Dachang Chen

List of Publications by Year
in descending order

72 **papers**	2,868 **citations**	136740 32 **h-index**	182168 51 **g-index**
72 **all docs**	72 **docs citations**	72 **times ranked**	1382 **citing authors**

#	ARTICLE	IF	CITATIONS
1	First-principles insight into Ni-doped InN monolayer as a noxious gases scavenger. Applied Surface Science, 2019, 494, 859-866.	3.1	250
2	Pristine and Cu decorated hexagonal InN monolayer, a promising candidate to detect and scavenge SF6 decompositions based on first-principle study. Journal of Hazardous Materials, 2019, 363, 346-357.	6.5	146
3	Decomposition Properties of C_4F_7N/N_2 Gas Mixture: An Environmentally Friendly Gas to Replace SF_6. Industrial & Engineering Chemistry Research, 2018, 57, 5173-5182.	1.8	126
4	Pt & Pd decorated CNT as a workable media for SOF2 sensing: A DFT study. Applied Surface Science, 2019, 471, 335-341.	3.1	125
5	Adsorption mechanism of SF6 decomposed species on pyridine-like PtN3 embedded CNT: A DFT study. Applied Surface Science, 2018, 447, 594-598.	3.1	110
6	Noble metal (Pt or Au)-doped monolayer MoS2 as a promising adsorbent and gas-sensing material to SO2, SOF2 and SO2F2: a DFT study. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	105
7	Dissolved gas analysis in transformer oil using Pd catalyst decorated MoSe2 monolayer: A first-principles theory. Sustainable Materials and Technologies, 2019, 20, e00094.	1.7	99
8	A First-Principles Study of the SF_6 Decomposed Products Adsorbed Over Defective WS_2 Monolayer as Promising Gas Sensing Device. IEEE Transactions on Device and Materials Reliability, 2019, 19, 473-483.	1.5	90
9	Assessment on the toxicity and application risk of C4F7N: A new SF6 alternative gas. Journal of Hazardous Materials, 2019, 368, 653-660.	6.5	78
10	Adsorption behavior of COF2 and CF4 gas on the MoS2 monolayer doped with Ni: A first-principles study. Applied Surface Science, 2018, 443, 274-279.	3.1	70
11	Theoretical Study of Monolayer $PtSe_2$ as Outstanding Gas Sensor to Detect SF_6 Decompositions. IEEE Electron Device Letters, 2018, 39, 1405-1408.	2.2	67
12	Dissolved Gas Analysis in Transformer Oil Using Pt-Doped WSe_2 Monolayer Based on First Principles Method. IEEE Access, 2019, 7, 72012-72019.	2.6	58
13	Exploring single atom catalysts of transition-metal doped phosphorus carbide monolayer for HER: A first-principles study. Journal of Energy Chemistry, 2021, 52, 155-162.	7.1	54
14	Adsorption performance of Rh decorated SWCNT upon SF 6 decomposed components based on DFT method. Applied Surface Science, 2017, 420, 825-832.	3.1	53
15	Insight into Prolonged Cycling Life of 4 V All‐Solid‐State Polymer Batteries by a High‐Voltage Stable Binder. Advanced Energy Materials, 2021, 11, .	10.2	52
16	Detecting Decompositions of Sulfur Hexafluoride Using MoS_2 Monolayer as Gas Sensor. IEEE Sensors Journal, 2019, 19, 39-46.	2.4	51
17	Computational screening of homo and hetero transition metal dimer catalysts for reduction of CO_2 to C_2 products with high activity and low limiting potential. Journal of Materials Chemistry A, 2020, 8, 21241-21254.	5.2	51
18	Machine-learning-accelerated discovery of single-atom catalysts based on bidirectional activation mechanism. Chem Catalysis, 2021, 1, 183-195.	2.9	50

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19	A triple atom catalyst with ultrahigh loading potential for nitrogen electrochemical reduction. Journal of Materials Chemistry A, 2020, 8, 15086-15093.	5.2	48
20	Density functional theory study of small Ag cluster adsorbed on graphyne. Applied Surface Science, 2019, 465, 93-102.	3.1	46
21	Dissociative adsorption of environment-friendly insulating medium C3F7CN on Cu(111) and Al(111) surface: A theoretical evaluation. Applied Surface Science, 2018, 434, 549-560.	3.1	45
22	Experimental study on the partial discharge and AC breakdown properties of C_4F_7N/CO_2 mixture. High Voltage, 2019, 4, 12-17.	2.7	45
23	Study on the thermal decomposition characteristics of C_4F_7N–CO_2 mixture as eco‐friendly gas‐insulating medium. High Voltage, 2020, 5, 46-52.	2.7	40
24	Single Ni atom doped WS2 monolayer as sensing substrate for dissolved gases in transformer oil: A first-principles study. Applied Surface Science, 2022, 579, 152141.	3.1	40
25	Transition metal–N$_4$ embedded black phosphorus carbide as a high-performance bifunctional electrocatalyst for ORR/OER. Nanoscale, 2020, 12, 18721-18732.	2.8	39
26	Using Pd-Doped γ-Graphyne to Detect Dissolved Gases in Transformer Oil: A Density Functional Theory Investigation. Nanomaterials, 2019, 9, 1490.	1.9	37
27	Reactive molecular dynamics study of the decomposition mechanism of the environmentally friendly insulating medium C_3F_7CN. RSC Advances, 2017, 7, 50663-50671.	1.7	36
28	Borophene: a promising adsorbent material with strong ability and capacity for SO2 adsorption. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	36
29	The adsorption performance of harmful gas on Cu doped WS2: A first-principle study. Materials Today Communications, 2021, 28, 102488.	0.9	36
30	SnO2 nanoparticles based highly sensitive gas sensor for detection of C4F7N: A new eco-friendly gas insulating medium. Journal of Hazardous Materials, 2022, 422, 126882.	6.5	34
31	Understanding of SF 6 decompositions adsorbed on cobalt-doped SWCNT: A DFT study. Applied Surface Science, 2017, 420, 371-382.	3.1	32
32	Adsorption and dissociation mechanism of SO2 and H2S on Pt decorated graphene: a DFT-D3 study. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	32
33	Study on the thermal interaction mechanism between C4F7N-N2 and copper, aluminum. Corrosion Science, 2019, 153, 32-46.	3.0	32
34	Adsorption behaviour of SO_2 and SOF_2 gas on Rh-doped BNNT: a DFT study. Molecular Physics, 2020, 118, e1580394.	0.8	32
35	Theoretical study on the interaction between C5-PFK and Al (1 1 1), Ag (1 1 1): A comparative study. Applied Surface Science, 2019, 464, 586-596.	3.1	31
36	Electronic structure and H2S adsorption property of Pt3 cluster decorated (8, 0) SWCNT. Applied Surface Science, 2018, 428, 82-88.	3.1	30

#	ARTICLE	IF	CITATIONS
37	Study on the Dielectric Properties of C_4F_7N/N_2 Mixture Under Highly Non-Uniform Electric Field. IEEE Access, 2018, 6, 42868-42876.	2.6	30
38	Theoretical study of the interaction of SF6 molecule on Ag(1â€¯1â€¯1) surfaces: A DFT study. Applied Surface Science, 2018, 457, 745-751.	3.1	30
39	Sensing properties of Ni-doped boron nitride nanotube to SF6 decomposed components: A DFT study. AIP Advances, 2019, 9, .	0.6	30
40	Influence regularity of O_2 on dielectric and decomposition properties of C_4F_7Nâ€“CO_2 â€“O_2 gas mixture for mediumâ€voltage equipment. High Voltage, 2020, 5, 256-263.	2.7	30
41	Using Single-Layer HfS_2 as Prospective Sensing Device Toward Typical Partial Discharge Gas in SF_6-Based Gas-Insulated Switchgear. IEEE Transactions on Electron Devices, 2019, 66, 689-695.	1.6	26
42	Insight Into the Compatibility Between $C_6F_{12}O$ and Metal Materials: Experiment and Theory. IEEE Access, 2018, 6, 58154-58160.	2.6	25
43	Sulfur dioxide adsorbed on pristine and Au dimer decorated Î³-graphyne: A density functional theory study. Applied Surface Science, 2018, 458, 781-789.	3.1	25
44	Geometric structure and SOF2 adsorption behavior of Ptn (n=1-4) clustered (8, 0) single-walled CNT using density functional theory. Journal of Fluorine Chemistry, 2018, 211, 148-153.	0.9	25
45	Theoretical study on the interaction between SF6 molecule and BaTiO3(0 0 1) surface: A DFT study. Applied Surface Science, 2019, 483, 409-416.	3.1	25
46	High Selective SO_2 Gas Sensor Based on Monolayer η-AsSb to Detect SF_6 Decompositions. IEEE Sensors Journal, 2019, 19, 1215-1223.	2.4	21
47	High selectivity n-type InSe monolayer toward decomposition products of sulfur hexafluoride: A density functional theory study. Applied Surface Science, 2019, 479, 852-862.	3.1	20
48	Theoretical evaluation of the interaction between C5-PFK molecule and Cu (1 1 1). Journal of Fluorine Chemistry, 2018, 208, 48-54.	0.9	19
49	Insights into the interaction between C4F7N decomposition products and Cu (1 1 1), Ag (1 1 1) surface. Journal of Fluorine Chemistry, 2018, 213, 24-30.	0.9	19
50	Investigation of Gas-Sensing Property of Acid-Deposited Polyaniline Thin-Film Sensors for Detecting H2S and SO2. Sensors, 2016, 16, 1889.	2.1	18
51	Interaction Mechanism between the C_4F_7Nâ€“CO_2 Gas Mixture and the EPDM Seal Ring. ACS Omega, 2020, 5, 5911-5920.	1.6	17
52	Adsorption and decomposition of SF6 molecule on Î±-Al2O3 (0 0 0 1) surface: a DFT study. Adsorption, 2019, 25, 1625-1632.	1.4	16
53	Detecting decompositions of sulfur hexafluoride using reduced graphene oxide decorated with Pt nanoparticles. Journal Physics D: Applied Physics, 2018, 51, 185304.	1.3	15
54	Repairing the N-vacancy in an InN monolayer using NO molecules: a first-principles study. Nanoscale Advances, 2019, 1, 2003-2008.	2.2	14

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55	Insight into the compatibility between C4F7N and silver: Experiment and theory. Journal of Physics and Chemistry of Solids, 2019, 126, 105-111.	1.9	14
56	Simulation and experiment on the catalytic degradation of high-concentration SF6 on TiO2 surface under UV light. AIP Advances, 2018, 8, .	0.6	13
57	Theoretical study of SF6 decomposition on the MoS2 monolayer doped with Ag, Ni, Au, Pt: a first-principles study. Adsorption, 2019, 25, 225-233.	1.4	12
58	Thermal compatibility properties of C6F12O-air gas mixture with metal materials. AIP Advances, 2019, 9, .	0.6	12
59	Facile Fabrication of Au Nanoparticles/Tin Oxide/Reduced Graphene Oxide Ternary Nanocomposite and Its High-Performance SF6 Decomposition Components Sensing. Frontiers in Chemistry, 2019, 7, 476.	1.8	11
60	Different doping of penta-graphene as adsorbent and gas sensing material for scavenging and detecting SF6 decomposed species. Sustainable Materials and Technologies, 2019, 21, e00100.	1.7	11
61	Two-dimensional square metal organic framework as promising cathode material for lithium-sulfur battery with high theoretical energy density. Journal of Colloid and Interface Science, 2022, 613, 435-446.	5.0	11
62	A Promising Gas Sensor Based on Monolayer $alpha $-SbN to Detect SO_2 Among SF_6 Decompositions. , 2018, 2, 1-4.		10
63	Adsorption of SF_6 Decomposed Products over ZnO(101Ì…0): Effects of O and Zn Vacancies. ACS Omega, 2018, 3, 18739-18752.	1.6	9
64	Adsorption Behavior of Î³-Al$_2$O$_3$ Toward Heptafluoroisobutyronitrile and its Decompositions: Theoretical and Experimental Insights. IEEE Access, 2020, 8, 36741-36748.	2.6	9
65	Influence of Oxygen on the Thermal Decomposition Properties of C$_4$F$_7$Nâ€"N$_2$â€"O$_2$ as an Eco-Friendly Gas Insulating Medium. ACS Omega, 2019, 4, 18616-18626.	1.6	8
66	Thermal decomposition properties of fluoronitriles-N2 gas mixture as alternative gas for SF6. Journal of Fluorine Chemistry, 2020, 229, 109434.	0.9	8
67	Adsorption of SF6 Decomposed Products on ZnO-Modified C3N: A Theoretical Study. Nanoscale Research Letters, 2020, 15, 186.	3.1	8
68	Transition-metal-free boron doped SbN monolayer for N2 adsorption and reduction to NH3: A first-principles study. Journal of Colloid and Interface Science, 2022, 607, 1551-1561.	5.0	8
69	Real-Time Measurement of SO_2, H_2S, and CS_2 Mixed Gases Using Ultraviolet Spectroscopy and a Least Squares Algorithm. Applied Spectroscopy, 2021, 75, 265-273.	1.2	5
70	Mono- and Bi-Molecular Adsorption of SF6 Decomposition Products on Pt Doped Graphene: A First-Principles Investigation. Applied Sciences (Switzerland), 2018, 8, 2010.	1.3	4
71	Theoretical study on the interaction of heptafluoro-iso-butyronitrile decomposition products with Al (1 1 1). Molecular Physics, 2019, 117, 218-227.	0.8	4
72	Detecting decompositions of sulfur hexafluoride using Ge modified SWCNT: a theoretical evaluation. , 2018, , .		0