

# Qu Zhou

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4291178/publications.pdf>

Version: 2024-02-01

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	Adsorption and Sensing Properties of Dissolved Gas in Oil on Cr-Doped InN Monolayer: A Density Functional Theory Study. <i>Chemosensors</i> , 2022, 10, 30.	3.6	5
2	Adsorption Characteristics of Carbon Monoxide on Ag- and Au-Doped HfS <sub>2</sub> Monolayers Based on Density Functional Theory. <i>Chemosensors</i> , 2022, 10, 82.	3.6	3
3	Theoretical screening into Ag-Embedded HfS <sub>2</sub> monolayers as gas sensor for detecting SF <sub>6</sub> decomposition gases. <i>Journal of Materials Research and Technology</i> , 2022, 18, 1991-2000.	5.8	20
4	Ag-modified hexagonal GaN monolayer as an innovative gas detector toward SF <sub>6</sub> decomposed species: Insights from the first-principles computations. <i>Applied Surface Science</i> , 2022, 589, 153000.	6.1	46
5	Theoretical study on adsorption of SF <sub>6</sub> decomposition gas in GIS gas cell based on intrinsic and Ni-doped MoTe <sub>2</sub> monolayer. <i>Applied Surface Science</i> , 2022, 591, 153167.	6.1	37
6	Novel Characteristic Quantities for Determining the Moisture State of Oil-Impregnated Cellulose Insulation Using the Extended Debye Model. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2022, 29, 1087-1094.	2.9	4
7	Pristine and Ag decorated In <sub>2</sub> O <sub>3</sub> (110): A gas-sensitive material to selective detect NO <sub>2</sub> based on DFT study. <i>Journal of Materials Research and Technology</i> , 2022, 18, 4236-4247.	5.8	19
8	Gas Sensing Mechanism and Adsorption Properties of C <sub>2</sub> H <sub>4</sub> and CO Molecules on the Ag <sub>3</sub> -HfSe <sub>2</sub> Monolayer: A First-Principle Study. <i>Frontiers in Chemistry</i> , 2022, 10, .	3.6	6
9	Adsorption and Sensing Performances of Pristine and Au-Decorated Gallium Nitride Monolayer to Noxious Gas Molecules: A DFT Investigation. <i>Frontiers in Chemistry</i> , 2022, 10, .	3.6	3
10	Adsorption of HCN on WSe <sub>2</sub> monolayer doped with transition metal (Fe, Ag, Au, As and Mo). <i>Sensors and Actuators A: Physical</i> , 2022, 341, 113612.	4.1	15
11	The gas-sensing mechanism of Pt <sub>3</sub> cluster doped SnS <sub>2</sub> monolayer for SF <sub>6</sub> decomposition: A DFT study. <i>Applied Surface Science</i> , 2022, 597, 153693.	6.1	49
12	Pd-GaSe and Pd <sub>3</sub> -GaSe Monolayers: Two Promising Candidates for Detecting Dissolved Gases in Transformer Oil. <i>Chemosensors</i> , 2022, 10, 236.	3.6	2
13	A Novel Nondestructive Testing Method for Dielectric Loss Factor of Transformer Oil Based on Multifrequency Ultrasound. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2022, 29, 1659-1665.	2.9	6
14	Novel Gas-Sensitive Material for Monitoring the Status of SF <sub>6</sub> Gas-Insulated Switches: Gese Monolayer. <i>Chemosensors</i> , 2022, 10, 246.	3.6	2
15	Adsorption Mechanism of SO <sub>2</sub> on Transition Metal (Pd, Pt, Au, Fe, Co and Mo)-Modified InP <sub>3</sub> Monolayer. <i>Chemosensors</i> , 2022, 10, 279.	3.6	2
16	Cr <sub>3</sub> -doped GaSe monolayer as an innovative sensor and scavenger for Cl <sub>2</sub> , NO, and SO <sub>2</sub> : A DFT study. <i>Journal of Materials Research and Technology</i> , 2022, 19, 4463-4472.	5.8	15
17	Adsorption of toxic and harmful gas CO on TM (Ni, Pd, Pt) doped MoTe <sub>2</sub> monolayer: A DFT study. <i>Surfaces and Interfaces</i> , 2022, 31, 102111.	3.0	13
18	Adsorption mechanism of decomposition gas of SF <sub>6</sub> circuit breaker on MOF-505 analogue. <i>Vacuum</i> , 2021, 183, 109816.	3.5	15

#	ARTICLE	IF	CITATIONS
19	The Adsorption of H <sub>2</sub> and C <sub>2</sub> H <sub>2</sub> on Ge-Doped and Cr-Doped Graphene Structures: A DFT Study. <i>Nanomaterials</i> , 2021, 11, 231.	4.1	22
20	Adsorption behavior of Cu-doped ZIF-67 for decomposition gases of organic insulator: A first-principles study. <i>Journal of Physics: Conference Series</i> , 2021, 1754, 012033.	0.4	2
21	Raman Spectra of SF <sub>6</sub> Decomposed Characteristic Products Based on Density Functional Theory. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2021, 16, 201-207.	0.5	0
22	Evaluation of Breakdown Voltage and Water Content in Transformer Oil Using Multi Frequency Ultrasonic and Generalized Regression Neural Network. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2021, 16, 387-394.	0.5	4
23	Gas-sensing mechanism of Cr doped SnP <sub>3</sub> monolayer to SF <sub>6</sub> partial discharge decomposition components. <i>Applied Surface Science</i> , 2021, 546, 149084.	6.1	35
24	Adsorption behaviors of SF <sub>6</sub> decomposition gas on Ni-doped ZIF-8: A first-principles study. <i>Vacuum</i> , 2021, 187, 110131.	3.5	8
25	First-Principles Insight into Pd-Doped C <sub>3</sub> N Monolayer as a Promising Scavenger for NO, NO <sub>2</sub> and SO <sub>2</sub> . <i>Nanomaterials</i> , 2021, 11, 1267.	4.1	17
26	Adsorption of SF <sub>6</sub> decomposition gases (H <sub>2</sub> S, SO <sub>2</sub> , SOF <sub>2</sub> and SO <sub>2</sub> F <sub>2</sub> ) on Sc-doped MoS <sub>2</sub> surface: A DFT study. <i>Applied Surface Science</i> , 2021, 549, 149271.	6.1	96
27	Enhanced ethanol sensing properties based on W-doped NiO flower-like microstructure: Beneficial improvement from loose to dense morphology. <i>Materials Letters: X</i> , 2021, 10, 100075.	0.7	1
28	Adsorption properties of InP <sub>3</sub> monolayer toward SF <sub>6</sub> decomposed gases: A DFT study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2021, 130, 114689.	2.7	26
29	First-Principles Study of Au-Doped InN Monolayer as Adsorbent and Gas Sensing Material for SF <sub>6</sub> Decomposed Species. <i>Nanomaterials</i> , 2021, 11, 1708.	4.1	12
30	Theoretical study of dissolved gas molecules in transformer oil adsorbed on intrinsic and Cr-doped InP <sub>3</sub> monolayer. <i>Applied Surface Science</i> , 2021, 561, 149816.	6.1	27
31	Adsorption properties of Cr modified GaN monolayer for H <sub>2</sub> , CO, C <sub>2</sub> H <sub>2</sub> and C <sub>2</sub> H <sub>4</sub> . <i>Chemical Physics</i> , 2021, 550, 111304.	1.9	20
32	Cr doped MN (M = In, Ga) monolayer: A promising candidate to detect and scavenge SF <sub>6</sub> decomposition components. <i>Sensors and Actuators A: Physical</i> , 2021, 330, 112854.	4.1	23
33	A density functional theory study of the adsorption of Cl <sub>2</sub> , NH <sub>3</sub> , and NO <sub>2</sub> on Ag <sub>3</sub> -doped WSe <sub>2</sub> monolayers. <i>Applied Surface Science</i> , 2021, 563, 150329.	6.1	41
34	Low temperature carbon monoxide gas sensor based on Co <sub>3</sub> O <sub>4</sub> @TiO <sub>2</sub> nanocomposites: Theoretical and experimental analysis. <i>Journal of Alloys and Compounds</i> , 2021, 882, 160710.	5.5	21
35	First-Principle Insight into Ga-Doped MoS <sub>2</sub> for Sensing SO <sub>2</sub> , SOF <sub>2</sub> and SO <sub>2</sub> F <sub>2</sub> . <i>Nanomaterials</i> , 2021, 11, 314.	4.1	24
36	Adsorption Performance of Noble-Metal Decorated InN Monolayer to CO: A Computational Study. <i>IEEE Sensors Journal</i> , 2021, 21, 26586-26593.	4.7	16

#	ARTICLE	IF	CITATIONS
37	Gas sensing mechanism of dissolved gases in transformer oil on Ag <sup>+</sup> MoS <sub>2</sub> monolayer: A DFT study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 118, 113947.	2.7	59
38	DFT study on the selective adsorption properties of modified graphene for SF <sub>6</sub> decompositions. <i>IEEE Sensors Journal</i> , 2020, , 1-1.	4.7	9
39	Dissolved gas analysis in transformer oil using Sb-doped graphene: A DFT study. <i>Applied Surface Science</i> , 2020, 533, 147509.	6.1	36
40	Experimental and theoretical studies of Zn-doped MoO <sub>3</sub> hierarchical microflower with excellent sensing performances to carbon monoxide. <i>Ceramics International</i> , 2020, 46, 29222-29232.	4.8	30
41	Volatile Organic Compounds Gas Sensors Based on Molybdenum Oxides: A Mini Review. <i>Frontiers in Chemistry</i> , 2020, 8, 339.	3.6	52
42	Recent Advances of SnO <sub>2</sub> -Based Sensors for Detecting Volatile Organic Compounds. <i>Frontiers in Chemistry</i> , 2020, 8, 321.	3.6	43
43	Adsorption of SO <sub>2</sub> molecule on Ni-doped and Pd-doped graphene based on first-principle study. <i>Applied Surface Science</i> , 2020, 517, 146180.	6.1	99
44	Application of WO <sub>3</sub> Hierarchical Structures for the Detection of Dissolved Gases in Transformer Oil: A Mini Review. <i>Frontiers in Chemistry</i> , 2020, 8, 188.	3.6	21
45	Adsorption behavior of Rh-doped MoS <sub>2</sub> monolayer towards SO <sub>2</sub> , SOF <sub>2</sub> , SO <sub>2</sub> F <sub>2</sub> based on DFT study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2020, 122, 114224.	2.7	40
46	Hierarchical WO <sub>3</sub> /NiO microflower for high sensitivity detection of SF <sub>6</sub> decomposition byproduct H <sub>2</sub> S. <i>Nanotechnology</i> , 2020, 31, 215701.	2.6	29
47	Performance of Intrinsic and Modified Graphene for the Adsorption of H <sub>2</sub> S and CH <sub>4</sub> : A DFT Study. <i>Nanomaterials</i> , 2020, 10, 299.	4.1	78
48	First-Principles Insight Into Au-Doped MoS <sub>2</sub> for Sensing C <sub>2</sub> H <sub>6</sub> and C <sub>2</sub> H <sub>4</sub> . <i>Frontiers in Materials</i> , 2020, 7, .	2.4	24
49	Hydrothermal synthesis of hierarchical WO <sub>3</sub> /NiO porous microsphere with enhanced gas sensing performances. <i>Materials Letters</i> , 2020, 264, 127383.	2.6	12
50	SWCNTs-based MEMS gas sensor array and its pattern recognition based on deep belief networks of gases detection in oil-immersed transformers. <i>Sensors and Actuators B: Chemical</i> , 2020, 312, 127998.	7.8	36
51	Adsorption Behavior of SF <sub>6</sub> Decomposed Components SO <sub>2</sub> , SOF <sub>2</sub> , SO <sub>2</sub> F <sub>2</sub> on Rh-doped MoS <sub>2</sub> . , 2020, , .		0
52	Thermal Analysis of the Transformer Bushings Subjected to Harmonic Voltages and Currents. , 2020, , .		0
53	Classification of Transformer Winding Deformation Fault Types by FRA Polar Plot and Multiple SVM Classifiers. , 2020, , .		3
54	Modeling the Inverse Problem of Dielectric Response of Oil-impregnated-paper Insulation. , 2020, , .		0

#	ARTICLE	IF	CITATIONS
55	Evaluating BDV in Transformer Oil Combined MFU and GRNN. , 2020, , .		1
56	The novel 2D honeycomb-like NiO nanoplates assembled by nanosheet arrays with excellent gas sensing performance. <i>Materials Letters</i> , 2019, 255, 126523.	2.6	14
57	Hydrothermal Synthesis of SnO <sub>2</sub> Nanoneedle-Anchored NiO Microsphere and its Gas Sensing Performances. <i>Nanomaterials</i> , 2019, 9, 1015.	4.1	40
58	Synthesis of Hollow Nanofibers and Application on Detecting SF <sub>6</sub> Decomposing Products. <i>Frontiers in Materials</i> , 2019, 6, .	2.4	10
59	High sensitive and low-concentration sulfur dioxide (SO <sub>2</sub> ) gas sensor application of heterostructure NiO-ZnO nanodisks. <i>Sensors and Actuators B: Chemical</i> , 2019, 298, 126870.	7.8	209
60	Synthesis and Application of Ag <sub>2</sub> O Doped ZnO Based Sensor for Detecting CH <sub>4</sub> Gas. , 2019, , .		2
61	Synthesis of nanosheet-assembled porous NiO/ZnO microflowers through a facile one-step hydrothermal approach. <i>Materials Letters</i> , 2019, 256, 126649.	2.6	1
62	Superior Hydrogen Sensing Property of Porous NiO/SnO <sub>2</sub> Nanofibers Synthesized via Carbonization. <i>Nanomaterials</i> , 2019, 9, 1250.	4.1	24
63	Ab Initio Study of SOF <sub>2</sub> and SO <sub>2</sub> F <sub>2</sub> Adsorption on Co-MoS <sub>2</sub> . <i>ACS Omega</i> , 2019, 4, 2517-2522.	3.5	19
64	Gas sensing performances and mechanism at atomic level of Au-MoS <sub>2</sub> microspheres. <i>Applied Surface Science</i> , 2019, 490, 124-136.	6.1	99
65	Adsorption of H <sub>2</sub> O molecule on TM (Au, Ag) doped-MoS <sub>2</sub> monolayer: A first-principles study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2019, 113, 72-78.	2.7	51
66	Detection of Water Content in Transformer Oil Using Multi Frequency Ultrasonic with PCA-GA-BPNN. <i>Energies</i> , 2019, 12, 1379.	3.1	31
67	A novel porous NiO nanosheet and its H <sub>2</sub> sensing performance. <i>Materials Letters</i> , 2019, 245, 166-169.	2.6	19
68	DFT-based study on H <sub>2</sub> S and SOF <sub>2</sub> adsorption on Si-MoS <sub>2</sub> monolayer. <i>Results in Physics</i> , 2019, 13, 102225.	4.1	38
69	Competitive adsorption of SF <sub>6</sub> decompositions on Ni-doped ZnO (100) surface: Computational and experimental study. <i>Applied Surface Science</i> , 2019, 479, 185-197.	6.1	93
70	A Novel Measuring Method of Interfacial Tension of Transformer Oil Combined PSO Optimized SVM and Multi Frequency Ultrasonic Technology. <i>IEEE Access</i> , 2019, 7, 182624-182631.	4.2	21
71	Synthesis of Cr <sub>2</sub> O <sub>3</sub> Nanoparticle-Coated SnO <sub>2</sub> Nanofibers and C <sub>2</sub> H <sub>2</sub> Sensing Properties. <i>Frontiers in Materials</i> , 2019, 6, .	2.4	17
72	Adsorption of SF <sub>6</sub> decomposition components over Pd (111): A density functional theory study. <i>Applied Surface Science</i> , 2019, 465, 172-179.	6.1	112

#	ARTICLE	IF	CITATIONS
73	Morphology controllable synthesis of hierarchical WO <sub>3</sub> nanostructures and C <sub>2</sub> H <sub>2</sub> sensing properties. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2019, 109, 253-260.	2.7	28
74	Hierarchically MoS <sub>2</sub> nanospheres assembled from nanosheets for superior CO gas-sensing properties. <i>Materials Research Bulletin</i> , 2018, 101, 132-139.	5.2	41
75	Highly sensitive carbon monoxide (CO) gas sensors based on Ni and Zn doped SnO <sub>2</sub> nanomaterials. <i>Ceramics International</i> , 2018, 44, 4392-4399.	4.8	181
76	The sensing mechanism of N-doped SWCNTs toward SF <sub>6</sub> decomposition products: A first-principle study. <i>Applied Surface Science</i> , 2018, 440, 846-852.	6.1	72
77	Shape control of Co <sub>3</sub> O <sub>4</sub> micro-structures for high-performance gas sensor. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2018, 95, 121-124.	2.7	23
78	Pt nanoparticles decorated SnO <sub>2</sub> nanoneedles for efficient CO gas sensing applications. <i>Sensors and Actuators B: Chemical</i> , 2018, 256, 656-664.	7.8	200
79	Fabrication and characterization of highly sensitive and selective sensors based on porous NiO nanodisks. <i>Sensors and Actuators B: Chemical</i> , 2018, 259, 604-615.	7.8	85
80	Multi frequency ultrasonic detection of water content in transformer oil with GA-BPNN. , 2018, , .		3
81	Molecular Simulation on the Thermal Stability of Meta-Aramid Insulation Paper Fiber at Transformer Operating Temperature. <i>Polymers</i> , 2018, 10, 1348.	4.5	38
82	Improved Method to Obtain the Online Impulse Frequency Response Signature of a Power Transformer by Multi Scale Complex CWT. <i>IEEE Access</i> , 2018, 6, 48934-48945.	4.2	17
83	Electrospun ZnO@SnO <sub>2</sub> Composite Nanofibers and Enhanced Sensing Properties to SF <sub>6</sub> Decomposition Byproduct H <sub>2</sub> S. <i>Frontiers in Chemistry</i> , 2018, 6, 540.	3.6	48
84	Ni-CNT Chemical Sensor for SF <sub>6</sub> Decomposition Components Detection: A Combined Experimental and Theoretical Study. <i>Sensors</i> , 2018, 18, 3493.	3.8	24
85	Recent Advances of SnO <sub>2</sub> -Based Sensors for Detecting Fault Characteristic Gases Extracted From Power Transformer Oil. <i>Frontiers in Chemistry</i> , 2018, 6, 364.	3.6	33
86	Adsorption of SF <sub>6</sub> decomposition components on Pt <sub>3</sub> -TiO <sub>2</sub> (111) surface: A DFT study. <i>Applied Surface Science</i> , 2018, 459, 242-248.	6.1	90
87	Synthesis and Characterization of Highly Sensitive Hydrogen (H <sub>2</sub> ) Sensing Device Based on Ag Doped SnO <sub>2</sub> Nanospheres. <i>Materials</i> , 2018, 11, 492.	2.9	29
88	Hydrothermal Synthesis of Hierarchical Ultrathin NiO Nanoflakes for High-Performance CH <sub>4</sub> Sensing. <i>Frontiers in Chemistry</i> , 2018, 6, 194.	3.6	44
89	Facile Hydrothermal Synthesis and Enhanced Methane Sensing Properties of Pt-Decorated ZnO Nanosheets. <i>Journal of Nanoscience and Nanotechnology</i> , 2018, 18, 3335-3340.	0.9	12
90	Highly Sensitive Hydrogen Sulfide Sensor Based on Titanium Dioxide Nanomaterials. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2018, 13, 1784-1788.	0.5	7

#	ARTICLE	IF	CITATIONS
91	Fabrication and Characterization of Highly Sensitive Acetone Chemical Sensor Based on ZnO Nanoballs. <i>Materials</i> , 2017, 10, 799.	2.9	15
92	Synthesis, Characterization and Enhanced Sensing Properties of a NiO/ZnO p-n Junctions Sensor for the SF6 Decomposition Byproducts SO2, SO2F2, and SOF2. <i>Sensors</i> , 2017, 17, 913.	3.8	69
93	Characterization of Reduced Graphene Oxide (rGO)-Loaded SnO2 Nanocomposite and Applications in C2H2 Gas Detection. <i>Applied Sciences (Switzerland)</i> , 2017, 7, 19.	2.5	40
94	Identification of Power Transformer Winding Mechanical Fault Types Based on Online IFRA by Support Vector Machine. <i>Energies</i> , 2017, 10, 2022.	3.1	18
95	The Effect of PMMA Pore-Forming on Hydrogen Sensing Properties of Porous SnO <sub>2</sub> Thick Film Sensor. <i>Science of Advanced Materials</i> , 2017, 9, 1350-1355.	0.7	13
96	Hydrothermal Synthesis and Responsive Characteristics of Hierarchical Zinc Oxide Nanoflowers to Sulfur Dioxide. <i>Journal of Nanotechnology</i> , 2016, 2016, 1-6.	3.4	19
97	Molecular dynamics simulations of the effect of shape and size of SiO <sub>2</sub> nanoparticle dopants on insulation paper cellulose. <i>AIP Advances</i> , 2016, 6, .	1.3	20
98	Improvement of thermal stability of insulation paper cellulose by modified polysiloxane grafting. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	14
99	Pt-doped SnO <sub>2</sub> nanoflower gas sensor detection characteristic for hydrocarbon gases dissolved in transformer oil. , 2016, .		3
100	Fabrication and Enhanced Acetylene Sensing Properties of PdO-Decorated SnO <sub>2</sub> Composites Chemical Sensor. <i>Sensor Letters</i> , 2016, 14, 1144-1149.	0.4	8
101	Hydrothermal Synthesis and Structural Characterization of NiO/SnO <sub>2</sub> Composites and Hydrogen Sensing Properties. <i>Journal of Spectroscopy</i> , 2015, 2015, 1-6.	1.3	7
102	Research on Acetylene Sensing Properties and Mechanism of SnO <sub>2</sub> -Based Chemical Gas Sensor Decorated with Sm <sub>2</sub> O <sub>3</sub> . <i>Journal of Nanotechnology</i> , 2015, 2015, 1-7.	3.4	13
103	Nanosheet-assembled flower-like SnO <sub>2</sub> hierarchical structures with enhanced gas-sensing performance. <i>Materials Letters</i> , 2015, 161, 499-502.	2.6	30
104	Fabrication and Characterization of Hydrogen Sensor Based on Hierarchical Pine-Needle Shape SnO <sub>2</sub> Nanostructures. <i>Sensor Letters</i> , 2015, 13, 900-905.	0.4	1
105	The influence and mechanism of nano Al <sub>2</sub> O <sub>3</sub> to the thermal stability of cellulose insulation paper. <i>Zhongguo Kexue Jishu Kexue/Scientia Sinica Technologica</i> , 2015, 45, 1167-1179.	0.5	16
106	Hydrothermal Synthesis and Acetylene Sensing Properties of Variety Low Dimensional Zinc Oxide Nanostructures. <i>Scientific World Journal</i> , The, 2014, 2014, 1-8.	2.1	8
107	Hydrothermal Synthesis of Various Hierarchical ZnO Nanostructures and Their Methane Sensing Properties. <i>Sensors</i> , 2013, 13, 6171-6182.	3.8	78