monolayer to CO: A Computational Study. IEEE Sensors Journal, 2021, 21, 26586-26593.	4.7	16
66	Fabrication and Characterization of Highly Sensitive Acetone Chemical Sensor Based on ZnO Nanoballs. Materials, 2017, 10, 799.	2.9	15
67	Adsorption mechanism of decomposition gas of SF6 circuit breaker on MOF-505 analogue. Vacuum, 2021, 183, 109816.	3.5	15
68	Adsorption of HCN on WSe2 monolayer doped with transition metal (Fe, Ag, Au, As and Mo). Sensors and Actuators A: Physical, 2022, 341, 113612.	4.1	15
69	Cr3-doped GaSe monolayer as an innovative sensor and scavenger for Cl2, NO, and SO2: A DFT study. Journal of Materials Research and Technology, 2022, 19, 4463-4472.	5.8	15
70	Improvement of thermal stability of insulation paper cellulose by modified polysiloxane grafting. Applied Physics Letters, 2016, 109, .	3.3	14
71	The novel 2D honeycomb-like NiO nanoplates assembled by nanosheet arrays with excellent gas sensing performance. Materials Letters, 2019, 255, 126523.	2.6	14
72	Research on Acetylene Sensing Properties and Mechanism of SnO_2 Based Chemical Gas Sensor Decorated with Sm_2O_3. Journal of Nanotechnology, 2015, 2015, 1-7.	3.4	13

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73	The Effect of PMMA Pore-Forming on Hydrogen Sensing Properties of Porous SnO_2 Thick Film Sensor. Science of Advanced Materials, 2017, 9, 1350-1355.	0.7	13
74	Adsorption of toxic and harmful gas CO on TM (Ni, Pd, Pt) doped MoTe2 monolayer: A DFT study. Surfaces and Interfaces, 2022, 31, 102111.	3.0	13
75	Facile Hydrothermal Synthesis and Enhanced Methane Sensing Properties of Pt-Decorated ZnO Nanosheets. Journal of Nanoscience and Nanotechnology, 2018, 18, 3335-3340.	0.9	12
76	Hydrothermal synthesis of hierarchical WO3/NiO porous microsphere with enhanced gas sensing performances. Materials Letters, 2020, 264, 127383.	2.6	12
77	First-Principles Study of Au-Doped InN Monolayer as Adsorbent and Gas Sensing Material for SF6 Decomposed Species. Nanomaterials, 2021, 11, 1708.	4.1	12
78	Synthesis of Hollow Nanofibers and Application on Detecting SF6 Decomposing Products. Frontiers in Materials, 2019, 6, .	2.4	10
79	DFT study on the selective adsorption properties of modified graphene for SF6 decompositions. IEEE Sensors Journal, 2020, , 1-1.	4.7	9
80	Hydrothermal Synthesis and Acetylene Sensing Properties of Variety Low Dimensional Zinc Oxide Nanostructures. Scientific World Journal, The, 2014, 2014, 1-8.	2.1	8
81	Adsorption behaviors of SF6 decomposition gas on Ni-doped ZIF-8:A first-principles study. Vacuum, 2021, 187, 110131.	3.5	8
82	Fabrication and Enhanced Acetylene Sensing Properties of PdO-Decorated SnO_2 Composites Chemical Sensor. Sensor Letters, 2016, 14, 1144-1149.	0.4	8
83	Hydrothermal Synthesis and Structural Characterization of NiO/SnO2Composites and Hydrogen Sensing Properties. Journal of Spectroscopy, 2015, 2015, 1-6.	1.3	7
84	Highly Sensitive Hydrogen Sulfide Sensor Based on Titanium Dioxide Nanomaterials. Journal of Nanoelectronics and Optoelectronics, 2018, 13, 1784-1788.	0.5	7
85	Gas Sensing Mechanism and Adsorption Properties of C2H4 and CO Molecules on the Ag3â€"HfSe2 Monolayer: A First-Principle Study. Frontiers in Chemistry, 2022, 10, .	3.6	6
86	A Novel Nondestructive Testing Method for Dielectric Loss Factor of Transformer Oil Based on Multifrequency Ultrasound. IEEE Transactions on Dielectrics and Electrical Insulation, 2022, 29, 1659-1665.	2.9	6
87	Adsorption and Sensing Properties of Dissolved Gas in Oil on Cr-Doped InN Monolayer: A Density Functional Theory Study. Chemosensors, 2022, 10, 30.	3.6	5
88	Evaluation of Breakdown Voltage and Water Content in Transformer Oil Using Multi Frequency Ultrasonic and Generalized Regression Neural Network. Journal of Nanoelectronics and Optoelectronics, 2021, 16, 387-394.	0.5	4
89	Novel Characteristic Quantities for Determining the Moisture State of Oil-Impregnated Cellulose Insulation Using the Extended Debye Model. IEEE Transactions on Dielectrics and Electrical Insulation, 2022, 29, 1087-1094.	2.9	4
90	Pt-doped SnO_2 nanoflower gas sensor detection characteristic for hydrocarbon gases dissolved in transformer oil. , 2016, , .		3

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91	Multi frequency ultrasonic detection of water content in transformer oil with GA-BPNN. , 2018, , .		3
92	Classification of Transformer Winding Deformation Fault Types by FRA Polar Plot and Multiple SVM Classifiers. , 2020, , .		3
93	Adsorption Characteristics of Carbon Monoxide on Ag- and Au-Doped HfS2 Monolayers Based on Density Functional Theory. Chemosensors, 2022, 10, 82.	3.6	3
94	Adsorption and Sensing Performances of Pristine and Au-Decorated Gallium Nitride Monolayer to Noxious Gas Molecules: A DFT Investigation. Frontiers in Chemistry, 2022, 10, .	3.6	3
95	Synthesis and Application of Ag2O Doped ZnO Based Sensor for Detecting CH4 Gas. , 2019, , .		2
96	Adsorption behavior of Cu-doped ZIF-67 for decomposition gases of organic insulator: A first-principles study. Journal of Physics: Conference Series, 2021, 1754, 012033.	0.4	2
97	Pd-GaSe and Pd3-GaSe Monolayers: Two Promising Candidates for Detecting Dissolved Gases in Transformer Oil. Chemosensors, 2022, 10, 236.	3.6	2
98	Novel Gas-Sensitive Material for Monitoring the Status of SF6 Gas-Insulated Switches: Gese Monolayer. Chemosensors, 2022, 10, 246.	3.6	2
99	Adsorption Mechanism of SO2 on Transition Metal (Pd, Pt, Au, Fe, Co and Mo)-Modified InP3 Monolayer. Chemosensors, 2022, 10, 279.	3.6	2
100	Synthesis of nanosheet-assembled porous NiO/ZnO microflowers through a facile one-step hydrothermal approach. Materials Letters, 2019, 256, 126649.	2.6	1
101	Enhanced ethanol sensing properties based on W-doped NiO flower-like microstructure: Beneficial improvement from loose to dense morphology. Materials Letters: X, 2021, 10, 100075.	0.7	1
102	Fabrication and Characterization of Hydrogen Sensor Based on Hierarchical Pine-Needle Shape SnO<SUB>2</SUB> Nanostructures. Sensor Letters, 2015, 13, 900-905.	0.4	1
103	Evaluating BDV in Transformer Oil Combined MFU and GRNN. , 2020, , .		1
104	Raman Spectra of SF6 Decomposed Characteristic Products Based on Density Functional Theory. Journal of Nanoelectronics and Optoelectronics, 2021, 16, 201-207.	0.5	0
105	Adsorption Behavior of SF6 Decomposed Components SO2, SOF2, SO2F2 on Rh-doped MoS2. , 2020, , .		0
106	Thermal Analysis of the Transformer Bushings Subjected to Harmonic Voltages and Currents. , 2020, , .		0
107	Modeling the Inverse Problem of Dielectric Response of Oil-impregnated-paper Insulation. , 2020, , .		0