

Zaihua Duan

List of Publications by Year in descending order

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Version: 2024-02-01

55
papers

4,213
citations

81900

39
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182427

51
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57
all docs

57
docs citations

57
times ranked

2335
citing authors

#	ARTICLE	IF	CITATIONS
1	Facile, Flexible, Cost-Saving, and Environment-Friendly Paper-Based Humidity Sensor for Multifunctional Applications. ACS Applied Materials & Interfaces, 2019, 11, 21840-21849.	8.0	326
2	Paper-Based Sensors for Gas, Humidity, and Strain Detections: A Review. ACS Applied Materials & Interfaces, 2020, 12, 31037-31053.	8.0	296
3	Enhanced ammonia response of Ti ₃ C ₂ T nanosheets supported by TiO ₂ nanoparticles at room temperature. Sensors and Actuators B: Chemical, 2019, 298, 126874.	7.8	222
4	Evolution of breath analysis based on humidity and gas sensors: Potential and challenges. Sensors and Actuators B: Chemical, 2020, 318, 128104.	7.8	217
5	An integrated flexible self-powered wearable respiration sensor. Nano Energy, 2019, 63, 103829.	16.0	181
6	Recent advances in humidity sensors for human body related humidity detection. Journal of Materials Chemistry C, 2021, 9, 14963-14980.	5.5	167
7	Halloysite nanotubes: Natural, environmental-friendly and low-cost nanomaterials for high-performance humidity sensor. Sensors and Actuators B: Chemical, 2020, 317, 128204.	7.8	160
8	A facile respiration-driven triboelectric nanogenerator for multifunctional respiratory monitoring. Nano Energy, 2019, 58, 312-321.	16.0	143
9	Ultrasensitive flexible NH ₃ gas sensor based on polyaniline/SrGe ₄ O ₉ nanocomposite with ppt-level detection ability at room temperature. Sensors and Actuators B: Chemical, 2020, 319, 128293.	7.8	129
10	A review on Ti ₃ C ₂ T _x -based nanomaterials: synthesis and applications in gas and humidity sensors. Rare Metals, 2021, 40, 1459-1476.	7.1	121
11	Daily writing carbon ink: Novel application on humidity sensor with wide detection range, low detection limit and high detection resolution. Sensors and Actuators B: Chemical, 2021, 339, 129884.	7.8	113
12	PANI nanofibers-supported Nb ₂ CT _x nanosheets-enabled selective NH ₃ detection driven by TENG at room temperature. Sensors and Actuators B: Chemical, 2021, 327, 128923.	7.8	108
13	Highly sensitive and selective NO ₂ sensor of alkalized V ₂ CT MXene driven by interlayer swelling. Sensors and Actuators B: Chemical, 2021, 344, 130150.	7.8	104
14	Ultrathin Nb ₂ CT nanosheets-supported polyaniline nanocomposite: Enabling ultrasensitive NH ₃ detection. Sensors and Actuators B: Chemical, 2021, 343, 130069.	7.8	94
15	Paper and carbon ink enabled low-cost, eco-friendly, flexible, multifunctional pressure and humidity sensors. Smart Materials and Structures, 2021, 30, 055012.	3.5	91
16	Simultaneous Biomechanical and Biochemical Monitoring for Self-Powered Breath Analysis. ACS Applied Materials & Interfaces, 2022, 14, 7301-7310.	8.0	86
17	A Nb ₂ CT _x /sodium alginate-based composite film with neuron-like network for self-powered humidity sensing. Chemical Engineering Journal, 2022, 438, 135588.	12.7	86
18	An ingenious strategy for improving humidity sensing properties of multi-walled carbon nanotubes via poly-L-lysine modification. Sensors and Actuators B: Chemical, 2019, 289, 182-185.	7.8	79

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19	Novel application of attapulgite on high performance and low-cost humidity sensors. <i>Sensors and Actuators B: Chemical</i> , 2020, 305, 127534.	7.8	79
20	Inspiration from Daily Goods: A Low-Cost, Facilely Fabricated, and Environment-Friendly Strain Sensor Based on Common Carbon Ink and Elastic Core-Spun Yarn. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 17474-17481.	6.7	76
21	A do-it-yourself approach to achieving a flexible pressure sensor using daily use materials. <i>Journal of Materials Chemistry C</i> , 2021, 9, 13659-13667.	5.5	76
22	Edge-enriched MoS ₂ nanosheets modified porous nanosheet-assembled hierarchical In ₂ O ₃ microflowers for room temperature detection of NO ₂ with ultrahigh sensitivity and selectivity. <i>Journal of Hazardous Materials</i> , 2022, 434, 128836.	12.4	73
23	Super-fast response humidity sensor based on La _{0.7} Sr _{0.3} MnO ₃ nanocrystals prepared by PVP-assisted sol-gel method. <i>Sensors and Actuators B: Chemical</i> , 2018, 258, 527-534.	7.8	71
24	Power generation humidity sensor based on primary battery structure. <i>Chemical Engineering Journal</i> , 2022, 446, 136910.	12.7	66
25	Enhanced positive humidity sensitive behavior of p-reduced graphene oxide decorated with n-WS ₂ nanoparticles. <i>Rare Metals</i> , 2021, 40, 1762-1767.	7.1	62
26	Novel chitosan/ZnO bilayer film with enhanced humidity-tolerant property: Endowing triboelectric nanogenerator with acetone analysis capability. <i>Nano Energy</i> , 2020, 78, 105256.	16.0	61
27	Enhanced NH ₃ sensing performance of polyaniline via a facile morphology modification strategy. <i>Sensors and Actuators B: Chemical</i> , 2022, 369, 132302.	7.8	61
28	Edge-enriched Mo ₂ TiC ₂ T _x /MoS ₂ Heterostructure with Coupling Interface for Selective NO ₂ Monitoring. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	58
29	Drawn a facile sensor: A fast response humidity sensor based on pencil-trace. <i>Sensors and Actuators B: Chemical</i> , 2018, 261, 345-353.	7.8	52
30	High performance humidity sensor based on 3D mesoporous Co ₃ O ₄ hollow polyhedron for multifunctional applications. <i>Applied Surface Science</i> , 2022, 585, 152698.	6.1	52
31	Enhanced humidity sensing properties of SmFeO ₃ -modified MoS ₂ nanocomposites based on the synergistic effect. <i>Sensors and Actuators B: Chemical</i> , 2018, 272, 459-467.	7.8	51
32	The Art of Integrated Functionalization: Super Stable Black Phosphorus Achieved through Metal-Organic Framework Coating. <i>Advanced Functional Materials</i> , 2020, 30, 2002232.	14.9	51
33	Enhanced Blocking Effect: A New Strategy to Improve the NO ₂ Sensing Performance of Ti ₃ C ₂ T _x by ¹³ Poly(<i>l</i> -glutamic acid) Modification. <i>ACS Sensors</i> , 2021, 6, 2858-2867.	7.8	51
34	Gold-loaded tellurium nanobelts gas sensor for ppt-level NO ₂ detection at room temperature. <i>Sensors and Actuators B: Chemical</i> , 2022, 355, 131300.	7.8	49
35	Facilely constructed two-sided microstructure interfaces between electrodes and cellulose paper active layer: eco-friendly, low-cost and high-performance piezoresistive sensor. <i>Cellulose</i> , 2021, 28, 6389.	4.9	48
36	A chitosan/amido-graphene oxide-based self-powered humidity sensor enabled by triboelectric effect. <i>Rare Metals</i> , 2021, 40, 1995-2003.	7.1	47

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37	Constructing Electrically and Mechanically Self-Healing Elastomers by Hydrogen Bonded Intermolecular Network. Langmuir, 2020, 36, 3029-3037.	3.5	45
38	High performance ethylene sensor based on palladium-loaded tin oxide: Application in fruit quality detection. Chinese Chemical Letters, 2020, 31, 2045-2049.	9.0	44
39	Ag ₂ Te nanowires for humidity-resistant trace-level NO ₂ detection at room temperature. Sensors and Actuators B: Chemical, 2022, 363, 131790.	7.8	42
40	Facile and low-cost fabrication of a humidity sensor using naturally available sepiolite nanofibers. Nanotechnology, 2020, 31, 355501.	2.6	39
41	Fabrication of electrospun LaFeO ₃ nanotubes via annealing technique for fast ethanol detection. Materials Letters, 2018, 215, 58-61.	2.6	34
42	Facile primary battery-based humidity sensor for multifunctional application. Sensors and Actuators B: Chemical, 2022, 370, 132369.	7.8	34
43	Integrated cross-section interface engineering and surface encapsulating strategy: A high-response, waterproof, and low-cost paper-based bending strain sensor. Journal of Materials Chemistry C, 2021, 9, 14003-14011.	5.5	33
44	Protrusion Microstructure-Induced Sensitivity Enhancement for Zinc Oxide/Carbon Nanotube Flexible Pressure Sensors. ACS Applied Electronic Materials, 2021, 3, 5506-5513.	4.3	28
45	Facilely constructed randomly distributed surface microstructure for flexible strain sensor with high sensitivity and low detection limit. Journal Physics D: Applied Physics, 2021, 54, 284003.	2.8	23
46	Mixed-Potential-Type Gas Sensors Based on Pt/YSZ Film/LaFeO ₃ for Detecting NO ₂ . Journal of Electronic Materials, 2017, 46, 6895-6900.	2.2	22
47	Wearable and washable textile-based strain sensors via a single-step, environment-friendly method. Science China Technological Sciences, 2021, 64, 441-450.	4.0	18
48	Designing Cu ²⁺ as a Partial Substitution of Protons in Polyaniline Emeraldine Salt: Room-Temperature-Recoverable H ₂ S Sensing Properties and Mechanism Study. ACS Applied Materials & Interfaces, 2022, 14, 27203-27213.	8.0	16
49	Humidity sensing properties of LnFeO ₃ nanofibers synthesized by electrospinning (Ln = Sm, Tj ETQq1.1.0.784314 rgBT / 1.6 13)	1.6	13
50	A Facile Strategy for Low Young's Modulus PDMS Microbeads Enhanced Flexible Capacitive Pressure Sensors. Particle and Particle Systems Characterization, 2021, 38, 2100019.	2.3	13
51	Drawn a flexible, low-cost, eco-friendly, and multifunctional humidity sensor on paper using carbon ink. , 2020, , .		1
52	MXene/Ag ⁺ -TM: aoeEae-°è¿;â±•ăŽæœ³æŸæCE'æ~. Chinese Science Bulletin, 2022, , .	0.7	1
53	A Facile Strategy for Low Young's Modulus PDMS Microbeads Enhanced Flexible Capacitive Pressure Sensors (Part. Part. Syst. Charact. 7/2021). Particle and Particle Systems Characterization, 2021, 38, 2170016.	2.3	0
54	Enhanced NH ₃ Sensing Performance of Ti ₃ C ₂ T _x Nanosheets Supported By TiO ₂ Nanoparticles at Room Temperature. ECS Meeting Abstracts, 2020, MA2020-01, 2162-2162.	0.0	0

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55	Ultrathin niobium carbide nanosheets for humidity sensing. , 2020, , .		0