Electrically-Transduced Chemical Sensors Based on Tw

Chemical Reviews 119, 478-598

DOI: 10.1021/acs.chemrev.8b00311

Citation Report

#	Article	IF	CITATIONS
1	Van der Waals Heterostructured MOFâ€onâ€MOF Thin Films: Cascading Functionality to Realize Advanced Chemiresistive Sensing. Angewandte Chemie, 2019, 131, 15057-15061.	2.0	45
2	2D molecular crystal lattices: advances in their synthesis, characterization, and application. Journal of Materials Chemistry A, 2019, 7, 23537-23562.	10.3	33
3	Gas transport regulation in a MO/MOF interface for enhanced selective gas detection. Journal of Materials Chemistry A, 2019, 7, 18397-18403.	10.3	44
4	A novel flexible UV-cured carbon nanotube composite film for humidity sensing. Sensors and Actuators B: Chemical, 2019, 297, 126785.	7.8	18
5	Low cost, flexible and disposable SnSe2 based photoresponsive ammonia sensor for detection of ammonia in urine samples. Sensors and Actuators B: Chemical, 2019, 297, 126725.	7.8	51
6	Enhanced ammonia response of Ti3C2T nanosheets supported by TiO2 nanoparticles at room temperature. Sensors and Actuators B: Chemical, 2019, 298, 126874.	7.8	222
7	Van der Waals Heterostructured MOFâ€onâ€MOF Thin Films: Cascading Functionality to Realize Advanced Chemiresistive Sensing. Angewandte Chemie - International Edition, 2019, 58, 14915-14919.	13.8	186
8	Two-dimensional nanomaterials: fascinating materials in biomedical field. Science Bulletin, 2019, 64, 1707-1727.	9.0	171
9	Gas sensing with heterostructures based on two-dimensional nanostructured materials: a review. Journal of Materials Chemistry C, 2019, 7, 13367-13383.	5.5	197
10	Disease Detection with Molecular Biomarkers: From Chemistry of Body Fluids to Nature-Inspired Chemical Sensors. Chemical Reviews, 2019, 119, 11761-11817.	47.7	269
11	Inkjet-printed CMOS-integrated graphene–metal oxide sensors for breath analysis. Npj 2D Materials and Applications, 2019, 3, .	7.9	30
12	Electrochemical-Based Biosensors on Different Zinc Oxide Nanostructures: A Review. Materials, 2019, 12, 2985.	2.9	108
13	Low-operating temperature resistive nanostructured hydrogen sensors. International Journal of Hydrogen Energy, 2019, 44, 26646-26664.	7.1	53
14	Polypyrrole coated niobium disulfide nanowires as high performance electrocatalysts for hydrogen evolution reaction. Nanotechnology, 2019, 30, 405601.	2.6	7
15	Two-Dimensional Chemiresistive Covalent Organic Framework with High Intrinsic Conductivity. Journal of the American Chemical Society, 2019, 141, 11929-11937.	13.7	313
16	SnS ₂ /SnS p–n heterojunctions with an accumulation layer for ultrasensitive room-temperature NO ₂ detection. Nanoscale, 2019, 11, 13741-13749.	5.6	116
17	Ultrafast Cathodic Exfoliation of Few-Layer Black Phosphorus in Aqueous Solution. ACS Applied Nano Materials, 2019, 2, 3793-3801.	5.0	35
18	Bottom-Up Synthesis of Graphene Monolayers with Tunable Crystallinity and Porosity. ACS Nano, 2019, 13, 7310-7322.	14.6	24

#	Article	IF	CITATIONS
19	Detection of Phenylketonuria Markers Using a ZIF-67 Encapsulated PtPd Alloy Nanoparticle (PtPd@ZIF-67)-Based Disposable Electrochemical Microsensor. ACS Applied Materials & Interfaces, 2019, 11, 20734-20742.	8.0	43
20	Photoluminescent organic polymer nanofilms formed in water through a self-assembly formation mechanism. Journal of Materials Chemistry C, 2019, 7, 3286-3293.	5.5	4
21	Adsorption of gas molecules on a C3N monolayer and the implications for NO2 sensors. AIP Advances, 2019, 9, .	1.3	31
22	BN quantum dots decorated ZnO nanoplates sensor for enhanced detection of BTEX gases. Journal of Alloys and Compounds, 2020, 815, 152376.	5.5	33
23	2D Electrocatalysts for Converting Earthâ€Abundant Simple Molecules into Valueâ€Added Commodity Chemicals: Recent Progress and Perspectives. Advanced Materials, 2020, 32, e1904870.	21.0	76
24	A Dualâ€Ligand Porous Coordination Polymer Chemiresistor with Modulated Conductivity and Porosity. Angewandte Chemie - International Edition, 2020, 59, 172-176.	13.8	124
25	A Dualâ€Ligand Porous Coordination Polymer Chemiresistor with Modulated Conductivity and Porosity. Angewandte Chemie, 2020, 132, 178-182.	2.0	8
26	Timeâ€Resolved Terahertz Spectroscopy Studies on 2D Van der Waals Materials. Advanced Optical Materials, 2020, 8, 1900533.	7.3	37
27	Black phosphorus photocatalysts for photocatalytic H2 generation: A review. Chemical Engineering Journal, 2020, 386, 123997.	12.7	87
28	Dipole moment effects in dopamine/N-doped-graphene systems. Surface Science, 2020, 693, 121546.	1.9	6
29	Amorphous Intermediate Derivative from ZIFâ€67 and Its Outstanding Electrocatalytic Activity. Small, 2020, 16, e1904252.	10.0	120
30	Novel halochromic cellulose nanowhiskers from rice straw: Visual detection of urea. Carbohydrate Polymers, 2020, 231, 115740.	10.2	45
31	Flexible and Degradable Multimodal Sensor Fabricated by Transferring Laser-Induced Porous Carbon on Starch Film. ACS Sustainable Chemistry and Engineering, 2020, 8, 527-533.	6.7	45
32	Doping of transition metal dichalcogenides in molecularly imprinted conductive polymers for the ultrasensitive determination of 17β-estradiol in eel serum. Biosensors and Bioelectronics, 2020, 150, 111901.	10.1	28
33	Review— Recent Exploration of Two-Dimensional MXenes for Gas Sensing: From a Theoretical to an Experimental View. Journal of the Electrochemical Society, 2020, 167, 037515.	2.9	78
34	One-Dimensional Arrays of Sensing Materials Based on Wettability Interface Dewetting Process. Accounts of Materials Research, 2020, 1, 53-62.	11.7	4
35	Atomic Layer Deposition-Derived Nanomaterials: Oxides, Transition Metal Dichalcogenides, and Metal–Organic Frameworks. Chemistry of Materials, 2020, 32, 9056-9077.	6.7	25
36	Chemical Potential and Thermodynamic Properties of Self-Assembled Monolayers: A Method of External Fields in a Monte Carlo Simulation. Journal of Physical Chemistry C, 2020, 124, 22447-22458.	3.1	7

#	Article	IF	CITATIONS
37	Gate-polarity-dependent doping effects of H2O adsorption on graphene/SiO2 field-effect transistors. Journal Physics D: Applied Physics, 2020, 53, 455301.	2.8	2
38	Electronic Devices Using Open Framework Materials. Chemical Reviews, 2020, 120, 8581-8640.	47.7	185
39	High-Performance Atomically-Thin Room-Temperature NO ₂ Sensor. Nano Letters, 2020, 20, 6120-6127.	9.1	34
40	Assembling Nano–Microarchitecture for Electromagnetic Absorbers and Smart Devices. Advanced Materials, 2020, 32, e2002112.	21.0	259
41	Exploiting Twoâ€Dimensional Bi ₂ O ₂ Se for Trace Oxygen Detection. Angewandte Chemie, 2020, 132, 18094-18099.	2.0	7
42	Direct Synthesis of Atomically Dispersed Palladium Atoms Supported on Graphitic Carbon Nitride for Efficient Selective Hydrogenation Reactions. ACS Applied Materials & Interfaces, 2020, 12, 54146-54154.	8.0	31
43	Semiconductor Gas Sensors: Materials, Technology, Design, and Application. Sensors, 2020, 20, 6694.	3.8	215
44	Thermodynamics, EOS, and heat capacity in molecular modeling of self-assembled molecular layers. Journal of Chemical Physics, 2020, 153, 204105.	3.0	4
45	Water-Stable 1D Double-Chain Cu Metal–Organic Framework-based Electrochemical Biosensor for Detecting <scp>l</scp> -Tyrosine. Langmuir, 2020, 36, 14123-14129.	3.5	19
46	Nitrogen-doped carbon coated TiC nanofiber arrays deposited on Ti-6Al-4V for selective and sensitive electrochemical detection of dopamine. Surface and Coatings Technology, 2020, 402, 126266.	4.8	3
47	Room-Temperature Gas Sensors Under Photoactivation: From Metal Oxides to 2D Materials. Nano-Micro Letters, 2020, 12, 164.	27.0	201
48	2D Material Chemistry: Graphdiyne-based Biochemical Sensing. Chemical Research in Chinese Universities, 2020, 36, 622-630.	2.6	91
49	Tunable SO2-sensing performance of arsenene induced by Stone-Wales defects and external electric field. Applied Surface Science, 2020, 523, 146403.	6.1	29
50	Emerging 2D hybrid nanomaterials: towards enhanced sensitive and selective conductometric gas sensors at room temperature. Journal of Materials Chemistry C, 2020, 8, 13108-13126.	5.5	57
51	Hydrogen Sensors Based on MoS ₂ Hollow Architectures Assembled by Pickering Emulsion. ACS Nano, 2020, 14, 9652-9661.	14.6	47
52	Ternary Chalcogenides GeSb2Se3 and Ge3Sb4Se7 Containing a â^ž1[Sb2Se2]2– 1D Chain and a 2D Structure Related to SnSe. Inorganic Chemistry, 2020, 59, 11207-11212.	4.0	4
53	Inkâ€Based Additive Nanomanufacturing of Functional Materials for Humanâ€Integrated Smart Wearables. Advanced Intelligent Systems, 2020, 2, 2000117.	6.1	17
54	Functional metal–organic frameworks as effective sensors of gases and volatile compounds. Chemical Society Reviews, 2020, 49, 6364-6401.	38.1	784

#	ARTICLE	IF	CITATIONS
55	Electrocatalytic Activity for the Sulfadiazine Sensor. ACS Sustainable Chemistry and Engineering, 2020, 8, 12471-12481.	6.7	58
56	2D Reâ€Based Transition Metal Chalcogenides: Progress, Challenges, and Opportunities. Advanced Science, 2020, 7, 2002320.	11.2	62
57	Supercapacitive performance of nitrogen doped porous carbon based material for supercapacitor application. Journal of Chemical Sciences, 2020, 132, 1.	1.5	0
58	Chemiresistive Hydrogen Sensors: Fundamentals, Recent Advances, and Challenges. ACS Nano, 2020, 14, 14284-14322.	14.6	143
59	Non-Carbon 2D Materials-Based Field-Effect Transistor Biosensors: Recent Advances, Challenges, and Future Perspectives. Sensors, 2020, 20, 4811.	3.8	16
60	Novel fluorescence quenching triad based on molybdenum(V) tetra- <i>p</i> -tolylporphyrin and substituted fullero[60]pyrrolidine. Journal of Porphyrins and Phthalocyanines, 2020, 24, 1224-1232.	0.8	3
61	A novel approach for green synthesis of WO ₃ nanomaterials and their highly selective chemical sensing properties. Journal of Materials Chemistry A, 2020, 8, 20373-20385.	10.3	35
62	Synthesis of a CuNP/chitosan/black phosphorus nanocomposite for non-enzymatic hydrogen peroxide sensing. Analyst, The, 2020, 145, 7260-7266.	3.5	13
63	Perylene diimide self-assembly: From electronic structural modulation to photocatalytic applications. Journal of Semiconductors, 2020, 41, 091708.	3.7	11
64	Metal carbide/Ni hybrids for high-performance electromagnetic absorption and absorption-based electromagnetic interference shielding. Inorganic Chemistry Frontiers, 2020, 7, 4832-4844.	6.0	31
65	Recent Advances in the Fabrication and Application of Graphene Microfluidic Sensors. Micromachines, 2020, 11, 1059.	2.9	24
66	Multifunctional layered black phosphorene-based nanoplatform for disease diagnosis and treatment: a review. Frontiers of Optoelectronics, 2020, 13, 327-351.	3.7	9
67	Tackling the Problem of Sensing Commonly Abused Drugs Through Nanomaterials and (Bio)Recognition Approaches. Frontiers in Chemistry, 2020, 8, 561638.	3.6	18
68	Graphene nanoribbons as flexible docks for chemiresistive sensing of gas phase explosives. Nanoscale, 2020, 12, 10730-10736.	5.6	12
69	Solution-gated transistors of two-dimensional materials for chemical and biological sensors: status and challenges. Nanoscale, 2020, 12, 11364-11394.	5.6	41
71	Ag-Modified 3D Reduced Graphene Oxide Aerogel-Based Sensor with an Embedded Microheater for a Fast Response and High-Sensitive Detection of NO ₂ . ACS Applied Materials & Interfaces, 2020, 12, 25243-25252.	8.0	56
72	Manipulation of mechanical properties of monolayer molybdenum disulfide: Kirigami and hetero-structure based approach. Materials Chemistry and Physics, 2020, 252, 123280.	4.0	5
73	Two-Dimensional Nanomaterials with Unconventional Phases. CheM, 2020, 6, 1237-1253.	11.7	93

	CITATION R	CITATION REPORT	
# 74	ARTICLE Recent advances in solid-contact ion-selective electrodes: functional materials, transduction mechanisms, and development trends. Chemical Society Reviews, 2020, 49, 4405-4465.	IF 38.1	Citations 257
75	Chalcogenides-based Tubular Micromotors in Fluorescent Assays. Analytical Chemistry, 2020, 92, 9188-9193.	6.5	26
76	Voltammetric determination of hydrogen peroxide using AuCu nanoparticles attached on polypyrrole-modified 2D metal-organic framework nanosheets. Mikrochimica Acta, 2020, 187, 389.	5.0	11
77	Selective Detection of Ethylene by MoS ₂ –Carbon Nanotube Networks Coated with Cu(I)–Pincer Complexes. ACS Sensors, 2020, 5, 1699-1706.	7.8	18
78	Frontiers of graphene and 2D material-based gas sensors for environmental monitoring. 2D Materials, 2020, 7, 032002.	4.4	103
79	Quasi-2D Co ₃ O ₄ nanoflakes as an efficient gas sensor <i>versus</i> alcohol VOCs. Journal of Materials Chemistry A, 2020, 8, 7214-7228.	10.3	31
80	Machine-intelligent inkjet-printed α-Fe2O3/rGO towards NO2 quantification in ambient humidity. Sensors and Actuators B: Chemical, 2020, 321, 128446.	7.8	20
81	Host–Guest Interactions and Redox Activity in Layered Conductive Metal–Organic Frameworks. Chemistry of Materials, 2020, 32, 7639-7652.	6.7	43
82	Exploiting Twoâ€Dimensional Bi ₂ O ₂ Se for Trace Oxygen Detection. Angewandte Chemie - International Edition, 2020, 59, 17938-17943.	13.8	31
83	Advanced Nanoscale Buildâ€Up Sensors for Daily Life Monitoring of Diabetics. Advanced Materials Interfaces, 2020, 7, 2000153.	3.7	23
84	Hybrid heterostructures and devices based on two-dimensional layers and wide bandgap materials. Materials Today Nano, 2020, 12, 100092.	4.6	28
85	Black arsenene as a promising anisotropic sensor with high sensitivity and selectivity: insights from a first-principles investigation. Journal of Materials Chemistry C, 2020, 8, 4073-4080.	5.5	18
86	Nanoscale dynamic chemical, biological sensor material designs for control monitoring and early detection of advanced diseases. Materials Today Bio, 2020, 5, 100044.	5.5	18
87	Printed gas sensors. Chemical Society Reviews, 2020, 49, 1756-1789.	38.1	216
88	Three-Dimensional ZnInS Nanoflakes@Carbon Fiber Frameworks for Biocatalytic Precipitation-Based Photoelectrochemical Immunoassay. ACS Applied Bio Materials, 2020, 3, 1761-1768.	4.6	10
89	Synthesis of boron nitride nanosheets with N-defects for efficient tetracycline antibiotics adsorptive removal. Chemical Engineering Journal, 2020, 387, 124138.	12.7	75
90	Two-Dimensional Conductive Metal–Organic Frameworks Based on Truxene. ACS Applied Materials & Interfaces, 2020, 12, 7504-7509.	8.0	50
91	Two-Dimensional Transition Metal Dichalcogenides for Gas Sensing Applications. Environmental Chemistry for A Sustainable World, 2020, , 131-155.	0.5	9

#	Article	IF	CITATIONS
92	Innovative Technologies for Cultural Heritage. Tattoo Sensors and AI: The New Life of Cultural Assets. Sensors, 2020, 20, 1909.	3.8	9
93	Siloxene, Germanane, and Methylgermanane: Functionalized 2D Materials of Group 14 for Electrochemical Applications. Advanced Functional Materials, 2020, 30, 1910186.	14.9	44
94	Electrically Conductive Metal–Organic Frameworks. Chemical Reviews, 2020, 120, 8536-8580.	47.7	989
95	Organic "receptor―fully covered few-layer organic–metal chalcogenides for high-performance chemiresistive gas sensing at room temperature. Chemical Communications, 2020, 56, 5366-5369.	4.1	29
96	A WS ₂ -gold nanoparticle heterostructure-based novel SERS platform for the rapid identification of antibiotic-resistant pathogens. Nanoscale Advances, 2020, 2, 2025-2033.	4.6	19
97	Soft–Hard Composites for Bioelectric Interfaces. Trends in Chemistry, 2020, 2, 519-534.	8.5	21
98	Electroactive Organic Building Blocks for the Chemical Design of Functional Porous Frameworks (MOFs and COFs) in Electronics. Chemistry - A European Journal, 2020, 26, 10912-10935.	3.3	53
99	Elastomer nanocomposites containing MXene for mechanical robustness and electrical and thermal conductivity. Nanotechnology, 2020, 31, 315715.	2.6	31
100	Methods for design and fabrication of nanosensors: the case of ZnO-based nanosensor. , 2020, , 9-30.		9
101	Applications of nano-materials in diverse dentistry regimes. RSC Advances, 2020, 10, 15430-15460.	3.6	62
102	Layer-by-layer assembled dual-ligand conductive MOF nano-films with modulated chemiresistive sensitivity and selectivity. Nano Research, 2021, 14, 438-443.	10.4	54
103	Two-dimensional d-ï€ conjugated metal-organic framework based on hexahydroxytrinaphthylene. Nano Research, 2021, 14, 369-375.	10.4	49
104	2D materials in electrochemical sensors for in vitro or in vivo use. Analytical and Bioanalytical Chemistry, 2021, 413, 701-725.	3.7	39
105	Preparation and processing of nanocomposites of all-inorganic lead halide perovskite nanocrystals. , 2021, , 19-93.		0
106	A new sensing material design based on chemically passivated phosphorene/porous two-dimensional polymer: Highly sensitive and selective detection of NO2. Sensors and Actuators B: Chemical, 2021, 329, 129233.	7.8	22
107	MXene/SnO2 heterojunction based chemical gas sensors. Sensors and Actuators B: Chemical, 2021, 329, 129275.	7.8	157
108	Advanced Functional Electroactive and Photoactive Materials for Monitoring the Environmental Pollutants. Advanced Functional Materials, 2021, 31, 2008227.	14.9	39
109	Poly(α-l-lysine)-based nanomaterials for versatile biomedical applications: Current advances and perspectives. Bioactive Materials, 2021, 6, 1878-1909.	15.6	103

#	Article	IF	CITATIONS
110	A DFT study on the hydrogen storage performance of the Sb monolayer decorated with Li, Na or K. Vacuum, 2021, 183, 109868.	3.5	15
111	Two-dimensional transition metal dichalcogenides and their composites for lab-based sensing applications: Recent progress and future outlook. Sensors and Actuators A: Physical, 2021, 318, 112517.	4.1	21
112	Metal–organic frameworks and their derivatives for electrically-transduced gas sensors. Coordination Chemistry Reviews, 2021, 426, 213479.	18.8	145
113	Microâ€Schottky Junctionâ€Boosted Efficient Charge Transducing for Ultrasensitive NO ₂ Sensing. Advanced Materials Technologies, 2021, 6, .	5.8	9
114	The Role of Metal–Organic Frameworks in Electronic Sensors. Angewandte Chemie, 2021, 133, 15320-15340.	2.0	26
115	Sensing Applications of Atomically Thin Group IV Carbon Siblings Xenes: Progress, Challenges, and Prospects. Advanced Functional Materials, 2021, 31, 2005957.	14.9	37
116	The Role of Metal–Organic Frameworks in Electronic Sensors. Angewandte Chemie - International Edition, 2021, 60, 15192-15212.	13.8	62
117	Harnessing selectivity in chemical sensing <i>via</i> supramolecular interactions: from functionalization of nanomaterials to device applications. Materials Horizons, 2021, 8, 2685-2708.	12.2	18
118	Boosted interfacial charge transfer in SnO ₂ /SnSe ₂ heterostructures: toward ultrasensitive room-temperature H ₂ S detection. Inorganic Chemistry Frontiers, 2021, 8, 2068-2077.	6.0	23
119	Novel Chemical Based on Green Composite Materials for. Environmental Chemistry for A Sustainable World, 2021, , 109-138.	0.5	0
120	Two-dimensional conductive phthalocyanine-based metal–organic frameworks for electrochemical nitrite sensing. RSC Advances, 2021, 11, 4472-4477.	3.6	41
121	Ultrasensitive humidity sensing and the multifunctional applications of borophene–MoS ₂ heterostructures. Journal of Materials Chemistry A, 2021, 9, 13100-13108.	10.3	55
122	Scalable approach towards specific and ultrasensitive cation sensing under harsh environmental conditions by engineering the analyte–transducer interface. Nanoscale Advances, 2021, 3, 3752-3761.	4.6	3
123	Nanofabrication techniques for semiconductor chemical sensors. , 2021, , 119-137.		11
124	Low dimensional materials for glucose sensing. Nanoscale, 2021, 13, 11017-11040.	5.6	30
125	Gas sensing performance of 2D nanomaterials/metal oxide nanocomposites: a review. Journal of Materials Chemistry C, 2021, 9, 8776-8808.	5.5	115
126	Conducting polymers as anion-responsive chemical fuses. Chemical Communications, 2021, 57, 3773-3776.	4.1	1
127	Concluding remarks: current and next generation MOFs. Faraday Discussions, 2021, 231, 397-417.	3.2	17

#	Article	IF	CITATIONS
128	High-performance electrically transduced hazardous gas sensors based on low-dimensional nanomaterials. Nanoscale Advances, 2021, 3, 6254-6270.	4.6	14
129	Printed Polymer Composite Sensors for Low-Power, Near Room-Temperature Detection and Classification of VOCS. , 2021, , .		2
130	Divalent Cation Dependence Enhances Dopamine Aptamer Biosensing. ACS Applied Materials & Interfaces, 2021, 13, 9425-9435.	8.0	42
131	Wafer-Scale Lateral Self-Assembly of Mosaic Ti ₃ C ₂ T _{<i>x</i>} MXene Monolayer Films. ACS Nano, 2021, 15, 625-636.	14.6	48
132	MOF-based electrocatalysts for high-efficiency CO ₂ conversion: structure, performance, and perspectives. Journal of Materials Chemistry A, 2021, 9, 22710-22728.	10.3	20
133	Charge transfer driven by redox dye molecules on graphene nanosheets for room-temperature gas sensing. Nanoscale, 2021, 13, 18596-18607.	5.6	9
134	Printed aerogels: chemistry, processing, and applications. Chemical Society Reviews, 2021, 50, 3842-3888.	38.1	128
135	Rational strategies for proton-conductive metal–organic frameworks. Chemical Society Reviews, 2021, 50, 6349-6368.	38.1	174
136	Nanomaterial-Based Gas Sensors for Agriculture Sector. Concepts and Strategies in Plant Sciences, 2021, , 51-80.	0.5	1
137	Two-Dimensional Metal-Organic Framework Materials: Synthesis, Structures, Properties and Applications. Chemical Reviews, 2021, 121, 3751-3891.	47.7	442
138	Functionalized 2D Germanene and Silicene Enzymatic System. Advanced Functional Materials, 2021, 31, 2011125.	14.9	30
139	Design and in situ synthesis of ZnInS@ZIF-8-nanofilms multifunctional nanocomposite: A case application for simultaneous fluorescent sensing and enhanced photocatalytic performance toward antibiotic. Microporous and Mesoporous Materials, 2021, 315, 110916.	4.4	18
140	Kinetically Controlled, Scalable Synthesis of γâ€FeOOH Nanosheet Arrays on Nickel Foam toward Efficient Oxygen Evolution: The Key Role of Inâ€Situâ€Generated γâ€NiOOH. Advanced Materials, 2021, 33, e2005587.	21.0	115
141	Hydrogen gas sensing properties of microwave-assisted 2D Hybrid Pd/rGO: Effect of temperature, humidity and UV illumination. International Journal of Hydrogen Energy, 2021, 46, 7653-7665.	7.1	71
142	Review—Novel Carbon Nanomaterials Based Flexible Electrochemical Biosensors. Journal of the Electrochemical Society, 2021, 168, 027504.	2.9	10
143	Recent Advancements in Development of Wearable Gas Sensors. Advanced Materials Technologies, 2021, 6, .	5.8	109
144	The prior rules of designing Ti3C2Tx MXene-based gas sensors. Frontiers of Chemical Science and Engineering, 2021, 15, 505-517.	4.4	38
145	Enhanced mid-infrared gas absorption spectroscopic detection using chalcogenide or porous germanium waveguides. Journal of Optics (United Kingdom), 2021, 23, 035102.	2.2	17

#	Article	IF	CITATIONS
146	Highly Graphitized Fe-N-C Electrocatalysts Prepared from Chitosan Hydrogel Frameworks. Catalysts, 2021, 11, 390.	3.5	15
147	The Prospect of Dimensionality in Porous Semiconductors. Chemistry - A European Journal, 2021, 27, 7489-7501.	3.3	15
148	Nano-FET-enabled biosensors: Materials perspective and recent advances in North America. Biosensors and Bioelectronics, 2021, 176, 112941.	10.1	28
149	Volatile Organic Compound Sensors Based on 2D Materials. Advanced Electronic Materials, 2021, 7, 2001071.	5.1	23
150	Recent Advances in 2D Group VB Transition Metal Chalcogenides. Small, 2021, 17, e2005411.	10.0	20
151	Editorial: Low-Dimension Sensing Nanomaterials. Frontiers in Chemistry, 2021, 9, 608327.	3.6	0
152	Adsorption, Gas-Sensing, and Optical Properties of Molecules on a Diazine Monolayer: A First-Principles Study. ACS Omega, 2021, 6, 11418-11426.	3.5	20
153	Gadolinium-chelate functionalized magnetic CuFeSe ₂ ternary nanocrystals for T1-T2 dual MRI and CT imaging in vitro and in vivo. Materials Research Express, 2021, 8, 045001.	1.6	4
154	A DFT study of NO2 and SO2 gas-sensing properties of InX (X = Cl, Br and I) monolayers. Journal of Materials Science, 2021, 56, 11828-11837.	3.7	12
155	Enhanced performance of Ni catalysts supported on ZrO2 nanosheets for CO2 methanation: Effects of support morphology and chelating ligands. International Journal of Hydrogen Energy, 2021, 46, 14395-14406.	7.1	24
156	Recent Progress on Semiconductor-Interface Facing Clinical Biosensing. Sensors, 2021, 21, 3467.	3.8	7
157	Nonlinear Optical Properties and Applications of Fluorenone Molecular Materials. Advanced Optical Materials, 2021, 9, 2100327.	7.3	56
158	Twoâ€Ðimensional Bis(dithiolene)iron(II) Selfâ€Powered UV Photodetectors with Ultrahigh Air Stability. Advanced Science, 2021, 8, 2100564.	11.2	19
159	Simple synthesis of porous ZnO nanoplates hyper-doped with low concentration of Pt for efficient acetone sensing. Journal of Alloys and Compounds, 2021, 865, 158890.	5.5	30
160	Covalent Organic Frameworks for Batteries. Advanced Functional Materials, 2021, 31, 2100505.	14.9	154
161	Artificial Olfaction in the 21 st Century. IEEE Sensors Journal, 2021, 21, 12969-12990.	4.7	46
162	STRETCHABLE OXYGEN SENSOR BASED ON SELF-HEALING AND SELF-ADHESIVE ORGANOHYDROGELS. , 2021, , .		0
163	Single-Layer MX ₂ (M = Zn, Cd and X = Cl, I): Auxetic Semiconductors with Strain-Tunable Optoelectronic Properties. Journal of Physical Chemistry C, 2021, 125, 12983-12990.	3.1	9

		FORT	
# 164	ARTICLE Emerging 2D nanomaterials for biomedical applications. Materials Today, 2021, 50, 276-302.	IF 14.2	Citations 148
165	Sc doped arsenene as adsorbent for the detection and removal of SF6 decomposition gases: A DFT study. Applied Surface Science, 2021, 552, 149449.	6.1	20
166	Addressing the Theoretical and Experimental Aspects of Low-Dimensional-Materials-Based FET Immunosensors: A Review. Chemosensors, 2021, 9, 162.	3.6	5
167	Highly enhanced NH3-sensing performance of BC6N monolayer with single vacancy and Stone-Wales defects: A DFT study. Applied Surface Science, 2021, 551, 149383.	6.1	45
168	Calcium ion-selective electrode based on the facile synthesis of CuO over Cu wires. Journal of Materials Science: Materials in Electronics, 2021, 32, 20240-20251.	2.2	5
170	Polypyrrole-derived N-doped carbon nanoribbon for broadband microwaves absorption. Journal of Materials Science: Materials in Electronics, 2021, 32, 26151.	2.2	1
171	Two-Dimensional Material-Based Colorimetric Biosensors: A Review. Biosensors, 2021, 11, 259.	4.7	78
172	Surfaceâ€Modified Phthalocyanineâ€Based Twoâ€Dimensional Conjugated Metal–Organic Framework Films for Polarityâ€Selective Chemiresistive Sensing. Angewandte Chemie - International Edition, 2021, 60, 18666-18672.	13.8	41
173	Phononic Crystal Sensors: A New Class of Resonant Sensors—Chances and Challenges for the Determination of Liquid Properties. Frontiers in Mechanical Engineering, 2021, 7, .	1.8	18
174	Conductive Metalâ€Organic Frameworks: Electronic Structure and Electrochemical Applications. Chemistry - A European Journal, 2021, 27, 11482-11538.	3.3	25
175	Surfaceâ€Modified Phthalocyanineâ€Based Twoâ€Dimensional Conjugated Metal–Organic Framework Films for Polarityâ€Selective Chemiresistive Sensing. Angewandte Chemie, 2021, 133, 18814-18820.	2.0	7
176	Interfacial Synthesis of Layer-Oriented 2D Conjugated Metal–Organic Framework Films toward Directional Charge Transport. Journal of the American Chemical Society, 2021, 143, 13624-13632.	13.7	36
177	Highly sensitive gas sensing platforms based on field effect Transistor-A review. Analytica Chimica Acta, 2021, 1172, 338575.	5.4	26
178	Multishelled NiO/NiCo2O4 hollow microspheres derived from bimetal-organic frameworks as high-performance sensing material for acetone detection. Journal of Hazardous Materials, 2021, 415, 125662.	12.4	38
179	Nitrogenâ€doped TiO 2 Nanocrystals for Highly Sensitive Electrochemical Immunoassay of Carcinoembryonic Antigen. Electroanalysis, 0, , .	2.9	1
180	MXene-Derived TiO ₂ Nanoparticles Intercalating between RGO Nanosheets: An Assembly for Highly Sensitive Gas Detection. ACS Applied Materials & Interfaces, 2021, 13, 39772-39780.	8.0	32
181	A selective polypyrrole-based sub-ppm impedimetric sensor for the detection of dissolved hydrogen sulfide and ammonia in a mixture. Journal of Hazardous Materials, 2021, 416, 125892.	12.4	19
182	Doping and Decorating 2D Materials for Biosensing: Benefits and Drawbacks. Advanced Functional Materials, 2021, 31, 2102555.	14.9	23

#	Article	IF	CITATIONS
183	High Performance Acoustic Wave Nitrogen Dioxide Sensor with Ultraviolet Activated 3D Porous Architecture of Ag-Decorated Reduced Graphene Oxide and Polypyrrole Aerogel. ACS Applied Materials & Interfaces, 2021, 13, 42094-42103.	8.0	38
184	Nitrogen Dioxide Gas Sensor Based on Ag-Doped Graphene: A First-Principle Study. Chemosensors, 2021, 9, 227.	3.6	15
185	Application of Metal-Organic Framework-Based Composites for Gas Sensing and Effects of Synthesis Strategies on Gas-Sensitive Performance. Chemosensors, 2021, 9, 226.	3.6	18
186	Electrochemical sensor for the detection of ppq-level Cd2+ based on a multifunctional composite material by fast scan voltammetry. Sensors and Actuators B: Chemical, 2021, 341, 130037.	7.8	15
187	Enhanced Selectivity in Volatile Organic Compound Gas Sensors Based on ReS ₂ -FETs under Light-Assisted and Gate-Bias Tunable Operation. ACS Applied Materials & Interfaces, 2021, 13, 43030-43038.	8.0	18
188	pH sensors based on amino-terminated carbon nanomembrane and single-layer graphene van der Waals heterostructures. Applied Physics Reviews, 2021, 8, 031410.	11.3	7
189	Nanostructured WO ₃ based gas sensors: a short review. Sensor Review, 2021, 41, 406-424.	1.8	8
191	Plumbene: A next generation hydrogen storage medium. International Journal of Hydrogen Energy, 2021, 46, 33197-33205.	7.1	11
192	Electrical gas sensors for meat freshness assessment and quality monitoring: A review. Trends in Food Science and Technology, 2021, 118, 36-44.	15.1	53
193	Monolayer PtTe2: A promising candidate for NO2 sensor with ultrahigh sensitivity and selectivity. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 134, 114925.	2.7	11
194	Recent advances of atomically thin 2D heterostructures in sensing applications. Nano Today, 2021, 40, 101287.	11.9	41
195	Wearable patch delivery system for artificial pancreas health diagnostic-therapeutic application: A review. Biosensors and Bioelectronics, 2021, 189, 113384.	10.1	9
196	Capacitive sensor based on GaN honeycomb nanonetwork for ultrafast and low temperature hydrogen gas detection. Sensors and Actuators B: Chemical, 2021, 346, 130488.	7.8	10
197	N dopants triggered new active sites and fast charge transfer in MoS2 nanosheets for full Response-Recovery NO2 detection at room temperature. Applied Surface Science, 2022, 571, 151162.	6.1	20
198	Robust Room-Temperature NO ₂ Sensors from Exfoliated 2D Few-Layered CVD-Grown Bulk Tungsten Di-selenide (2H-WSe ₂). ACS Applied Materials & Interfaces, 2021, 13, 4316-4329.	8.0	45
199	Virtual Alternating Current Measurements Advance Semiconductor Gas Sensors' Performance in the Internet of Things. IEEE Internet of Things Journal, 2022, 9, 5502-5510.	8.7	10
200	A comparative study of honeycomb-like 2D ĩ€-conjugated metal–organic framework chemiresistors: conductivity and channels. Dalton Transactions, 2021, 50, 13236-13245.	3.3	17
201	Advanced development of metal oxide nanomaterials for H ₂ gas sensing applications. Materials Advances, 2021, 2, 1530-1569.	5.4	28

#	Article	IF	CITATIONS
202	Advanced developments in nonstoichiometric tungsten oxides for electrochromic applications. Materials Advances, 2021, 2, 6839-6884.	5.4	32
203	Interactions Between 2D Materials and Living Matter: A Review on Graphene and Hexagonal Boron Nitride Coatings. Frontiers in Bioengineering and Biotechnology, 2021, 9, 612669.	4.1	21
204	Two-dimensional conjugated metal–organic frameworks (2D <i>c</i> -MOFs): chemistry and function for MOFtronics. Chemical Society Reviews, 2021, 50, 2764-2793.	38.1	242
205	Two-dimensional materials in biomedical, biosensing and sensing applications. Chemical Society Reviews, 2021, 50, 619-657.	38.1	265
206	Borophene-graphene heterostructure: Preparation and ultrasensitive humidity sensing. Nano Research, 2021, 14, 2337.	10.4	60
207	Using Carbon Laser Patterning to Produce Flexible, Metal-Free Humidity Sensors. ACS Applied Electronic Materials, 2020, 2, 4146-4154.	4.3	9
208	Strain-engineered black arsenene as a promising gas sensor for detecting SO ₂ among SF ₆ decompositions. Nanotechnology, 2021, 32, 065501.	2.6	9
209	Synthesis of calcite-zincite nano composite materials using sol-gel auto combustion method. IOP Conference Series: Materials Science and Engineering, 0, 1003, 012132.	0.6	1
210	Development of use-specific high-performance cyber-nanomaterial optical detectors by effective choice of machine learning algorithms. Machine Learning: Science and Technology, 2020, 1, 025007.	5.0	9
211	Natural polysaccharides based self-assembled nanoparticles for biomedical applications – A review. International Journal of Biological Macromolecules, 2021, 192, 1240-1255.	7.5	31
213	Ultrasensitive Molecular Sensors Based on Realâ€Time Impedance Spectroscopy in Solutionâ€Processed 2D Materials. Advanced Functional Materials, 2022, 32, 2106830.	14.9	13
214	Review—MXene Based Transducer for Biosensor Applications. Journal of the Electrochemical Society, 2021, 168, 117507.	2.9	9
215	Research on X-Ray Inspection of Basin Insulators and Wireless Image Sensing Technology. Journal of Sensors, 2021, 2021, 1-11.	1.1	2
216	Hybrid two-dimensional nanostructured hydrogen gas sensors. , 2019, , .		0
217	From new materials to advanced biomedical applications of solid-state biosensor: A review. Sensors and Actuators B: Chemical, 2022, 352, 131033.	7.8	11
218	Borophene gas sensor. Nano Research, 2022, 15, 2537-2544.	10.4	53
219	Suspended graphene arrays for gas sensing applications. 2D Materials, 2021, 8, 025006.	4.4	15
220	Computer Simulation of the Electric Transport Properties of the FeSe Monolayer. Latvian Journal of Physics and Technical Sciences, 2020, 57, 3-11.	0.6	1

ARTICLE IF CITATIONS # H2S sensing under various humidity conditions with Ag nanoparticle functionalized Ti3C2Tx MXene 221 12.4 48 field-effect transistors. Journal of Hazardous Materials, 2022, 424, 127492. Scalably Nanomanufactured Atomically Thin Materialsâ€Based Wearable Health Sensors. Small Structures, 2022, 3, 2100120. Role of nanostructuring of sensing materials in performance of electrical gas sensors by combining 223 2.4 5 with extra strategies. Nano Express, 2021, 2, 042003. Immobilization of Molecular Assemblies on 2D Nanomaterials for Electrochemical Biosensing 224 0.3 Applications. Gels Horizons: From Science To Smart Materials, 2021, , 435-474. Hard template synthesis of 2D porous Co₃O₄ nanosheets with graphene oxide 225 2.6 1 for H₂O₂ sensing. Nanotechnology, 2021, 32, 015502. Photocatalytic Reduction of CO<sub>2</sub> over Metal/BaTiO<sub>3</sub> Catalysts. Solid State Phenomena, 0, 312, 74-79. 0.3 A fast micro–nano liquid layer induced construction of scaled-up oxyhydroxide based 227 10.3 27 electrocatalysts for alkaline water splitting. Journal of Materials Chemistry A, 2021, 9, 26777-26787. Techniques for wearable gas sensors fabrication. Sensors and Actuators B: Chemical, 2022, 353, 131133. Current progress in organic–inorganic hetero-nano-interfaces based electrochemical biosensors for 229 18.8 57 healthcare monitoring. Coordination Chemistry Reviews, 2022, 452, 214282. Thin Films of an Ultrastable Metal–Organic Framework for Formic Acid Sensing with High Selectivity and Excellent Reproducibility., 2021, 3, 1746-1751. A Novel Artificial Neuron-Like Gas Sensor Constructed from CuS Quantum Dots/Bi2S3 Nanosheets. 231 27.0 53 Nano-Micro Letters, 2022, 14, 8. Opportunities in electrically tunable 2D materials beyond graphene: Recent progress and future 11.3 26 outlook. Applied Physics Réviews, 2021, 8, . Uranyl phosphonates: crystalline materials and nanosheets for temperature sensing. Dalton 233 3.3 9 Transactions, 2021, 50, 17129-17139. Covalent organic frameworks as multifunctional materials for chemical detection. Chemical Society 234 38.1 114 Reviews, 2021, 50, 13498-13558. Highly sensitive and selective room-temperature gas sensors based on B6N6H6 monolayer for sensing 235 32 4.1 SO2 and NH3: A first-principles study. Results in Physics, 2022, 33, 105208. Recent advances in arsenene nanostructures towards prediction, properties, synthesis and applications. Surfaces and Interfaces, 2022, 28, 101610. Current progress in plant pathogen detection enabled by nanomaterials-based (bio)sensors. Sensors 237 4.4 18 and Actuators Reports, 2022, 4, 100068. Highly Sensitive and Selective Room-Temperature Gas Sensors Based on B ₆N 238 ₆H ₆ Monolayer for Sensing SO ₂ and NH ₃: A First-Principles Study. SSRN Electronic Journal, 0, , .

#	Article	IF	CITATIONS
239	Noble metals and nonnoble metal oxides based electrochemical sensors. , 2022, , 115-140.		6
240	Porphyrinâ€Based COF 2D Materials: Variable Modification of Sensing Performances by Postâ€Metallization. Angewandte Chemie, 0, , .	2.0	13
241	Review—Recent Advances in Graphene-Based Field-Effect-Transistor Biosensors: A Review on Biosensor Designing Strategy. Journal of the Electrochemical Society, 2022, 169, 027509.	2.9	9
242	Ultra-sensitive all organic PVDF-TrFE E-spun nanofibers with enhanced β-phase for piezoelectric response. Journal of Materials Science: Materials in Electronics, 2022, 33, 3965-3981.	2.2	14
243	Enhancement in room temperature ammonia sensing properties of naphthalene diimides through core expansion. Journal of Materials Chemistry C, 2022, 10, 1326-1333.	5.5	10
244	Palladium Nanosheet-Based Dual Gas Sensors for Sensitive Room-Temperature Hydrogen and Carbon Monoxide Detection. ACS Sensors, 2022, 7, 225-234.	7.8	25
245	Electroanalytical techniques. , 2022, , 163-175.		1
246	Metal–organic frameworks for advanced transducer based gas sensors: review and perspectives. Nanoscale Advances, 2022, 4, 697-732.	4.6	33
247	Spin Current Sensing for Selective Detection of Explosive Molecules. ACS Applied Materials & Interfaces, 2022, 14, 4469-4478.	8.0	1
248	Machine Learning-Assisted Pattern Recognition of Amyloid Beta Aggregates with Fluorescent Conjugated Polymers and Graphite Oxide Electrostatic Complexes. Analytical Chemistry, 2022, 94, 2757-2763.	6.5	12
249	Self-Healing, Self-Adhesive and Stable Organohydrogel-Based Stretchable Oxygen Sensor with High Performance at Room Temperature. Nano-Micro Letters, 2022, 14, 52.	27.0	53
250	Porphyrinâ€Based COF 2D Materials: Variable Modification of Sensing Performances by Postâ€Metallization. Angewandte Chemie - International Edition, 2022, 61, .	13.8	63
251	Two-dimensional chromium phosphorus monolayer based gas sensors to detect NOx: A first-principles study. Results in Physics, 2022, 32, 105100.	4.1	10
254	Borophene as an emerging 2D flatland for biomedical applications: current challenges and future prospects. Journal of Materials Chemistry B, 2022, 10, 1146-1175.	5.8	31
256	Single-phase high-entropy oxide-based chemiresistor: Toward selective and sensitive detection of methane gas for real-time applications. Sensors and Actuators B: Chemical, 2022, 357, 131426.	7.8	18
257	Gas sensing based on metal-organic frameworks: Concepts, functions, and developments. Journal of Hazardous Materials, 2022, 429, 128321.	12.4	43
258	MXene-derived TiO2 nanosheets decorated with Ag nanoparticles for highly sensitive detection of ammonia at room temperature. Journal of Materials Science and Technology, 2022, 114, 233-239.	10.7	41
259	A two-dimensional Ti ₃ C ₂ T _{<i>X</i>} MXene@TiO ₂ /MoS ₂ heterostructure with excellent selectivity for the room temperature detection of ammonia. Journal of Materials Chemistry A, 2022, 10, 5505-5519.	10.3	76

#	Article	IF	CITATIONS
260	Gas Sensing and Capturing Based on the C ₇ N ₆ Monolayer with and Without Metal Decoration: A First-Principles Investigation. SSRN Electronic Journal, 0, , .	0.4	0
261	Onion-structured transition metal dichalcogenide nanoparticles by laser fabrication in liquids and atmospheres. Chinese Physics B, 2022, 31, 076106.	1.4	1
262	2D Heterostructures for Ubiquitous Electronics and Optoelectronics: Principles, Opportunities, and Challenges. Chemical Reviews, 2022, 122, 6514-6613.	47.7	187
263	Semiquantitative Classification of Two Oxidizing Gases with Graphene-Based Gas Sensors. Chemosensors, 2022, 10, 68.	3.6	5
264	Advances in electrochemical detection methods for measuring contaminants of emerging concerns. Electrochemical Science Advances, 2022, 2, .	2.8	19
265	Advances in 3d Printed-Based (Bio)Sensors for Food Analysis. SSRN Electronic Journal, 0, , .	0.4	1
266	Two-Dimensional Dy2O3-Pd-PDA/rGO Heterojunction Nanocomposite: Synergistic Effects of Hybridisation, UV Illumination and Relative Humidity on Hydrogen Gas Sensing. Chemosensors, 2022, 10, 78.	3.6	10
267	High-temperature multigap superconductivity in two-dimensional metal borides. Physical Review Materials, 2022, 6, .	2.4	18
268	A review on recent advances in hydrogen peroxide electrochemical sensors for applications in cell detection. Chinese Chemical Letters, 2022, 33, 4133-4145.	9.0	49
269	Effect of processing on the stability and electrical properties of pressureless sintered graphene oxide–alumina composites. Ceramics International, 2022, 48, 15839-15847.	4.8	2
270	2D Materials for Wearable Energy Harvesting. Advanced Materials Technologies, 2022, 7, .	5.8	16
271	Conjugated Metal–Organic Macrocycles: Synthesis, Characterization, and Electrical Conductivity. Journal of the American Chemical Society, 2022, 144, 4515-4521.	13.7	25
272	Recent advances in ethanol gas sensors based on metal oxide semiconductor heterojunctions. Rare Metals, 2022, 41, 1818-1842.	7.1	71
273	Inkjetâ€Printed rGO/binary Metal Oxide Sensor for Predictive Gas Sensing in a Mixed Environment. Advanced Functional Materials, 2022, 32, .	14.9	38
274	A Fully Integrated Flexible Tunable Chemical Sensor Based on Gold-Modified Indium Selenide Nanosheets. ACS Sensors, 2022, 7, 1183-1193.	7.8	29
275	Simultaneous detection of exosomal microRNAs by nucleic acid functionalized disposable paper-based sensors. Chemical Engineering Journal, 2022, 438, 135594.	12.7	20
276	2D paddle wheel lanthanide metal-organic framework: Synthesis, structure and exploration of catalytic N-arylation reaction. Polyhedron, 2022, 219, 115789.	2.2	1
277	Gas sensing and capturing based on the C7N6 monolayer with and without metal decoration: A first-principles investigation. Applied Surface Science, 2022, 591, 153129.	6.1	36

#	Article	IF	CITATIONS
278	Recent Advances of Nanostructured Materials for Photoelectrochemical Bioanalysis. Chemosensors, 2022, 10, 14.	3.6	8
279	Metalâ€Organic Framework Based Gas Sensors. Advanced Science, 2022, 9, e2104374.	11.2	142
280	Iridium Single-Atomic Site Catalysts with Superior Oxygen Reduction Reaction Activity for Sensitive Monitoring of Organophosphorus Pesticides. Analytical Chemistry, 2022, 94, 1390-1396.	6.5	28
281	Molecular Engineered Carbon-Based Sensor for Ultrafast and Specific Detection of Neurotransmitters. ACS Applied Materials & Interfaces, 2021, 13, 60878-60893.	8.0	12
282	Influence of "Productive―Impurities (Cd, Na, O) on the Properties of the Cu ₂ ZnSnS ₄ Absorber of Model Solar Cells. Latvian Journal of Physics and Technical Sciences, 2021, 58, 13-23.	0.6	0
283	Wet-chemical synthesis and applications of amorphous metal-containing nanomaterials. Nano Research, 2023, 16, 4289-4309.	10.4	17
284	Two-Dimensional Field-Effect Transistor Sensors: The Road toward Commercialization. Chemical Reviews, 2022, 122, 10319-10392.	47.7	89
285	Triethyl-Borates as Surfactants to Stabilize Semiconductor Nanoplatelets in Polar Solvents and to Tune Their Optical Properties. Frontiers in Chemistry, 2022, 10, 860781.	3.6	2
286	MXene chemistry, electrochemistry and energy storage applications. Nature Reviews Chemistry, 2022, 6, 389-404.	30.2	429
287	An electrochemical biosensor based on few-layer MoS ₂ nanosheets for highly sensitive detection of tumor marker ctDNA. Analytical Methods, 2022, 14, 1956-1962.	2.7	5
288	Enhanced n-butanol sensing performance of SnO2/ZnO nanoflowers fabricated via a facile solvothermal method. Ceramics International, 2022, 48, 22426-22434.	4.8	15
289	Two-Dimensional Material-Based Electrochemical Sensors/Biosensors for Food Safety and Biomolecular Detection. Biosensors, 2022, 12, 314.	4.7	103
290	Advances in 3D printed sensors for food analysis. TrAC - Trends in Analytical Chemistry, 2022, 154, 116672.	11.4	15
291	Ultra-Sensitive Photo-Induced Hydrogen Gas Sensor Based on Two-Dimensional CeO2-Pd-PDA/rGO Heterojunction Nanocomposite. Nanomaterials, 2022, 12, 1628.	4.1	10
292	High Throughput Data-Driven Design of Laser-Crystallized 2D MoS ₂ Chemical Sensors: A Demonstration for NO ₂ Detection. ACS Applied Nano Materials, 2022, 5, 7549-7561.	5.0	5
293	Perspectives of different colourâ€emissive nanomaterials in fluorescent ink, LEDs, cell imaging, and sensing of various analytes. Luminescence, 2023, 38, 867-895.	2.9	9
294	Sensors for Volatile Organic Compounds. ACS Nano, 2022, 16, 7080-7115.	14.6	129
295	Layer-by-layer growth of ferrocene decorated metal–organic framework thin films and studies of their electrochemical properties. Applied Surface Science, 2022, 596, 153525.	6.1	1

#	Article	IF	CITATIONS
296	Semiconductor Porous Hydrogen-Bonded Organic Frameworks Based on Tetrathiafulvalene Derivatives. Journal of the American Chemical Society, 2022, 144, 9074-9082.	13.7	26
297	Amine-functionalized stable Nb ₂ CT _{<i>x</i>} MXene toward room temperature ultrasensitive NO ₂ gas sensor. Materials Advances, 2022, 3, 5151-5162.	5.4	28
298	Self-Powered and Flexible Gas Sensor Using Defect-Engineered Ws2/G Heterostructure. SSRN Electronic Journal, 0, , .	0.4	0
299	Constructing Ultrathin Defective Co3o4/Mos2 Nanosheets Based 2d/2d Heterojunction Toward Room Temperature Nh3 Detection. SSRN Electronic Journal, 0, , .	0.4	0
300	Electrochemical Sensor Based on Glassy-Carbon Electrode Modified with Dual-Ligand EC-MOFs Supported on rGO for BPA. Biosensors, 2022, 12, 367.	4.7	5
301	Two-dimensional material inks. Nature Reviews Materials, 2022, 7, 717-735.	48.7	71
302	Room-temperature NH3 gas-sensing characteristics of spray-deposited transition metal ions substituted CoFe2O4 thin films. Applied Physics A: Materials Science and Processing, 2022, 128, .	2.3	3
303	Snse Nanosheet Arrays Film for Trace No2 Detection at Room Temperature. SSRN Electronic Journal, 0, , .	0.4	0
304	2D materials: increscent quantum flatland with immense potential for applications. Nano Convergence, 2022, 9, .	12.1	29
305	Solid-State Reaction Synthesis of Nanoscale Materials: Strategies and Applications. Chemical Reviews, 2022, 122, 12748-12863.	47.7	35
306	The rise of 2D materials/ferroelectrics for next generation photonics and optoelectronics devices. APL Materials, 2022, 10, .	5.1	23
307	Metal–Organic Frameworks on Palladium Nanoparticle–Functionalized Carbon Nanotubes for Monitoring Hydrogen Storage. ACS Applied Nano Materials, 2022, 5, 13779-13786.	5.0	9
308	Cascading Photoelectric Detecting and Chemiresistive Gasâ€Sensing Properties of Pb ₅ S ₂ I ₆ Nanowire Mesh for Multiâ€Factor Accurate Fire Alarm. Small Methods, 0, , 2200470.	8.6	3
309	Bidimensional Engineered Amorphous <i>a</i> .SnO ₂ Interfaces: Synthesis and Gas Sensing Response to H ₂ S and Humidity. ACS Sensors, 2022, 7, 2058-2068.	7.8	10
310	Highly Sensitive and Selective Gas Sensors Based on Nanoporous Cn Monolayer for Reusable Detection of No, H2s and Nh3: A First-Principles Study. SSRN Electronic Journal, 0, , .	0.4	0
311	Volatolomics in healthcare and its advanced detection technology. Nano Research, 2022, 15, 8185-8213.	10.4	30
312	Cocrystallization Enabled Spatial Self onfinement Gives Crystalline Porous Metal Oxide Nanosheets for Gas Sensing. Angewandte Chemie, 0, , .	2.0	4
313	Cu ₂ O/Ti ₃ C ₂ T _x nanocomposites for detection of triethylamine gas at room temperature. Nanotechnology, 2022, 33, 415501.	2.6	12

#	Article	IF	CITATIONS
314	Pentagonal 2D Transition Metal Dichalcogenides: PdSe ₂ and Beyond. Advanced Functional Materials, 2022, 32, .	14.9	16
315	Cocrystallization Enabled Spatial Selfâ€Confinement Approach to Synthesize Crystalline Porous Metal Oxide Nanosheets for Gas Sensing. Angewandte Chemie - International Edition, 2022, 61, .	13.8	10
316	N–p-Conductor Transition of Gas Sensing Behaviors in Mo ₂ CT _{<i>x</i>} MXene. ACS Sensors, 2022, 7, 2225-2234.	7.8	20
317	Research trends in biomedical applications of two-dimensional nanomaterials over the last decade – A bibliometric analysis. Advanced Drug Delivery Reviews, 2022, 188, 114420.	13.7	25
318	Chemical and electrochemical conversion of magnetic nanoparticles to Prussian blue for label-free and refreshment-enhanced electrochemical biosensing of enrofloxacin. Analytica Chimica Acta, 2022, 1221, 340123.	5.4	4
319	SnSe nanosheet arrays film for trace NO2 detection at room temperature. Sensors and Actuators B: Chemical, 2022, 370, 132407.	7.8	8
320	Effectiveness of metal-organic framework as sensors: Comprehensive review. , 2022, , 47-64.		2
321	Photonic Crystals: A Review as Promising Tool for the Selective Detection of Toxic Gases. , 2022, 2, .		2
322	2D semiconductors for specific electronic applications: from device to system. Npj 2D Materials and Applications, 2022, 6, .	7.9	53
323	<i>De Novo</i> Design of Molecules with Low Hole Reorganization Energy Based on a Quarter-Million Molecule DFT Screen: Part 2. Journal of Physical Chemistry A, 2022, 126, 5837-5852.	2.5	1
324	Tailoring the Vertical and Planar Growth of 2D WS ₂ Thin Films Using Pulsed Laser Deposition for Enhanced Gas Sensing Properties. ACS Applied Materials & Interfaces, 2022, 14, 36789-36800.	8.0	8
325	Orthogonally Responsive Donor–Acceptor Stenhouse Adduct/Poly(2-ethylsulfonyl-2-oxazoline) Colorimetric Sensors with Nonvolatile Memories. ACS Applied Polymer Materials, 2022, 4, 6505-6513.	4.4	4
326	Gas Sensors Based on Single-Wall Carbon Nanotubes. Molecules, 2022, 27, 5381.	3.8	22
327	Noble-Nanoparticle-Decorated Ti ₃ C ₂ T _{<i>x</i>} MXenes for Highly Sensitive Volatile Organic Compound Detection. ACS Omega, 2022, 7, 29195-29203.	3.5	13
328	Covalent and Non-covalent Functionalized Nanomaterials for Environmental Restoration. Topics in Current Chemistry, 2022, 380, .	5.8	11
329	Chemiresistive gas sensors based on layered double hydroxides (LDHs) structures: A review. Sensors and Actuators A: Physical, 2022, 346, 113827.	4.1	10
330	First-principles study of highly sensitive and selective gas-sensing properties of the C3N2 monolayers towards SO2 gas. Surfaces and Interfaces, 2022, 33, 102254.	3.0	5
331	Self-powered and flexible gas sensor using defect-engineered WS2/G heterostructure. Sensors and Actuators B: Chemical, 2022, 371, 132523.	7.8	17

#	Article	IF	CITATIONS
332	Evolution of MXene and its 2D heterostructure in electrochemical sensor applications. Coordination Chemistry Reviews, 2022, 471, 214755.	18.8	29
333	High performance gas sensors based on layered cobaltite nanoflakes with moisture resistance. Applied Surface Science, 2022, 604, 154487.	6.1	6
334	Highly sensitive and selective gas sensors based on nanoporous CN monolayer for reusable detection of NO, H2S and NH3: A first-principles study. Applied Surface Science, 2022, 606, 154806.	6.1	18
335	Constructing ultrathin defective Co3O4/MoS2 nanosheets based 2D/2D heterojunction toward room temperature NH3 detection. Journal of Alloys and Compounds, 2022, 927, 166962.	5.5	10
336	Recent progress on MOF-based optical sensors for VOC sensing. Chemical Science, 2022, 13, 13978-14007.	7.4	49
337	Controlled growth of organic 2D layered material thin films <i>via</i> interfacial methods. Chemical Communications, 2022, 58, 12384-12398.	4.1	7
338	Nanomaterial-based Sensors for Volatile Biomarkers. , 2022, , 379-400.		0
339	Advanced Carbon-Based Gas Sensors. , 2022, , 139-159.		1
340	Challenges and Opportunities for Printed Electrical Gas Sensors. ACS Sensors, 2022, 7, 2804-2822.	7.8	23
341	Investigation the ability of pure and Al-doped graphene nano materials to detect toxic gases using first principle study. IOP Conference Series: Earth and Environmental Science, 2022, 1088, 012013.	0.3	0
342	Heterostructures of 2D materials and their applications in biosensing. Progress in Materials Science, 2023, 132, 101024.	32.8	18
343	Epitaxial Self-Assembly of Interfaces of 2D Metal–Organic Frameworks for Electroanalytical Detection of Neurotransmitters. ACS Nano, 2022, 16, 13869-13883.	14.6	12
344	Decorating MoS ₂ Nanoscrolls with Solution-Processed PbI ₂ Nanocrystals for Improved Photosensitivity. ACS Applied Nano Materials, 2022, 5, 15892-15901.	5.0	2
345	The TiNI monolayer: a two-dimensional system with promising ferroelastic, topological, and thermoelectric properties. Physical Chemistry Chemical Physics, 2022, 24, 28134-28140.	2.8	2
346	NH3 Sensor Based on ZIF-8/CNT Operating at Room Temperature with Immunity to Humidity. Inorganics, 2022, 10, 193.	2.7	2
347	2D Van der Waals Heterostructures for Chemical Sensing. Advanced Functional Materials, 2022, 32, .	14.9	34
348	2D-Materials-Based Wearable Biosensor Systems. Biosensors, 2022, 12, 936.	4.7	10
349	Enhanced Pd/aâ€WO ₃ /VO ₂ Hydrogen Gas Sensor Based on VO ₂ Phase Transition Layer. Small Methods, 2022, 6, .	8.6	5

#	Article	IF	CITATIONS
350	Tunneling or Hopping? A Direct Electrochemical Observation of Electron Transfer in DNA. Analytical Chemistry, 2022, 94, 15324-15331.	6.5	5
351	Charge Transport Across Dynamic Covalent Chemical Bridges. Nano Letters, 2022, 22, 8331-8338.	9.1	5
352	An overview on room-temperature chemiresistor gas sensors based on 2D materials: Research status and challenge. Composites Part B: Engineering, 2023, 248, 110378.	12.0	21
353	Visual chemiresistive dual-mode sensing platform based on SnS2/Ti3C2 MXene Schottky junction for acetone detection at room temperature. Talanta, 2023, 253, 124063.	5.5	12
354	2D Materials towards sensing technology: From fundamentals to applications. Sensing and Bio-Sensing Research, 2022, 38, 100540.	4.2	27
355	Ferroelectricity and nanotube-induced synthesis of one-dimensional group-⣠monochalcogenide nanowires. Applied Surface Science, 2023, 608, 155160.	6.1	4
356	Adsorption of NO gas molecule on the vacancy defected and transition metal doped antimonene: A first-principles study. Vacuum, 2023, 207, 111654.	3.5	7
357	Review of Interface Modification Based on 2D Nanomaterials for Surface Plasmon Resonance Biosensors. ACS Photonics, 2022, 9, 3807-3823.	6.6	16
358	Interactions Balancing Competition and Cooperation between Covalent–Organic Framework Additives and PEG Base Oil toward Advanced Lubrication. ACS Applied Materials & Interfaces, 2022, 14, 51476-51486.	8.0	5
359	Nitrogen and boron-doped reduced graphene oxide chemiresistive sensor for real-time monitoring dissolved oxygen in biological processes. Sensors and Actuators Reports, 2022, 4, 100128.	4.4	0
360	Smart electronics based on 2D materials for wireless healthcare monitoring. Applied Physics Reviews, 2022, 9, .	11.3	7
361	A room temperature functioning ammonia sensor utilising a bis-phenylalanine naphthalene diimide. Sensors and Actuators A: Physical, 2022, 348, 114008.	4.1	3
362	Environmental routes of virus transmission and the application of nanomaterial-based sensors for virus detection. Environmental Science: Nano, 2023, 10, 393-423.	4.3	8
363	Rationally designed titanium-based metal–organic frameworks for visible-light activated chemiresistive sensing. Journal of Materials Chemistry A, 2023, 11, 965-971.	10.3	14
364	Hierarchical In ₂ O ₃ /rGO nanostructures with uniformly distributed In ₂ O ₃ nanoparticles: microwave-assisted synthesis and improved NO-sensing performance. New Journal of Chemistry, 2023, 47, 1715-1723.	2.8	4
365	Recent electrochemical sensors and biosensors for toxic agents based on screen-printed electrodes equipped with nanomaterials. Microchemical Journal, 2023, 185, 108281.	4.5	10
366	Construction of SnO2 nanofibers @ MoS2 nanosheets core-shell nanocomposites for high efficiency xylene detection. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2023, 659, 130813.	4.7	0
367	2D MXeneâ€Based Biosensing: A Review. Small, 2023, 19, .	10.0	30

#	Article	IF	CITATIONS
368	Stainless Steel Foil-Based Label-Free Modular Thin-Film Electrochemical Detector for Solvent Identification. Micromachines, 2022, 13, 2256.	2.9	0
369	UV-Light-Tunable p-/n-Type Chemiresistive Gas Sensors Based on Quasi-1D TiS3 Nanoribbons: Detection of Isopropanol at ppm Concentrations. Sensors, 2022, 22, 9815.	3.8	2
370	Exploitation of Schottky-Junction-based Sensors for Specifically Detecting ppt-Concentration Gases. ACS Sensors, 2022, 7, 3764-3772.	7.8	3
371	The Ti0.2V1.8C MXene Ink-Prepared Chemiresistor: From Theory to Tests with Humidity versus VOCs. Chemosensors, 2023, 11, 7.	3.6	13
372	Dense Conductive Metal–Organic Frameworks as Robust Electrocatalysts for Biosensing. Analytical Chemistry, 2022, 94, 17177-17185.	6.5	14
373	Borophene-based materials for energy, sensors and information storage applications. , 2023, 2, e9120051.		42
374	Recent Advances in Luminescent Metal-Organic Frameworks for Detection of Gas and Volatile Organic Molecules. IEEE Transactions on Instrumentation and Measurement, 2023, 72, 1-12.	4.7	0
375	2D Zinc Oxide \hat{a} €" Synthesis, Methodologies, Reaction Mechanism, and Applications. Small, 2023, 19, .	10.0	22
376	Density functional theory study on sensing properties of <scp> g ₃ N ₄ Composition of the chinese chemical Society, 0, , .</scp>	1.4	2
377	3D-strain-induced multiple semiconductor–metallic phase transition in monolayer SrTiO3. Applied Physics Letters, 2023, 122, .	3.3	3
378	Fully Flexible MXene-based Gas Sensor on Paper for Highly Sensitive Room-Temperature Nitrogen Dioxide Detection. ACS Sensors, 2023, 8, 103-113.	7.8	40
379	Threeâ€Terminal Artificial Olfactory Sensors based on Emerging Materials: Mechanism and Application. Advanced Functional Materials, 2023, 33, .	14.9	12
380	Redoxâ€Active Mixedâ€Linker Metal–Organic Frameworks with Switchable Semiconductive Characteristics for Tailorable Chemiresistive Sensing. Angewandte Chemie - International Edition, 2023, 62, .	13.8	11
381	Metal halide HgI2 monolayer with auxetic property and photocatalysis application. Computational Materials Science, 2023, 219, 112007.	3.0	1
382	Redoxâ€Active Mixedâ€Linker Metal–Organic Frameworks with Switchable Semiconductive Characteristics for Tailorable Chemiresistive Sensing. Angewandte Chemie, 2023, 135, .	2.0	0
383	A Review on Low-Dimensional Nanomaterials: Nanofabrication, Characterization and Applications. Nanomaterials, 2023, 13, 160.	4.1	17
384	Femtomolar Level-Specific Detection of Lead Ions in Aqueous Environments, Using Aptamer-Derivatized Graphene Field-Effect Transistors. ACS Applied Nano Materials, 2023, 6, 2228-2235.	5.0	5
385	<i>In situ</i> synthesis of polythiophene encapsulated 2D hexagonal boron nitride nanocomposite based electrochemical transducer for detection of 5-fluorouracil with high selectivity. RSC Advances, 2023, 13, 2780-2794.	3.6	3

#	Article	IF	CITATIONS
386	Wearable chemical sensors based on 2D materials for healthcare applications. Nanoscale, 2023, 15, 3079-3105.	5.6	7
387	2D materials for flexible electronics. , 2023, , 169-206.		1
388	Involvement of metal organic frameworks in wearable electrochemical sensor for efficient performance. Trends in Environmental Analytical Chemistry, 2023, 38, e00200.	10.3	22
389	Reservoir computing and photoelectrochemical sensors: A marriage of convenience. Coordination Chemistry Reviews, 2023, 487, 215155.	18.8	7
390	Sequentially bridged MXene platelets for strong highâ€ŧemperature EMâ€ŀR biâ€stealth sheets. SmartMat, 2024, 5, .	10.7	3
391	Exploring Mg decorated antimonene for promising hydrogen storage material: A DFT outlook. Materials Science in Semiconductor Processing, 2023, 161, 107471.	4.0	1
392	A novel Sn/SnOx Ti3C2Tx nanosheet for adsorptive strontium removal in aqueous solution. Journal of Nuclear Materials, 2023, 577, 154323.	2.7	1
393	Pt/MoS ₂ /Polyaniline Nanocomposite as a Highly Effective Room Temperature Flexible Gas Sensor for Ammonia Detection. ACS Applied Materials & Interfaces, 2023, 15, 9604-9617.	8.0	17
394	Graphene and Two-Dimensional Materials for Biomolecule Sensing. Annual Review of Biophysics, 2023, 52, 487-507.	10.0	2
395	Metal-organic frameworks (MOF)-based sensors for detection of toxic gases: A review of current status and future prospects. Materials Chemistry and Physics, 2023, 299, 127512.	4.0	29
396	Chemical sensors based on two-dimensional materials. , 2023, , 143-163.		0
397	MXene Fiber-based Wearable Textiles in Sensing and Energy Storage Applications. Fibers and Polymers, 2023, 24, 1167-1182.	2.1	4
398	Improved Performance of g-C ₃ N ₄ for Optoelectronic Detection of NO ₂ Gas by Coupling Metal–Organic Framework Nanosheets with Coordinatively Unsaturated Ni(II) Sites. ACS Applied Materials & Interfaces, 2023, 15, 11961-11969.	8.0	8
399	Synergistic coupling of 0D–2D heterostructure from ZnO and Ti3C2T MXene-derived TiO2 for boosted NO2 detection at room temperature. Nano Materials Science, 2023, 5, 421-428.	8.8	6
400	Roles of MXenes in biomedical applications: recent developments and prospects. Journal of Nanobiotechnology, 2023, 21, .	9.1	34
401	2D material-based sensing devices: an update. Journal of Materials Chemistry A, 2023, 11, 6016-6063.	10.3	16
402	Nanomaterials-Based Electrochemical Δ9-THC and CBD Sensors for Chronic Pain. Biosensors, 2023, 13, 384.	4.7	0
403	An ultra-sensitive and stable electrochemical sensor with an expanded working range <i>via in situ</i> assembly of 3-D structures based on MXene/GnR nanohybrids. Journal of Materials Chemistry A. 2023, 11, 10748-10765.	10.3	4

#	Article	IF	CITATIONS
404	Functionalisation of Graphene Sensor Surfaces for the Specific Detection of Biomarkers. Angewandte Chemie - International Edition, 2023, 62, .	13.8	5
405	Functionalisation of Graphene Sensor Surfaces for the Specific Detection of Biomarkers. Angewandte Chemie, 0, , .	2.0	0
406	Recent advances in the material design for intelligent wearable devices. Materials Chemistry Frontiers, 2023, 7, 3278-3297.	5.9	12
407	Phase Change Thermal Storage Materials for Interdisciplinary Applications. Chemical Reviews, 2023, 123, 6953-7024.	47.7	79
408	Facile Synthesis of Metallosalphenâ€Based 2D Conductive Metalâ€Organic Frameworks for NO2 Sensing: Metal Coordination Induced Planarization. Angewandte Chemie, 0, , .	2.0	1
409	Facile Synthesis of Metallosalphenâ€Based 2D Conductive Metalâ€Organic Frameworks for NO ₂ Sensing: Metal Coordination Induced Planarization. Angewandte Chemie - International Edition, 2023, 62, .	13.8	14
410	Recent Advances of MOF-Based Nanoarchitectonics for Chemiresistive Gas Sensors. Journal of Inorganic and Organometallic Polymers and Materials, 2023, 33, 1453-1494.	3.7	4
411	Nanomaterial-Based Electric and Electronic Gas Sensors. , 2023, , 253-280.		0
412	2D Amorphous/Crystalline <i>a</i> -In ₂ O ₃ /In ₂ Se ₃ Nanosheet Heterostructures with Improved Capability for H ₂ and NO ₂ Sensing. ACS Applied Nano Materials, 2023, 6, 6011-6023.	5.0	7
413	Emerging metallenes: synthesis strategies, biological effects and biomedical applications. Chemical Society Reviews, 2023, 52, 2833-2865.	38.1	4
414	Recent Advances in Integrating 1D Nanomaterials into Chemiresistive Gas Sensor Devices. Advanced Materials Technologies, 2023, 8, .	5.8	9
415	A Spaceâ€Confined Polymerization Templated by Ice Enables Large cale Synthesis of Twoâ€Dimensional Polymer Sheets. Angewandte Chemie - International Edition, 2023, 62, .	13.8	8
416	A Spaceâ€Confined Polymerization Templated by Ice Enables Large‣cale Synthesis of Twoâ€Dimensional Polymer Sheets. Angewandte Chemie, 2023, 135, .	2.0	0
417	Applicability of Smart Tools in Vegetable Disease Diagnostics. Agronomy, 2023, 13, 1211.	3.0	2
418	2D/2D SnS2/SnSe2 van der Waals heterostructure for highly sensitive room-temperature NO2 sensor: Key role of interface contact. Chemical Engineering Journal, 2023, 466, 143369.	12.7	6
419	Dielectrics for Two-Dimensional Transition-Metal Dichalcogenide Applications. ACS Nano, 2023, 17, 9870-9905.	14.6	8
420	Fast Response-Recovery and High Selectivity Chemicapacitive Detection of a Nerve Agent Simulant Vapor. ECS Journal of Solid State Science and Technology, 2023, 12, 065002.	1.8	0
421	Graphene-based field-effect transistors for biosensing: where is the field heading to?. Analytical and Bioanalytical Chemistry, 0, , .	3.7	1

#	Article	IF	CITATIONS
422	Sodium-alginate-laden MXene and MOF systems and their composite hydrogel beads for batch and fixed-bed adsorption of naproxen with electrochemical regeneration. Carbohydrate Polymers, 2023, 318, 121098.	10.2	3
423	MOF-derived CeO2/Co3O4–Fe2O3@CC nanocomposites as highly sensitive electrochemical sensor for bisphenol A detection. Chemosphere, 2023, 336, 139249.	8.2	3
424	Ligandâ€Tuned Perylene Diimideâ€Based Versatile Coordination Polymers for Photoluminescent Sensing and Optoelectronics. Advanced Optical Materials, 0, , .	7.3	0
425	Adsorption of NO2 and NH3 on single-atom (Co, Pd, Pt)-decorated 2H-MoS2 monolayer: A DFT study. Results in Physics, 2023, 51, 106694.	4.1	3
426	Graphene Transistors for In Vitro Detection of Health Biomarkers. Advanced Functional Materials, 2023, 33, .	14.9	6
427	Integrated Soft Porosity and Electrical Properties of Conductiveâ€onâ€Insulating Metalâ€Organic Framework Nanocrystals. Angewandte Chemie - International Edition, 2023, 62, .	13.8	2
428	Integrated Soft Porosity and Electrical Properties of Conductiveâ€onâ€Insulating Metalâ€Organic Framework Nanocrystals. Angewandte Chemie, 2023, 135, .	2.0	0
429	Radiofrequency sensing systems based on emerging two-dimensional materials and devices. International Journal of Extreme Manufacturing, 2023, 5, 032010.	12.7	1
430	Layer-Dependent NO ₂ -Sensing Performance in MoS ₂ for Room-Temperature Monitoring. ACS Applied Nano Materials, 2023, 6, 9290-9297.	5.0	1
431	Nano-Trackers (Nano-Sensors) for Forensics Investigation. Advances in Digital Crime, Forensics, and Cyber Terrorism, 2023, , 81-107.	0.4	0
432	Metal–Organic Framework Coated Devices for Gas Sensing. ACS Sensors, 2023, 8, 2471-2492.	7.8	10
433	Molecularly Imprinted Polymer Based Antenna Sensor for Methanol Vapor Sensing. , 2023, , 1-4.		1
435	Nature-inspired functional porous materials for low-concentration biomarker detection. Materials Horizons, 0, , .	12.2	0
436	High specific surface area MXene/SWCNT/cellulose nanofiber aerogel film as an electrode for flexible supercapacitors. Composites Part B: Engineering, 2023, 264, 110888.	12.0	10
437	Interaction of Carbon Monoxide with Transition Metal Phthalocyanines. Journal of Structural Chemistry, 2023, 64, 1275-1282.	1.0	0
438	Computational Prediction of Stacking Mode in Conductive Two-Dimensional Metal–Organic Frameworks: An Exploration of Chemical and Electrical Property Changes. ACS Sensors, 2023, 8, 3068-3075.	7.8	4
439	Flexible pressure and temperature sensors towards e-skin: material, mechanism, structure and fabrication. , 0, 3, .		1
440	Selective Detection of H ₂ S Gas Using a Tin (II) Sulfide Based Chemiresistive Sensor with Schottky Contact. , 2023, , .		0

#	Article	IF	Citations
441	Organic vapor sensing behaviors of 4D printed thermoplastic polyamide elastomer by selective laser sintering. Journal of Materials Research and Technology, 2023, 26, 5095-5104.	5.8	2
442	Liquid metal-based Printing Synthesis of bismuth-doped gallium oxide and its application for photodetector. Journal of Materials Chemistry C, 0, , .	5.5	0
443	Toward Understanding the Formation Mechanism and OER Catalytic Mechanism of Hydroxides by <i>In Situ</i> and <i>Operando</i> Techniques. Angewandte Chemie - International Edition, 2023, 62, .	13.8	3
444	Auf dem Weg zum Verstädnis des Bildungs―und OERâ€Katalysemechanismus von Hydroxiden durch In situ―und <i>Operando</i> â€Techniken. Angewandte Chemie, 2023, 135, .	2.0	0
445	Recent Progress in Multifunctional Gas Sensors Based on 2D Materials. Chemosensors, 2023, 11, 483.	3.6	1
446	Modification of Metal Oxide Semiconductor Gas Sensors Using Conducting Polymer Materials. Journal of Sensors, 2023, 2023, 1-11.	1.1	1
447	Physical Confounding Factors Affecting Gas Sensors Response: A Review on Effects and Compensation Strategies for Electronic Nose Applications. Chemosensors, 2023, 11, 514.	3.6	3
449	Simultaneous detection and removal of mercury (II) using multifunctional fluorescent materials. Science of the Total Environment, 2023, 905, 167070.	8.0	0
450	Investigating the adsorption, electronic properties, and gas-sensing responses of NH3 on the B3S monolayer. Inorganic Chemistry Communication, 2023, 158, 111524.	3.9	0
451	Efficient removal of aqueous organic pollutants by well-ordered layered manganese oxide nanocomposites: Impacts of interlayer spacing and nanoconfinement. Chemical Engineering Journal, 2023, 472, 144830.	12.7	0
452	Hybrid Metal Oxide Nanocomposites for Gas-Sensing Applications: A Review. Industrial & Engineering Chemistry Research, 2023, 62, 14835-14852.	3.7	1
453	Polymer-Based Thermally Stable Chemiresistive Sensor for Real-Time Monitoring of NO ₂ Gas Emission. ACS Sensors, 2023, 8, 3687-3692.	7.8	3
454	Metal–Organic Frameworks for Sensing Applications. , 2023, , 251-300.		0
455	Smart nanomaterials to support quantum-sensing electronics. , 2023, 6, 100067.		6
456	Electrochemical CO ₂ Conversion via MXenes: A DFT Perspective. ACS Symposium Series, 0, , 169-184.	0.5	0
457	Fluorine-free MXenes via molten salt Lewis acidic etching: Applications, challenges, and future outlook. Progress in Materials Science, 2023, 139, 101183.	32.8	9
458	First-principles insights into the C ₆ N ₇ monolayer as a highly efficient sensor and scavenger for the detection of selective volatile organic compounds. RSC Advances, 2023, 13, 28703-28712.	3.6	1
459	Direct construction of strong, tough, conductive, and adhesive hydrogel bioelectronics enabled by salt-dissolved cellulose. Materials Today Communications, 2023, 37, 107002.	1.9	1

	CITATION	on Report	
#	Article	IF	CITATIONS
460	CO ₂ Reduction to Methane and Ethylene on a Single-Atom Catalyst: A Grand Canonical Quantum Mechanics Study. Journal of the American Chemical Society, 2023, 145, 21319-21329.	13.7	6
461	Revisiting traditional and modern trends in versatile 2D nanomaterials: Synthetic strategies, structural stability, and gas-sensing fundamentals. Journal of Advanced Ceramics, 2023, 12, 2149-2246.	17.4	10
462	Construction of Co3O4/SnO2 yolk-shell nanofibers for acetone gas detection. Sensors and Actuators B: Chemical, 2024, 398, 134724.	7.8	3
463	Versatile biomimetic catalyst functionalized nanozymes for electrochemical sensing. Chemical Engineering Journal, 2023, 475, 146491.	12.7	1
464	Hybrid Two-Dimensional Porous Materials. Chemistry of Materials, 0, , .	6.7	0
465	Inquest for the interaction of canonical and non-canonical DNA/RNA bases with ternary based 2D Si ₂ BN and doped Si ₂ BN for biosensing applications. Journal of Biomolecular Structure and Dynamics, 0, , 1-32.	3.5	1
467	Mechanics of 2D material bubbles. Nano Research, 2023, 16, 13434-13449.	10.4	2
468	Recent Advances in Functionalization and Hybridization of Twoâ€Dimensional Transition Metal Dichalcogenide for Gas Sensor. Advanced Engineering Materials, 2024, 26, .	3.5	2
469	Tuning the Functionality of Self-Assembled 2D Platelets in the Third Dimension. Journal of the American Chemical Society, 2023, 145, 25274-25282.	13.7	2
470	Device fabrication and sensing mechanism in metal-organic framework-based chemical sensors. Cell Reports Physical Science, 2023, 4, 101679.	5.6	1
471	Sensing applications of non-layered 2D materials. Semiconductors and Semimetals, 2023, , 217-251.	0.7	0
472	Recent progress in gas sensing based on 2D SnS2 and its heterostructure platforms: A review. Sensors and Actuators A: Physical, 2024, 365, 114860.	4.1	0
473	Engineering the Electrical and Optical Properties of WS ₂ Monolayers via Defect Control. Advanced Science, 0, , .	11.2	0
474	Hydrogen Adsorption in Ultramicroporous Metal–Organic Frameworks Featuring Silent Open Metal Sites. ACS Applied Materials & Interfaces, 0, , .	8.0	0
475	Ultrafast Response and High Selectivity of Diethylamine Gas Sensors at Room Temperature Using MOF-Derived 1D CuO Nano-Ellipsoids. Analytical Chemistry, 2023, 95, 17568-17576.	6.5	5
476	2D metallic vanadium dichalcogenides and related heterostructures. Materials Today Advances, 2024, 21, 100451.	5.2	0
477	PEI-ZIF-8 Overlayer Filter to Enhance the Selectivity of Amine Functionalized Nb ₂ CT _x Sensor Towards NO ₂ Gas at Room Temperature. , 2023, , .		0
478	Biomimetic Wearable Sensors: Emerging Combination of Intelligence and Electronics. Advanced Science, 2024, 11, .	11.2	4

#	Article	IF	CITATIONS
479	Advancements in Improving Selectivity of Metal Oxide Semiconductor Gas Sensors Opening New Perspectives for Their Application in Food Industry. Sensors, 2023, 23, 9548.	3.8	2
480	Current Progress in 3D-Printed Sensors: Design, Application, and Future Challenges. , 2024, , 1-32.		0
481	Synthesis and characterization of TiO2 nanomaterials for sensing environmental volatile compounds (VOCs): A review. TrAC - Trends in Analytical Chemistry, 2024, 170, 117454.	11.4	4
482	B3C2P3 monolayers based highly sensitive and selective room-temperature gas sensors for reusable NO and NO2 detection. Vacuum, 2024, 220, 112874.	3.5	2
483	2D Materials in Flexible Electronics: Recent Advances and Future Prospectives. Chemical Reviews, 2024, 124, 318-419.	47.7	3
484	n-Type boron \hat{I}^2 -diketone-containing conjugated polymers for high-performance room temperature ammonia sensors. Materials Horizons, 2024, 11, 1023-1031.	12.2	1
485	Tunable Crystallinity and Electron Conduction in Wavy 2D Conjugated Metal–Organic Frameworks via Halogen Substitution. Small, 0, , .	10.0	0
486	Evaluate the potential utilisation of B ₃ S monolayer as a novel formaldehyde gas sensor. Molecular Physics, 0, , .	1.7	1
487	Not Only Graphene Two-Dimensional Nanomaterials: Recent Trends in Electrochemical (Bio)sensing Area for Biomedical and Healthcare Applications. Molecules, 2024, 29, 172.	3.8	0
488	Black phosphorene with Au modification: Oxynitride remover and hydrogen sensor. Applied Surface Science, 2024, 651, 159194.	6.1	0
489	MXene-based nano(bio)sensors for the detection of biomarkers: A move towards intelligent sensors. Microchemical Journal, 2024, 197, 109874.	4.5	1
490	The B3S monolayer as a two-dimensional material for seeing of HCHO molecules as environmental and water pollutants. Physica B: Condensed Matter, 2024, 676, 415656.	2.7	1
491	A Review of Advances in Graphene Quantum Dots: From Preparation and Modification Methods to Application. Journal of Carbon Research, 2024, 10, 7.	2.7	1
492	Room-temperature humidity-resistant highly sensitive ammonia sensor based on a porous MXene/Na2Ti3O7 @polyaniline composite. Sensors and Actuators B: Chemical, 2024, 405, 135323.	7.8	0
493	Current perspectives, challenges, and future directions in the electrochemical detection of microplastics. RSC Advances, 2024, 14, 2134-2158.	3.6	0
494	Electrical gas sensors based on metal–organic frameworks for breath diagnosis. Microchemical Journal, 2024, 199, 109992.	4.5	0
495	Strategic review of gas sensing enhancement ways of 2D tungsten disulfide/selenide-based chemiresistive sensors: decoration and composite. Journal of Materials Chemistry A, 2024, 12, 3771-3806.	10.3	1
496	Exploring the Sensing Potential of g-C ₃ N ₄ versus Li/g-C ₃ N ₄ Nanoflakes toward Hazardous Organic Volatiles: A DFT Simulation Study. ACS Omega, 0, , .	3.5	0

#	Article	IF	CITATIONS
497	Ultra-effective room temperature gas discrimination based on monolithic Pd@MOF-derived porous nanocomposites: an exclusive scheme with photoexcitation. Journal of Materials Chemistry A, 2024, 12, 3896-3909.	10.3	0
498	Flexible sensors for food monitoring. Part I: Principle. Food Systems, 2024, 6, 519-530.	0.4	0
499	Gas sensor preparation based on green biological template: A review. Sensors and Actuators A: Physical, 2024, 366, 115051.	4.1	0
500	Recent advances in biological molecule detection based on a three-dimensional graphene structure. Analyst, The, 2024, 149, 1364-1380.	3.5	0
501	Wearing the Lab: Advances and Challenges in Skin-Interfaced Systems for Continuous Biochemical Sensing. Advances in Biochemical Engineering/Biotechnology, 2023, , .	1.1	0
502	Functional Electrospun Nanofibrous Hybrid Materials for Colorimetric Sensors: A Review. ACS Omega, 2024, 9, 5157-5174.	3.5	0
503	Naturally derived electrically active materials for eco-friendly electronics. Materials Today Advances, 2024, 21, 100470.	5.2	0
504	Real-time, noise and drift resilient formaldehyde sensing at room temperature with aerogel filaments. Science Advances, 2024, 10, .	10.3	0
505	Electrostatic Gating of Phosphorene Polymorphs. Journal of Physical Chemistry C, 2024, 128, 2997-3010.	3.1	0
506	Gas sensors based on metal-organic frameworks: Challenges and opportunities. , 2024, 43, 100251.		0
507	Two-Dimensional CrCl ₃ -Layered Trihalide Nanoflake Sensor for the Detection of Humidity, NO ₂ , and H ₂ . ACS Applied Nano Materials, 2024, 7, 3679-3690.	5.0	0
508	Enhancement of gas adsorption on transition metal ion–modified graphene using DFT calculations. Journal of Molecular Modeling, 2024, 30, .	1.8	0
509	Oriented Exfoliating 3D Metal–Organic Frameworks into Ultrathin Metal–Organic Nanosheets with Different Crystal Faces. Advanced Functional Materials, 0, , .	14.9	0
510	In Situ Exfoliation Growth Strategy Realizing Controlled Synthesis of 3D to 2D MOF Materials as High-Performance Electrochemical Biosensors. Inorganic Chemistry, 2024, 63, 4636-4645.	4.0	0
511	Recent advances of polyoxometalate-based materials applied for electron-related devices. Coordination Chemistry Reviews, 2024, 506, 215724.	18.8	0
512	MXenes: A promising material with multifunctional applications. Journal of Environmental Chemical Engineering, 2024, 12, 112316.	6.7	0
513	Design and engineering of 2D MXenes for point-of-care electrochemical detection of bioactive analytes and environmental pollutants. Coordination Chemistry Reviews, 2024, 507, 215746.	18.8	0
514	Advances in Few-Layered Nanoscale Transition Metal Dichalcogenides in Sensing Application. Advanced Structured Materials, 2024, , 95-116.	0.5	0

#	Article	IF	CITATIONS
515	Volatile organic compound sensing. , 2024, , 163-192.		0
516	2D magnetic nanoporous carbon with bridge-type aptamer assembly for pesticide detection based on a regenerative field-effect transistor biosensor. Chemical Engineering Journal, 2024, 487, 150380.	12.7	0
517	Highly sensitive Pt-functionalized In2O3/SnS2 nanoflowers to realize the rapid detection of H2S gas. Sensors and Actuators A: Physical, 2024, 371, 115306.	4.1	0
518	Sensing of biological molecules. , 2024, , 211-226.		0
519	Chemically sprayed pristine and Cd 2+ incorporated Co2SnO4 thin films for low ppm level enhanced chemi - resistive behaviour towards dimethylamine detection at room temperature. Journal of Hazardous Materials, 2024, 469, 134041.	12.4	0
520	Flexible and Disposable Gas Sensors Based on Two-Dimensional Materials. Key Engineering Materials, 0, 977, 85-91.	0.4	0
521	Progress in the development of copper oxide-based materials for electrochemical water splitting. International Journal of Hydrogen Energy, 2024, 62, 209-227.	7.1	0