

List of Publications by Year in descending order

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134
papers

6,351
citations

46984

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docs citations

134
times ranked

4523
citing authors

#	ARTICLE	IF	CITATIONS
1	Hydrothermally synthesized flower-like vanadium oxide nanostructures for ethanol sensing studies. <i>Materials Science in Semiconductor Processing</i> , 2022, 137, 106241.	1.9	7
2	Metal oxide-based nanofibers and their gas-sensing applications. , 2022, , 139-158.		2
3	Selective CO gas sensing by Au-decorated WS ₂ -SnO ₂ core-shell nanosheets on flexible substrates in self-heating mode. <i>Sensors and Actuators B: Chemical</i> , 2022, 353, 131197.	4.0	17
4	Inherent characteristics of ultra-photosensitive Al/Cu@CeO ₂ /p-Si metal oxide semiconductor diodes. <i>Journal of Materials Chemistry C</i> , 2022, 10, 1445-1457.	2.7	7
5	Room temperature NO ₂ sensing performance of a-C-decorated TeO ₂ nanowires. <i>Sensors and Actuators B: Chemical</i> , 2022, 363, 131853.	4.0	12
6	State-of-the-Art Research on Chemiresistive Gas Sensors in Korea: Emphasis on the Achievements of the Research Labs of Professors Hyoun Woo Kim and Sang Sub Kim. <i>Sensors</i> , 2022, 22, 61.	2.1	5
7	Catalyst and substrate-free synthesis of graphene nanosheets by unzipping C ₆₀ fullerene clusters using a pulse current method. <i>Materials Science in Semiconductor Processing</i> , 2022, 149, 106831.	1.9	2
8	Resistive-Based Gas Sensors Using Quantum Dots: A Review. <i>Sensors</i> , 2022, 22, 4369.	2.1	20
9	Hydrogen sensing characteristics of Pd-decorated ultrathin ZnO nanosheets. <i>Sensors and Actuators B: Chemical</i> , 2021, 329, 129222.	4.0	35
10	Sonochemical synthesis of PEDOT:PSS intercalated ammonium vanadate nanofiber composite for room-temperature NH ₃ sensing. <i>Sensors and Actuators B: Chemical</i> , 2021, 327, 128924.	4.0	22
11	SnO ₂ nanowires decorated by insulating amorphous carbon layers for improved room-temperature NO ₂ sensing. <i>Sensors and Actuators B: Chemical</i> , 2021, 326, 128801.	4.0	32
12	Realization of low-temperature and selective NO ₂ sensing of SnO ₂ nanowires via synergistic effects of Pt decoration and Bi ₂ O ₃ branching. <i>Ceramics International</i> , 2021, 47, 5099-5111.	2.3	23
13	Recent advances in energy-saving chemiresistive gas sensors: A review. <i>Nano Energy</i> , 2021, 79, 105369.	8.2	282
14	Boosting the sensing properties of resistive-based gas sensors by irradiation techniques: a review. <i>Nanoscale</i> , 2021, 13, 4728-4757.	2.8	33
15	Reduced Graphene Oxide (rGO)-Loaded Metal-Oxide Nanofiber Gas Sensors: An Overview. <i>Sensors</i> , 2021, 21, 1352.	2.1	60
16	Synergistic effects of SnO ₂ and Au nanoparticles decorated on WS ₂ nanosheets for flexible, room-temperature CO gas sensing. <i>Sensors and Actuators B: Chemical</i> , 2021, 332, 129493.	4.0	79
17	SnS-functionalized SnO ₂ nanowires for low-temperature detection of NO ₂ gas. <i>Materials Characterization</i> , 2021, 175, 110986.	1.9	15
18	Cu _x O Nanostructure-Based Gas Sensors for H ₂ S Detection: An Overview. <i>Chemosensors</i> , 2021, 9, 127.	1.8	23

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19	Achievement of self-heated sensing of hazardous gases by WS ₂ (core)@SnO ₂ (shell) nanosheets. <i>Journal of Hazardous Materials</i> , 2021, 412, 125196.	6.5	17
20	Gas sensing materials roadmap. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 303001.	0.7	49
21	Enhancement of room temperature ethanol sensing behavior of PbS@SnS ₂ nanocomposite by Au decoration. <i>Materials Science in Semiconductor Processing</i> , 2021, 127, 105742.	1.9	11
22	Combination of plant-mediated and sonochemical-assisted synthesis for preparation of low-toxic cadmium selenide semiconductor nanoparticles: Study of the effect of extraction techniques, characterization, comparative study of biological activities. <i>Surfaces and Interfaces</i> , 2021, 25, 101182.	1.5	8
23	Proton-beam engineered surface-point defects for highly sensitive and reliable NO ₂ sensing under humid environments. <i>Journal of Hazardous Materials</i> , 2021, 416, 125841.	6.5	34
24	Facile and fast decoration of SnO ₂ nanowires with Pd embedded SnO ₂ -x nanoparticles for selective NO ₂ gas sensing. <i>Sensors and Actuators B: Chemical</i> , 2021, 340, 129984.	4.0	35
25	Effect of Ag Addition on the Gas-Sensing Properties of Nanostructured Resistive-Based Gas Sensors: An Overview. <i>Sensors</i> , 2021, 21, 6454.	2.1	30
26	How femtosecond laser irradiation can affect the gas sensing behavior of SnO ₂ nanowires toward reducing and oxidizing gases. <i>Sensors and Actuators B: Chemical</i> , 2021, 342, 130036.	4.0	8
27	Chemical-recognition-driven selectivity of SnO ₂ -nanowire-based gas sensors. <i>Nano Today</i> , 2021, 40, 101265.	6.2	25
28	Decoration of multi-walled carbon nanotubes with CuO/Cu ₂ O nanoparticles for selective sensing of H ₂ S gas. <i>Sensors and Actuators B: Chemical</i> , 2021, 344, 130176.	4.0	41
29	Electrowetting-on-dielectric behavior of micro-nano hierarchical SiO ₂ layers decorated with noble metals. <i>Ceramics International</i> , 2021, 47, 28312-28320.	2.3	5
30	Changes in the crystal structure of SnO ₂ nanoparticles and improved H ₂ S gas-sensing characteristics by Al doping. <i>Applied Surface Science</i> , 2021, 565, 150493.	3.1	18
31	Facile synthesis of metal-organic framework-derived ZnO/CuO nanocomposites for highly sensitive and selective H ₂ S gas sensing. <i>Sensors and Actuators B: Chemical</i> , 2021, 349, 130741.	4.0	47
32	Preparation of n-ZnO/p-Co ₃ O ₄ heterojunctions from zeolitic imidazolate frameworks (ZIF-8/ZIF-67) for sensing low ethanol concentrations. <i>Sensors and Actuators B: Chemical</i> , 2021, 348, 130684.	4.0	40
33	Selective, sensitive, and stable NO ₂ gas sensor based on porous ZnO nanosheets. <i>Applied Surface Science</i> , 2021, 568, 150910.	3.1	94
34	Selective ethanol sensor based on Fe ₃ O ₄ nanoparticles. <i>Inorganic Chemistry Communication</i> , 2021, 133, 108961.	1.8	13
35	Porous Si/SnO ₂ nanowires heterostructures for H ₂ S gas sensing. <i>Ceramics International</i> , 2020, 46, 604-611.	2.3	61
36	Optimization of the surface coverage of metal nanoparticles on nanowires gas sensors to achieve the optimal sensing performance. <i>Sensors and Actuators B: Chemical</i> , 2020, 302, 127196.	4.0	44

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37	Enhancement of gas sensing by implantation of Sb-ions in SnO ₂ nanowires. <i>Sensors and Actuators B: Chemical</i> , 2020, 304, 127307.	4.0	52
38	Variation of shell thickness in ZnO-SnO ₂ core-shell nanowires for optimizing sensing behaviors to CO, C ₆ H ₆ , and C ₇ H ₈ gases. <i>Sensors and Actuators B: Chemical</i> , 2020, 302, 127150.	4.0	56
39	Deep feature selection using a teacher-student network. <i>Neurocomputing</i> , 2020, 383, 396-408.	3.5	40
40	The rapid response and high sensitivity of a ruthenium-doped copper ferrite thin film (Ru ²⁺ -CuFe ₂ O ₄) sensor. <i>RSC Advances</i> , 2020, 10, 13611-13615.	1.7	5
41	Electrowetting-on-dielectric characteristics of ZnO nanorods. <i>Scientific Reports</i> , 2020, 10, 14194.	1.6	15
42	A Review of Nanostructured Resistive-Based Vanadium Oxide Gas Sensors. <i>Chemosensors</i> , 2020, 8, 105.	1.8	27
43	Changes in characteristics of Pt-functionalized RGO nanocomposites by electron beam irradiation for room temperature NO ₂ sensing. <i>Ceramics International</i> , 2020, 46, 21638-21646.	2.3	19
44	Effect of Ag on the ZnO nanoparticles properties as an ethanol vapor sensor. <i>Materials Science in Semiconductor Processing</i> , 2020, 117, 105172.	1.9	50
45	Hybridization of silicon nanowires with TeO ₂ branch structures and Pt nanoparticles for highly sensitive and selective toluene sensing. <i>Applied Surface Science</i> , 2020, 525, 146620.	3.1	14
46	Realization of selective CO detection by Ni-incorporated metal-organic frameworks. <i>Sensors and Actuators B: Chemical</i> , 2020, 315, 128110.	4.0	30
47	Indium-implantation-induced enhancement of gas sensing behaviors of SnO ₂ nanowires by the formation of homo-core-shell structure. <i>Sensors and Actuators B: Chemical</i> , 2020, 321, 128475.	4.0	29
48	Nanostructured Metal Oxide-Based Acetone Gas Sensors: A Review. <i>Sensors</i> , 2020, 20, 3096.	2.1	135
49	Pd-decorated Si nano-horns as sensitive and selective hydrogen gas sensors. <i>Materials Research Bulletin</i> , 2020, 132, 110985.	2.7	14
50	Gas-sensing behaviors of TiO ₂ -layer-modified SnO ₂ quantum dots in self-heating mode and effects of the TiO ₂ layer. <i>Sensors and Actuators B: Chemical</i> , 2020, 310, 127870.	4.0	26
51	Flexible and low power CO gas sensor with Au-functionalized 2D WS ₂ nanoflakes. <i>Sensors and Actuators B: Chemical</i> , 2020, 313, 128040.	4.0	80
52	Pd-functionalized core-shell composite nanowires for self-heating, sensitive, and benzene-selective gas sensors. <i>Sensors and Actuators A: Physical</i> , 2020, 308, 112011.	2.0	15
53	Enhanced humidity sensing properties of Fe-doped CeO ₂ nanoparticles. <i>Journal of Materials Science: Materials in Electronics</i> , 2020, 31, 8815-8824. Room temperature LPG sensing properties of tin substituted copper ferrite CuFe_2O_4 xml:lang="en" alt="Room temperature LPG sensing properties of tin substituted copper ferrite CuFe_2O_4" data-bbox="82 871 724 899"/>	1.1	4
54			

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55	Exploration of ZrO ₂ -shelled nanowires for chemiresistive detection of NO ₂ gas. <i>Sensors and Actuators B: Chemical</i> , 2020, 319, 128309.	4.0	23
56	Role of Ruthenium in the Dielectric, Magnetic Properties of Nickel Ferrite (Ru@NiFe ₂ O ₄) Nanoparticles and Their Application in Hydrogen Sensors. <i>ACS Omega</i> , 2019, 4, 12919-12926.	1.6	26
57	Improvement of NO ₂ Sensing Properties in Pd Functionalized Reduced Graphene Oxides by Electron-Beam Irradiation. <i>Frontiers in Materials</i> , 2019, 6, .	1.2	18
58	Incorporation of metal nanoparticles in soda-lime glass sensors for enhancing selective sensing. <i>Sensors and Actuators B: Chemical</i> , 2019, 296, 126673.	4.0	11
59	ppb-Level Selective Hydrogen Gas Detection of Pd-Functionalized In ₂ O ₃ -Loaded ZnO Nanofiber Gas Sensors. <i>Sensors</i> , 2019, 19, 4276.	2.1	39
60	Realization of H ₂ S sensing by Pd-functionalized networked CuO nanowires in self-heating mode. <i>Sensors and Actuators B: Chemical</i> , 2019, 299, 126965.	4.0	54
61	Room-temperature NO ₂ sensor based on electrochemically etched porous silicon. <i>Journal of Alloys and Compounds</i> , 2019, 811, 151975.	2.8	26
62	Co ₃ O ₄ -loaded ZnO nanofibers for excellent hydrogen sensing. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 27499-27510.	3.8	44
63	Ultrasonic and microwave assisted extraction as rapid and efficient techniques for plant mediated synthesis of quantum dots: green synthesis, characterization of zinc telluride and comparison study of some biological activities. <i>New Journal of Chemistry</i> , 2019, 43, 15126-15138.	1.4	46
64	Selective H ₂ S sensing without external heat by a synergy effect in self-heated CuO-functionalized SnO ₂ -ZnO core-shell nanowires. <i>Sensors and Actuators B: Chemical</i> , 2019, 300, 126981.	4.0	42
65	Promotional effects of ZnO-branching and Au-functionalization on the surface of SnO ₂ nanowires for NO ₂ sensing. <i>Journal of Alloys and Compounds</i> , 2019, 786, 27-39.	2.8	56
66	An overview on how Pd on resistive-based nanomaterial gas sensors can enhance response toward hydrogen gas. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 20552-20571.	3.8	91
67	Low-Voltage-Driven Sensors Based on ZnO Nanowires for Room-Temperature Detection of NO ₂ and CO Gases. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 24172-24183.	4.0	74
68	Realization of Au-decorated WS ₂ nanosheets as low power-consumption and selective gas sensors. <i>Sensors and Actuators B: Chemical</i> , 2019, 296, 126659.	4.0	81
69	Incorporation of Pt Nanoparticles on the Surface of TeO ₂ -Branched Porous Si Nanowire Structures for Enhanced Room-Temperature Gas Sensing. <i>Journal of Nanoscience and Nanotechnology</i> , 2019, 19, 6647-6655.	0.9	3
70	Pd functionalization on ZnO nanowires for enhanced sensitivity and selectivity to hydrogen gas. <i>Sensors and Actuators B: Chemical</i> , 2019, 297, 126693.	4.0	70
71	Enhancement of CO and NO ₂ sensing in n-SnO ₂ -p-Cu ₂ O core-shell nanofibers by shell optimization. <i>Journal of Hazardous Materials</i> , 2019, 376, 68-82.	6.5	59
72	Gasochromic WO ₃ Nanostructures for the Detection of Hydrogen Gas: An Overview. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 1775.	1.3	49

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91	Low power-consumption CO gas sensors based on Au-functionalized SnO ₂ -ZnO core-shell nanowires. <i>Sensors and Actuators B: Chemical</i> , 2018, 267, 597-607.	4.0	118
92	Superhydrophobic and oleophilic micro-nano hierarchical Pd-decorated SiO ₂ layers. <i>Journal of the American Ceramic Society</i> , 2018, 101, 3817-3829.	1.9	5
93	Converting the Conducting Behavior of Graphene Oxides from n-Type to p-Type via Electron-Beam Irradiation. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 7324-7333.	4.0	18
94	Porous Si nanowires for highly selective room-temperature NO ₂ gas sensing. <i>Nanotechnology</i> , 2018, 29, 294001.	1.3	23
95	Resistive-based gas sensors for detection of benzene, toluene and xylene (BTX) gases: a review. <i>Journal of Materials Chemistry C</i> , 2018, 6, 4342-4370.	2.7	255
96	Sensing behavior to ppm-level gases and synergistic sensing mechanism in metal-functionalized rGO-loaded ZnO nanofibers. <i>Sensors and Actuators B: Chemical</i> , 2018, 255, 1884-1896.	4.0	100
97	Fabrication and gas sensing properties of vertically aligned Si nanowires. <i>Applied Surface Science</i> , 2018, 427, 215-226.	3.1	41
98	SnO ₂ (n)-NiO (p) composite nanowires: Gas sensing properties and sensing mechanisms. <i>Sensors and Actuators B: Chemical</i> , 2018, 258, 204-214.	4.0	115
99	How shell thickness can affect the gas sensing properties of nanostructured materials: Survey of literature. <i>Sensors and Actuators B: Chemical</i> , 2018, 258, 270-294.	4.0	117
100	Significant Enhancement of Hydrogen-Sensing Properties of ZnO Nanofibers through NiO Loading. <i>Nanomaterials</i> , 2018, 8, 902.	1.9	41
101	Hydrogen Sensing Properties of Co-Doped ZnO Nanoparticles. <i>Chemosensors</i> , 2018, 6, 61.	1.8	16
102	Selective NO ₂ sensor based on Bi ₂ O ₃ branched SnO ₂ nanowires. <i>Sensors and Actuators B: Chemical</i> , 2018, 274, 356-369.	4.0	75
103	Resistance-based H ₂ S gas sensors using metal oxide nanostructures: A review of recent advances. <i>Journal of Hazardous Materials</i> , 2018, 357, 314-331.	6.5	298
104	Electrowetting on dielectric (EWOD) properties of Teflon-coated electrosprayed silica layers in air and oil media and the influence of electric leakage. <i>Journal of Materials Chemistry C</i> , 2018, 6, 6808-6815.	2.7	19
105	Hydrogen gas detection of Nb ₂ O ₅ nanoparticle-decorated CuO nanorod sensors. <i>Metals and Materials International</i> , 2017, 23, 214-219.	1.8	19
106	Hydrogen sensing properties and mechanism of NiO-Nb ₂ O ₅ composite nanoparticle-based electrical gas sensors. <i>Ceramics International</i> , 2017, 43, 5247-5254.	2.3	47
107	Variational Relevant Sample-Feature Machine: A fully Bayesian approach for embedded feature selection. <i>Neurocomputing</i> , 2017, 241, 181-190.	3.5	21
108	Acetone Sensors Based on In ₂ O ₃ -Co ₃ O ₄ Composite Nanoparticles. <i>Journal of Nanoscience and Nanotechnology</i> , 2017, 17, 4087-4090.	0.9	10

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109	Synthesis and Selective Sensing Properties of rGO/Metal-Coloaded SnO ₂ Nanofibers. <i>Journal of Electronic Materials</i> , 2017, 46, 3531-3541.	1.0	30
110	Enhancement of gas sensing properties by the functionalization of ZnO-branched SnO ₂ nanowires with Cr ₂ O ₃ nanoparticles. <i>Sensors and Actuators B: Chemical</i> , 2017, 249, 656-666.	4.0	56
111	Extremely sensitive and selective sub-ppm CO detection by the synergistic effect of Au nanoparticles and core-shell nanowires. <i>Sensors and Actuators B: Chemical</i> , 2017, 249, 177-188.	4.0	63
112	Characterization and optical studies of PVP-capped silver nanoparticles. <i>Journal of Nanostructure in Chemistry</i> , 2017, 7, 37-46.	5.3	80
113	Synthesis, characterization and gas sensing properties of ZnO-decorated MWCNTs. <i>Applied Surface Science</i> , 2017, 413, 242-252.	3.1	86
114	Optimization and gas sensing mechanism of n-SnO ₂ -p-Co ₃ O ₄ composite nanofibers. <i>Sensors and Actuators B: Chemical</i> , 2017, 248, 500-511.	4.0	116
115	Synthesis of zinc oxide semiconductors-graphene nanocomposites by microwave irradiation for application to gas sensors. <i>Sensors and Actuators B: Chemical</i> , 2017, 249, 590-601.	4.0	142
116	Microwave assisted extraction as an efficient approach for biosynthesis of zinc oxide nanoparticles: Synthesis, characterization, and biological properties. <i>Materials Science and Engineering C</i> , 2017, 78, 1109-1118.	3.8	100
117	Attachment of Co ₃ O ₄ layer to SnO ₂ nanowires for enhanced gas sensing properties. <i>Sensors and Actuators B: Chemical</i> , 2017, 239, 180-192.	4.0	76
118	Sm-doped cobalt ferrite nanoparticles: A novel sensing material for conductometric hydrogen leak sensor. <i>Ceramics International</i> , 2017, 43, 1029-1037.	2.3	69
119	Modification of SnO ₂ Nanowires with TeO ₂ Branches and Their Enhanced Gas Sensing. <i>Proceedings (mdpi)</i> , 2017, 1, 404.	0.2	3
120	Synthesis and gas sensing properties of membrane template-grown hollow ZnO nanowires. <i>Nano Convergence</i> , 2017, 4, 27.	6.3	17
121	A comparative study on the electrical and gas sensing properties of thick films prepared with synthesized nano-sized and commercial micro-sized Fe ₂ O ₃ powders. <i>Processing and Application of Ceramics</i> , 2017, 11, 265-274.	0.4	3
122	Electrospun Metal Oxide Composite Nanofibers Gas Sensors: A Review. <i>Journal of the Korean Ceramic Society</i> , 2017, 54, 366-379.	1.1	90
123	Synthesis and characterization of nanocrystalline PZT powders: From sol to dense ceramics. <i>Processing and Application of Ceramics</i> , 2016, 10, 9-16.	0.4	11
124	A novel gas sensor based on Ag/Fe ₂ O ₃ core-shell nanocomposites. <i>Ceramics International</i> , 2016, 42, 18974-18982.	2.3	76
125	Surprising synthesis of nanodiamond from single-walled carbon nanotubes by the spark plasma sintering process. <i>Electronic Materials Letters</i> , 2016, 12, 747-752.	1.0	4
126	Fe ₂ O ₃ /Co ₃ O ₄ composite nanoparticle ethanol sensor. <i>Journal of the Korean Physical Society</i> , 2016, 69, 373-380.	0.3	67

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127	ZnO-capped nanorod gas sensors. <i>Ceramics International</i> , 2016, 42, 6187-6197.	2.3	56
128	CO gas sensing properties of In ₄ Sn ₃ O ₁₂ and TeO ₂ composite nanoparticle sensors. <i>Journal of Hazardous Materials</i> , 2016, 305, 130-138.	6.5	73
129	Promotional effect of nitric acid treatment on co sensing properties of SnO ₂ /MWCNT nanocomposites. <i>Processing and Application of Ceramics</i> , 2016, 10, 97-105.	0.4	11
130	Effect of Nb doping on sintering and dielectric properties of PZT ceramics. <i>Processing and Application of Ceramics</i> , 2016, 10, 175-182.	0.4	13
131	Synthesis and characterization of mesoporous γ -Fe ₂ O ₃ nanoparticles and investigation of electrical properties of fabricated thick films. <i>Processing and Application of Ceramics</i> , 2016, 10, 209-217.	0.4	60
132	Excellent Carbon Monoxide Sensing Performance of Au-Decorated SnO ₂ Nanofibers. <i>Korean Journal of Materials Research</i> , 2016, 26, 741-750.	0.1	19
133	Electrochemical Properties of Ag@iron Oxide Nanocomposite for Application as Nitrate Sensor. <i>Electroanalysis</i> , 2015, 27, 2654-2662.	1.5	17
134	Synthesis, Characterization and Gas Sensing Properties of Ag@ γ -Fe ₂ O ₃ Core-Shell Nanocomposites. <i>Nanomaterials</i> , 2015, 5, 737-749.	1.9	102