

Hao Cui

List of Publications by Year in descending order

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71
papers

3,564
citations

168829

31
h-index

150775

59
g-index

72
all docs

72
docs citations

72
times ranked

1316
citing authors

#	ARTICLE	IF	CITATIONS
1	First-principles screening in Cu-embedded PtSe ₂ monolayer as a potential gas sensor upon CO and HCHO in dry-type transformers. Computational and Theoretical Chemistry, 2022, 1209, 113586.	1.1	6
2	Janus PtSSe monolayer: A novel strain-modulated buddy for SOF ₂ sensing. Vacuum, 2022, 198, 110887.	1.6	14
3	Adsorption of H ₂ and C ₂ H ₂ onto Rh-decorated InN monolayer and the effect of applied electric field. Molecular Physics, 2022, 120, .	0.8	3
4	Difluorobenzylamine Treatment of Organolead Halide Perovskite Boosts the High Efficiency and Stability of Photovoltaic Cells. ACS Applied Materials & Interfaces, 2022, 14, 11388-11397.	4.0	11
5	Adsorption Behavior of Pd-Doped PtS ₂ Monolayer Upon SF ₆ Decomposed Species and the Effect of Applied Electric Field. IEEE Sensors Journal, 2022, 22, 6764-6771.	2.4	22
6	Pd-doped PtSe ₂ monolayer with strain-modulated effect for sensing SF ₆ decomposed species: a first-principles study. Journal of Materials Research and Technology, 2022, 18, 629-636.	2.6	28
7	First-principles screening upon Janus PtXY (X, Y = S, Se and Te) monolayer under applied biaxial strains and electric fields. Journal of Materials Research and Technology, 2022, 18, 1218-1229.	2.6	5
8	First-principles investigation of Pt-doped MoTe ₂ for detecting characteristic air decomposition components in air insulation switchgear. Computational and Theoretical Chemistry, 2022, 1214, 113796.	1.1	10
9	Favorable sensing property of Pt-doped Janus HfSSe monolayer upon H ₂ S and SO ₂ : A first-principles theory. Journal of Materials Research and Technology, 2022, , .	2.6	3
10	Geometric, Electronic and Optical Properties of Pt-Doped C ₃ N Monolayer Upon NO _x Adsorption: A DFT Study. IEEE Sensors Journal, 2021, 21, 3602-3608.	2.4	43
11	Pd-doped C ₃ N monolayer: A promising low-temperature and high-activity single-atom catalyst for CO oxidation. Applied Surface Science, 2021, 537, 147881.	3.1	42
12	Sensing behavior of Cu-embedded C ₃ N monolayer upon dissolved gases in transformer oil: a first-principles study. Carbon Letters, 2021, 31, 489-496.	3.3	1
13	SOF ₂ sensing by Rh-doped PtS ₂ monolayer for early diagnosis of partial discharge in the SF ₆ insulation device. Molecular Physics, 2021, 119, e1919774.	0.8	106
14	Performance Improvement of MoS ₂ , Gas Sensor at Room Temperature. IEEE Transactions on Electron Devices, 2021, 68, 4644-4650.	1.6	5
15	A Novel Regression Prediction Method for Electronic Nose Based on Broad Learning System. IEEE Sensors Journal, 2021, 21, 19374-19381.	2.4	6
16	Enhanced NO _x adsorption and sensing properties of MoTe ₂ monolayer by Ni-doping: A first-principles study. Surfaces and Interfaces, 2021, 26, 101372.	1.5	21
17	Al-Doped MoSe ₂ Monolayer as a Promising Biosensor for Exhaled Breath Analysis: A DFT Study. ACS Omega, 2021, 6, 988-995.	1.6	54
18	InP ₃ Monolayer as a Promising 2D Sensing Material in SF ₆ Insulation Devices. ACS Omega, 2021, 6, 29752-29758.	1.6	3

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19	Adsorption behaviour of SO ₂ and SOF ₂ gas on Rh-doped BNNT: a DFT study. <i>Molecular Physics</i> , 2020, 118, e1580394.	0.8	32
20	Thermal decomposition properties of fluoronitriles-N ₂ gas mixture as alternative gas for SF ₆ . <i>Journal of Fluorine Chemistry</i> , 2020, 229, 109434.	0.9	8
21	Adsorption and sensing of SO ₂ and SOF ₂ molecule by Pt-doped HfSe ₂ monolayer: A first-principles study. <i>Applied Surface Science</i> , 2020, 530, 147242.	3.1	63
22	Rh-doped MoTe ₂ Monolayer as a Promising Candidate for Sensing and Scavenging SF ₆ Decomposed Species: a DFT Study. <i>Nanoscale Research Letters</i> , 2020, 15, 129.	3.1	46
23	Thermally Stable RuO _x –CeO ₂ Nanofiber Catalysts for Low-Temperature CO Oxidation. <i>ACS Applied Nano Materials</i> , 2020, 3, 8403-8413.	2.4	41
24	Doping effect of small Rh _n (n=1-4) clusters on the geometric and electronic behaviors of MoS ₂ monolayer: A first-principles study. <i>Applied Surface Science</i> , 2020, 526, 146659.	3.1	27
25	Adsorption and sensing behaviors of SF ₆ decomposed species on Ni-doped C ₃ N monolayer: A first-principles study. <i>Applied Surface Science</i> , 2020, 512, 145759.	3.1	236
26	Adsorption of SO ₂ and NO ₂ molecule on intrinsic and Pd-doped HfSe ₂ monolayer: A first-principles study. <i>Applied Surface Science</i> , 2020, 513, 145863.	3.1	250
27	A DFT study of healing the N vacancy in h-BN monolayer by NO molecules. <i>Applied Physics A: Materials Science and Processing</i> , 2020, 126, 1.	1.1	7
28	Adsorption and sensing of CO and C ₂ H ₂ by S-defected SnS ₂ monolayer for DGA in transformer oil: A DFT study. <i>Materials Chemistry and Physics</i> , 2020, 249, 123006.	2.0	87
29	Corrections to “Ru-InN Monolayer as a Gas Scavenger to Guard the Operation Status of SF ₆ Insulation Devices: A First-Principles Theory” [Jul 19 5249-5255]. <i>IEEE Sensors Journal</i> , 2020, 20, 562-562.	2.4	4
30	A Classification for Electronic Nose Based on Broad Learning System. <i>Frontiers in Artificial Intelligence and Applications</i> , 2020, , .	0.3	0
31	Facile Fabrication of Au Nanoparticles/Tin Oxide/Reduced Graphene Oxide Ternary Nanocomposite and Its High-Performance SF ₆ Decomposition Components Sensing. <i>Frontiers in Chemistry</i> , 2019, 7, 476.	1.8	11
32	First-principles insight into Ni-doped InN monolayer as a noxious gases scavenger. <i>Applied Surface Science</i> , 2019, 494, 859-866.	3.1	250
33	Rh-doped MoSe ₂ as a toxic gas scavenger: a first-principles study. <i>Nanoscale Advances</i> , 2019, 1, 772-780.	2.2	261
34	High selectivity n-type InSe monolayer toward decomposition products of sulfur hexafluoride: A density functional theory study. <i>Applied Surface Science</i> , 2019, 479, 852-862.	3.1	20
35	Adsorption characteristic of Rh-doped MoSe ₂ monolayer towards H ₂ and C ₂ H ₂ for DGA in transformer oil based on DFT method. <i>Applied Surface Science</i> , 2019, 487, 930-937.	3.1	48
36	Repairing the N-vacancy in an InN monolayer using NO molecules: a first-principles study. <i>Nanoscale Advances</i> , 2019, 1, 2003-2008.	2.2	14

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37	Ru-InN Monolayer as a Gas Scavenger to Guard the Operation Status of SF ₆ Insulation Devices: A First-Principles Theory. IEEE Sensors Journal, 2019, 19, 5249-5255.	2.4	158
38	Different doping of penta-graphene as adsorbent and gas sensing material for scavenging and detecting SF ₆ decomposed species. Sustainable Materials and Technologies, 2019, 21, e00100.	1.7	11
39	Dissolved gas analysis in transformer oil using Pd catalyst decorated MoSe ₂ monolayer: A first-principles theory. Sustainable Materials and Technologies, 2019, 20, e00094.	1.7	99
40	Nanomaterials-based gas sensors of SF ₆ decomposed species for evaluating the operation status of high-voltage insulation devices. High Voltage, 2019, 4, 242-258.	2.7	124
41	Density functional theory study of small Ag cluster adsorbed on graphyne. Applied Surface Science, 2019, 465, 93-102.	3.1	46
42	Mechanical behaviors and porosity of porous Ti prepared with large-size acicular urea as spacer. SN Applied Sciences, 2019, 1, 1.	1.5	3
43	Adsorption and desorption behavior of anion-exchange resin towards SO ₄ ²⁻ in the desulphurization process using citric method. Adsorption, 2019, 25, 105-113.	1.4	1
44	Pt & Pd decorated CNT as a workable media for SOF ₂ sensing: A DFT study. Applied Surface Science, 2019, 471, 335-341.	3.1	125
45	Pd-doped MoS ₂ monolayer: A promising candidate for DGA in transformer oil based on DFT method. Applied Surface Science, 2019, 470, 1035-1042.	3.1	248
46	Pristine and Cu decorated hexagonal InN monolayer, a promising candidate to detect and scavenge SF ₆ decompositions based on first-principle study. Journal of Hazardous Materials, 2019, 363, 346-357.	6.5	146
47	Mechanical Behavior and Microstructure of Porous Ti Using TiC as Reinforcement. Minerals, Metals and Materials Series, 2019, , 495-501.	0.3	0
48	Adsorption mechanism of SF ₆ decomposed species on pyridine-like PtN ₃ embedded CNT: A DFT study. Applied Surface Science, 2018, 447, 594-598.	3.1	110
49	Adsorption behaviour of SF ₆ decomposed species onto Pd ₄ -decorated single-walled CNT: a DFT study. Molecular Physics, 2018, 116, 1749-1755.	0.8	31
50	Noble metal (Pt or Au)-doped monolayer MoS ₂ as a promising adsorbent and gas-sensing material to SO ₂ , SOF ₂ and SO ₂ F ₂ : a DFT study. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	105
51	Carbon-chain inserting effect on electronic behavior of single-walled carbon nanotubes: a density functional theory study. MRS Communications, 2018, 8, 189-193.	0.8	17
52	Electronic structure and H ₂ S adsorption property of Pt ₃ cluster decorated (8, 0) SWCNT. Applied Surface Science, 2018, 428, 82-88.	3.1	30
53	Pt-doped single-walled CNT as a superior media for evaluating the operation status of insulation devices: A first-principle study. AIP Advances, 2018, 8, .	0.6	13
54	Determination of Gas Sensing Properties of SF ₆ Decomposition Components by Pt Modified Graphene. , 2018, , .		0

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55	Adsorption of SF ₆ Decomposed Products over ZnO(101̄...0): Effects of O and Zn Vacancies. ACS Omega, 2018, 3, 18739-18752.	1.6	9
56	Interaction of CO and CH ₄ Adsorption with Noble Metal (Rh, Pd, and Pt)-Decorated N ₃ -CNTs: A First-Principles Study. ACS Omega, 2018, 3, 16892-16898.	1.6	16
57	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
58	Sulfur dioxide adsorbed on pristine and Au dimer decorated $\hat{1}^3$ -graphyne: A density functional theory study. Applied Surface Science, 2018, 458, 781-789.	3.1	25
59	Geometric structure and SOF ₂ 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
60	Borophene: a promising adsorbent material with strong ability and capacity for SO ₂ adsorption. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	36
61	Adsorption mechanism of SF ₆ decomposition components onto N, F-co-doped TiO ₂ : A DFT study. Journal of Fluorine Chemistry, 2018, 213, 18-23.	0.9	19
62	Pt Decorating Effect on CNT Surface Towards Adsorption of SF ₆ Decomposed Components. Minerals, Metals and Materials Series, 2018, , 921-928.	0.3	0
63	Adsorption characteristic of Pd-4 cluster carbon nanotube towards transformer oil dissolved components: A simulation. Applied Surface Science, 2017, 419, 802-810.	3.1	32
64	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
65	Understanding of SF ₆ decompositions adsorbed on cobalt-doped SWCNT: A DFT study. Applied Surface Science, 2017, 420, 371-382.	3.1	32
66	A first principle simulation of competitive adsorption of SF ₆ decomposition components on nitrogen-doped anatase TiO ₂ (101) surface. Applied Surface Science, 2017, 422, 331-338.	3.1	42
67	Mechanism and Application of Carbon Nanotube Sensors in SF ₆ Decomposed Production Detection: a Review. Nanoscale Research Letters, 2017, 12, 177.	3.1	74
68	Synthesis of Graphene-Based Sensors and Application on Detecting SF ₆ Decomposing Products: A Review. Sensors, 2017, 17, 363.	2.1	38
69	A DFT Calculation of Fluoride-Doped TiO ₂ Nanotubes for Detecting SF ₆ Decomposition Components. Sensors, 2017, 17, 1907.	2.1	14
70	Investigation of Gas-Sensing Property of Acid-Deposited Polyaniline Thin-Film Sensors for Detecting H ₂ S and SO ₂ . Sensors, 2016, 16, 1889.	2.1	18
71	Volume change of macropores of titanium foams during sintering. Transactions of Nonferrous Metals Society of China, 2015, 25, 3834-3839.	1.7	9