Nguyen Duc Hoa

List of Publications by Year
in descending order

127 papers	5,422 citations	46984 47 h-index	106281 65 g-index
128 all docs	128 docs citations	128 times ranked	5017 citing authors

#	Article	IF	Citations
1	Design of SnO2/ZnO hierarchical nanostructures for enhanced ethanol gas-sensing performance. Sensors and Actuators B: Chemical, 2012, 174, 594-601.	4.0	174
2	Synthesis of Mesoporous NiO Nanosheets for the Detection of Toxic NO₂ Gas. Chemistry - A European Journal, 2011, 17, 12896-12901.	1.7	158
3	Synthesis of porous CuO nanowires and its application to hydrogen detection. Sensors and Actuators B: Chemical, 2010, 146, 266-272.	4.0	142
4	Preparing large-scale WO3 nanowire-like structure for high sensitivity NH3 gas sensor through a simple route. Current Applied Physics, 2011, 11, 657-661.	1.1	135
5	Effective decoration of Pd nanoparticles on the surface of SnO2 nanowires for enhancement of CO gas-sensing performance. Journal of Hazardous Materials, 2014, 265, 124-132.	6.5	125
6	Nanowire structured SnOxâ€“SWNT composites: High performance sensor for NOx detection. Sensors and Actuators B: Chemical, 2009, 142, 253-259.	4.0	123
7	Fabrication of highly sensitive and selective H2 gas sensor based on SnO2 thin film sensitized with microsized Pd islands. Journal of Hazardous Materials, 2016, 301, 433-442.	6.5	119
8	Chlorine Gas Sensing Performance of On-Chip Grown ZnO, WO₃, and SnO₂ Nanowire Sensors. ACS Applied Materials & Interfaces, 2016, 8, 4828-4837.	4.0	116
9	On-chip fabrication of SnO2-nanowire gas sensor: The effect of growth time on sensor performance. Sensors and Actuators B: Chemical, 2010, 146, 361-367.	4.0	102
10	One-step fabrication of SnO2 porous nanofiber gas sensors for sub-ppm H2S detection. Sensors and Actuators A: Physical, 2020, 303, 111722.	2.0	98
11	Synthesis of p-type semiconducting cupric oxide thin films and their application to hydrogen detection. Sensors and Actuators B: Chemical, 2010, 146, 239-244.	4.0	96
12	Outstanding gas-sensing performance of graphene/SnO2 nanowire Schottky junctions. Applied Physics Letters, 2014, 105, .	1.5	93
13	Facile on-chip electrospinning of ZnFe2O4 nanofiber sensors with excellent sensing performance to H2S down ppb level. Journal of Hazardous Materials, 2018, 360, 6-16.	6.5	87
14	Facile synthesis of Î±-Fe 2 O 3 nanoparticles for high-performance CO gas sensor. Materials Research Bulletin, 2015, 68, 302-307.	2.7	80
15	Facile synthesis of ultrafine rGO/WO3 nanowire nanocomposites for highly sensitive toxic NH3 gas sensors. Materials Research Bulletin, 2020, 125, 110810.	2.7	80
16	Excellent detection of H2S gas at ppb concentrations using ZnFe2O4 nanofibers loaded with reduced graphene oxide. Sensors and Actuators B: Chemical, 2019, 282, 876-884.	4.0	75
17	On-chip growth of wafer-scale planar-type ZnO nanorod sensors for effective detection of CO gas. Sensors and Actuators B: Chemical, 2013, 181, 529-536.	4.0	74
18	Synthesis, characterization, and comparative gas-sensing properties of Fe2O3 prepared from Fe3O4 and Fe3O4-chitosan. Journal of Alloys and Compounds, 2012, 523, 120-126.	2.8	72

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19	Meso-/Nanoporous Semiconducting Metal Oxides for Gas Sensor Applications. Journal of Nanomaterials, 2015, 2015, 1-14.	1.5	71
20	Diameter controlled synthesis of tungsten oxide nanorod bundles for highly sensitive NO2 gas sensors. Sensors and Actuators B: Chemical, 2013, 183, 372-380.	4.0	70
21	Enhancement of gas-sensing characteristics of hydrothermally synthesized WO3 nanorods by surface decoration with Pd nanoparticles. Sensors and Actuators B: Chemical, 2016, 223, 453-460.	4.0	70
22	Nanofibers of conducting polyaniline for aromatic organic compound sensor. Sensors and Actuators B: Chemical, 2009, 143, 132-138.	4.0	69
23	Controllable growth of ZnO nanowires grown on discrete islands of Au catalyst for realization of planar-type micro gas sensors. Sensors and Actuators B: Chemical, 2014, 193, 888-894.	4.0	69
24	Porous single-wall carbon nanotube films formed by in Situ arc-discharge deposition for gas sensors application. Sensors and Actuators B: Chemical, 2009, 135, 656-663.	4.0	68
25	Nanocomposite of cobalt oxide nanocrystals and single-walled carbon nanotubes for a gas sensor application. Sensors and Actuators B: Chemical, 2010, 150, 160-166.	4.0	68
26	Bilayer SnO2â€“WO3 nanofilms for enhanced NH3 gas sensing performance. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2017, 224, 163-170.	1.7	67
27	Controlled synthesis of ultrathin MoS₂nanoflowers for highly enhanced NO₂sensing at room temperature. RSC Advances, 2020, 10, 12759-12771.	1.7	67
28	Comparative study on the gas-sensing performance of ZnO/SnO2 external and ZnOâ€“SnO2 internal heterojunctions for ppb H2S and NO2 gases detection. Sensors and Actuators B: Chemical, 2021, 334, 129606.	4.0	65
29	In-situ decoration of Pd nanocrystals on crystalline mesoporous NiO nanosheets for effective hydrogen gas sensors. International Journal of Hydrogen Energy, 2013, 38, 12090-12100.	3.8	61
30	A morphological control of tungsten oxide nanowires by thermal evaporation method for sub-ppm NO2 gas sensor application. Sensors and Actuators B: Chemical, 2012, 171-172, 760-768.	4.0	59
31	A comparative study on the electrochemical properties of nanoporous nickel oxide nanowires and nanosheets prepared by a hydrothermal method. RSC Advances, 2018, 8, 19449-19455.	1.7	57
32	C₂H₅OH and NO₂ sensing properties of ZnO nanostructures: correlation between crystal size, defect level and sensing performance. RSC Advances, 2018, 8, 5629-5639.	1.7	55
33	Effects of gamma irradiation on hydrogen gas-sensing characteristics of Pdâ€“SnO2 thin filmÂsensors. International Journal of Hydrogen Energy, 2015, 40, 12572-12580.	3.8	54
34	High-performance acetone gas sensor based on Ptâ€“Zn2SnO4 hollow octahedra for diabetic diagnosis. Journal of Alloys and Compounds, 2021, 886, 161284.	2.8	54
35	Facile synthesis of SnO2â€“ZnO coreâ€“shell nanowires for enhanced ethanol-sensing performance. Current Applied Physics, 2013, 13, 1637-1642.	1.1	53
36	Novel Self-Heated Gas Sensors Using on-Chip Networked Nanowires with Ultralow Power Consumption. ACS Applied Materials & Interfaces, 2017, 9, 6153-6162.	4.0	53

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37	Superior enhancement of NO2 gas response using n-p-n transition of carbon nanotubes/SnO2 nanowires heterojunctions. Sensors and Actuators B: Chemical, 2017, 238, 1120-1127.	4.0	53
38	Enhanced NH3 and H2 gas sensing with H2S gas interference using multilayer SnO2/Pt/WO3 nanofilms. Journal of Hazardous Materials, 2021, 412, 125181.	6.5	52
39	Comparative study on CO2 and CO sensing performance of LaOCl-coated ZnO nanowires. Journal of Hazardous Materials, 2013, 244-245, 209-216.	6.5	51
40	Comparative NO2 gas-sensing performance of the self-heated individual, multiple and networked SnO2 nanowire sensors fabricated by a simple process. Sensors and Actuators B: Chemical, 2014, 201, 7-12.	4.0	51
41	Effective monitoring and classification of hydrogen and ammonia gases with a bilayer Pt/SnO2 thin film sensor. International Journal of Hydrogen Energy, 2020, 45, 2418-2428.	3.8	51
42	Gas nanosensor design packages based on tungsten oxide: mesocages, hollow spheres, and nanowires. Nanotechnology, 2011, 22, 485503.	1.3	50
43	On-chip hydrothermal growth of ZnO nanorods at low temperature for highly selective NO2 gas sensor. Materials Letters, 2016, 169, 231-235.	1.3	50
44	VOC gas sensor based on hollow cubic assembled nanocrystal Zn2SnO4 for breath analysis. Sensors and Actuators A: Physical, 2020, 302, 111834.	2.0	50
45	Gas sensing materials roadmap. Journal of Physics Condensed Matter, 2021, 33, 303001.	0.7	49
46	An ammonia gas sensor based on non-catalytically synthesized carbon nanotubes on an anodic aluminum oxide template. Sensors and Actuators B: Chemical, 2007, 127, 447-454.	4.0	48
47	Highly sensitive and selective volatile organic compound gas sensors based on mesoporous nanocomposite monoliths. Analytical Methods, 2011, 3, 1948.	1.3	48
48	Giant enhancement of H2S gas response by decorating n-type SnO2 nanowires with p-type NiO nanoparticles. Applied Physics Letters, 2012, 101, .	1.5	48
49	Nanoporous and crystal evolution in nickel oxide nanosheets for enhanced gas-sensing performance. Sensors and Actuators B: Chemical, 2018, 273, 784-793.	4.0	47
50	Urea mediated synthesis of Ni(OH) 2 nanowires and their conversion into NiO nanostructure for hydrogen gas-sensing application. International Journal of Hydrogen Energy, 2018, 43, 9446-9453.	3.8	46
51	Facile synthesis of p-type semiconducting cupric oxide nanowires and their gas-sensing properties. Physica E: Low-Dimensional Systems and Nanostructures, 2009, 42, 146-149.	1.3	45
52	Gas sensor based on nanoporous hematite nanoparticles: Effect of synthesis pathways on morphology and gas sensing properties. Current Applied Physics, 2012, 12, 1355-1360.	1.1	42
53	Room temperature highly toxic NO2 gas sensors based on rootstock/scion nanowires of SnO2/ZnO, ZnO/SnO2, SnO2/SnO2 and, ZnO/ZnO. Sensors and Actuators B: Chemical, 2021, 348, 130652.	4.0	40
54	Crystalline mesoporous tungsten oxide nanoplate monoliths synthesized by directed soft template method for highly sensitive NO2 gas sensor applications. Materials Research Bulletin, 2013, 48, 440-448.	2.7	39

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55	High-performance carbon nanotube hydrogen sensor. Sensors and Actuators B: Chemical, 2010, 149, 184-188.	4.0	38
56	Synthesis of single-crystal SnO2 nanowires for NOx gas sensors application. Ceramics International, 2012, 38, 6557-6563.	2.3	37
57	Synthesis and gas-sensing characteristics of Î±-Fe2O3 hollow balls. Journal of Science: Advanced Materials and Devices, 2016, 1, 45-50.	1.5	37
58	Self-heated Ag-decorated SnO2 nanowires with low power consumption used as a predictive virtual multisensor for H2S-selective sensing. Analytica Chimica Acta, 2019, 1069, 108-116.	2.6	37
59	Scalable Fabrication of High-Performance NO₂ Gas Sensors Based on Tungsten Oxide Nanowires by On-Chip Growth and RuO₂-Functionalization. ACS Applied Materials & Interfaces, 2014, 6, 12022-12030.	4.0	36
60	Effective design and fabrication of low-power-consumption self-heated SnO2 nanowire sensors for reducing gases. Sensors and Actuators B: Chemical, 2019, 295, 144-152.	4.0	35
61	Multi gas sensors using one nanomaterial, temperature gradient, and machine learning algorithms for discrimination of gases and their concentration. Analytica Chimica Acta, 2020, 1124, 85-93.	2.6	35
62	Scalable fabrication of SnO2 thin films sensitized with CuO islands for enhanced H2S gas sensing performance. Applied Surface Science, 2015, 324, 280-285.	3.1	34
63	Ethanol-Sensing Characteristics of Nanostructured ZnO: Nanorods, Nanowires, and Porous Nanoparticles. Journal of Electronic Materials, 2017, 46, 3406-3411.	1.0	34
64	On-chip growth of patterned ZnO nanorod sensors with PdO decoration for enhancement of hydrogen-sensing performance. International Journal of Hydrogen Energy, 2017, 42, 16294-16304.	3.8	34
65	General and scalable route to synthesize nanowire-structured semiconducting metal oxides for gas-sensor applications. Journal of Alloys and Compounds, 2013, 549, 260-268.	2.8	32
66	Comparative effects of synthesis parameters on the NO2 gas-sensing performance of on-chip grown ZnO and Zn2SnO4 nanowire sensors. Journal of Alloys and Compounds, 2018, 765, 1237-1242.	2.8	32
67	Significantly enhanced NO2 gas-sensing performance of nanojunction-networked SnO2 nanowires by pulsed UV-radiation. Sensors and Actuators A: Physical, 2021, 327, 112759.	2.0	31
68	Ultrasensitive NO2 gas sensing performance of two dimensional ZnO nanomaterials: Nanosheets and nanoplates. Ceramics International, 2021, 47, 28811-28820.	2.3	31
69	Au doped ZnO/SnO2 composite nanofibers for enhanced H2S gas sensing performance. Sensors and Actuators A: Physical, 2021, 317, 112454.	2.0	30
70	Highly selective H2S gas sensor based on WO3-coated SnO2 nanowires. Materials Today Communications, 2021, 26, 102094.	0.9	29
71	MoS2 nanosheets-decorated SnO2 nanofibers for enhanced SO2 gas sensing performance and classification of CO, NH3 and H2 gases. Analytica Chimica Acta, 2021, 1167, 338576.	2.6	29
72	Tin oxide nanotube structures synthesized on a template of single-walled carbon nanotubes. Journal of Crystal Growth, 2009, 311, 657-661.	0.7	28

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73	Enhanced NO2 gas-sensing performance at room temperature using exfoliated MoS2 nanosheets. Sensors and Actuators A: Physical, 2021, 332, 113137.	2.0	28
74	Micro-wheels composed of self-assembled tungsten oxide nanorods for highly sensitive detection of low level toxic chlorine gas. RSC Advances, 2015, 5, 25204-25207.	1.7	27
75	Ultrasensitive NO2 gas sensors using tungsten oxide nanowires with multiple junctions self-assembled on discrete catalyst islands via on-chip fabrication. Sensors and Actuators B: Chemical, 2016, 227, 198-203.	4.0	27
76	SO2 and H2S Sensing Properties of Hydrothermally Synthesized CuO Nanoplates. Journal of Electronic Materials, 2018, 47, 7170-7178.	1.0	27
77	Tin Oxide-Carbon Nanotube Composite for NO_X Sensing. Journal of Nanoscience and Nanotechnology, 2012, 12, 1425-1428.	0.9	26
78	Effective hydrogen gas nanosensor based on bead-like nanowires of platinum-decorated tin oxide. Sensors and Actuators B: Chemical, 2012, 173, 211-217.	4.0	26
79	Ultrasensitive NO2 gas sensors using hybrid heterojunctions of multi-walled carbon nanotubes and on-chip grown SnO2 nanowires. Applied Physics Letters, 2018, 112, .	1.5	26
80	An effective H₂S sensor based on SnO₂ nanowires decorated with NiO nanoparticles by electron beam evaporation. RSC Advances, 2019, 9, 13887-13895.	1.7	26
81	Enhanced H2S gas-sensing performance of Î±-Fe2O3 nanofibers by optimizing process conditions and loading with reduced graphene oxide. Journal of Alloys and Compounds, 2020, 826, 154169.	2.8	26
82	Topical Developments of Nanoporous Membrane Filters for Ultrafine Noble Metal Nanoparticles. European Journal of Inorganic Chemistry, 2012, 2012, 5439-5450.	1.0	24
83	A novel design and fabrication of self-heated In2O3 nanowire gas sensor on glass for ethanol detection. Sensors and Actuators A: Physical, 2022, 345, 113769.	2.0	24
84	On-chip growth of single phase Zn2SnO4 nanowires by thermal evaporation method for gas sensor application. Journal of Alloys and Compounds, 2017, 708, 470-475.	2.8	23
85	Ultralow power consumption gas sensor based on a self-heated nanojunction of SnO₂ nanowires. RSC Advances, 2018, 8, 36323-36330.	1.7	23
86	A comparative study on the VOCs gas sensing properties of Zn2SnO4 nanoparticles, hollow cubes, and hollow octahedra towards exhaled breath analysis. Sensors and Actuators B: Chemical, 2021, 343, 130147.	4.0	23
87	Extraordinary H2S gas sensing performance of ZnO/rGO external and internal heterojunctions. Journal of Alloys and Compounds, 2021, 879, 160457.	2.8	23
88	Density-controllable growth of SnO2 nanowire junction-bridging across electrode for low-temperature NO2 gas detection. Journal of Materials Science, 2013, 48, 7253-7259.	1.7	21
89	Single-crystal zinc oxide nanorods with nanovoids as highly sensitive NO2 nanosensors. Materials Letters, 2013, 94, 41-43.	1.3	21
90	A facile synthesis of ruthenium/reduced graphene oxide nanocomposite for effective electrochemical applications. Solar Energy, 2019, 191, 420-426.	2.9	21

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91	Electronic noses based on metal oxide nanowires: A review. Nanotechnology Reviews, 2022, 11, 897-925.	2.6	21
92	Novel synthesis of highly ordered mesoporous Fe2O3/SiO2 nanocomposites for a room temperature VOC sensor. Current Applied Physics, 2013, 13, 1581-1588.	1.1	20
93	A high-performance triode-type carbon nanotube field emitter for mass production. Nanotechnology, 2007, 18, 345201.	1.3	18
94	Tin-Oxide Nanotubes for Gas Sensor Application Fabricated Using SWNTs as a Template. Journal of Nanoscience and Nanotechnology, 2008, 8, 5586-5589.	0.9	18
95	Comparison of NO2 Gas-Sensing Properties of Three Different ZnO Nanostructures Synthesized by On-Chip Low-Temperature Hydrothermal Growth. Journal of Electronic Materials, 2018, 47, 785-793.	1.0	18
96	New Design of ZnO Nanorod- and Nanowire-Based NO₂ Room-Temperature Sensors Prepared by Hydrothermal Method. Journal of Nanomaterials, 2019, 2019, 1-9.	1.5	17
97	Dip-coating decoration of Ag₂O nanoparticles on SnO₂ nanowires for high-performance H₂S gas sensors. RSC Advances, 2020, 10, 17713-17723.	1.7	17
98	Nanoporous NiO nanosheets-based nanohybrid catalyst for efficient reduction of triiodide ions. Solar Energy, 2020, 197, 546-552.	2.9	17
99	Nanoporous ZnO nanostructure synthesis by a facile method for superior sensitivity ethanol sensor applications. RSC Advances, 2016, 6, 64215-64218.	1.7	16
100	Controlled Growth of Vertically Oriented Trilayer MoS₂ Nanoflakes for Roomâ€Temperature NO₂ Gas Sensor Applications. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 2000004.	0.8	16
101	The use of anodic aluminium oxide templates for triode-type carbon nanotube field emission structures toward mass-production technology. Nanotechnology, 2006, 17, 2156-2160.	1.3	15
102	Full-Layer Controlled Synthesis and Transfer of Large-Scale Monolayer Graphene for Nitrogen Dioxide and Ammonia Sensing. Analytical Letters, 2014, 47, 280-294.	1.0	15
103	Prototype edge-grown nanowire sensor array for the real-time monitoring and classification of multiple gases. Journal of Science: Advanced Materials and Devices, 2020, 5, 409-416.	1.5	15
104	Urea mediated synthesis and acetone-sensing properties of ultrathin porous ZnO nanoplates. Materials Today Communications, 2020, 25, 101445.	0.9	15
105	ZnO coral-like nanoplates decorated with Pd nanoparticles for enhanced VOC gas sensing. Journal of Science: Advanced Materials and Devices, 2021, 6, 453-461.	1.5	15
106	Ammonia-Gas-Sensing Characteristics of WO₃/Carbon Nanotubes Nanocomposites: Effect of Nanotube Content and Sensing Mechanism. Science of Advanced Materials, 2016, 8, 524-533.	0.1	15
107	Hollow ZnO nanorices prepared by a simple hydrothermal method for NO₂ and SO₂ gas sensors. RSC Advances, 2021, 11, 33613-33625.	1.7	15
108	A comparative study on the NH<SUB align=right>3 gas-sensing properties of ZnO, SnO<SUB align=right>2, and WO<SUB align=right>3 nanowires. International Journal of Nanotechnology, 2011, 8, 174.	0.1	13

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109	Facile Hydrothermal Synthesis of Two-Dimensional Porous ZnO Nanosheets for Highly Sensitive Ethanol Sensor. Journal of Nanomaterials, 2019, 2019, 1-7.	1.5	13
110	Synthesis of MWNTs using Feâ€“Mo bimetallic catalyst by CVD method for field emission application. Solid State Communications, 2007, 144, 498-502.	0.9	12
111	Nitrogen-Doped Graphene Synthesized from a Single Liquid Precursor for a Field Effect Transistor. Journal of Electronic Materials, 2016, 45, 839-845.	1.0	12
112	CuO Nanofibers Prepared by Electrospinning for Gas Sensing Application: Effect of Copper Salt Concentration. Journal of Nanoscience and Nanotechnology, 2016, 16, 7910-7918.	0.9	11
113	Design and fabrication of effective gradient temperature sensor array based on bilayer SnO2/Pt for gas classification. Sensors and Actuators B: Chemical, 2022, 351, 130979.	4.0	11
114	3D micro-combs self-assembled from 2D N-doped In2S3 for room-temperature reversible NO2 gas sensing. Applied Materials Today, 2022, 26, 101355.	2.3	11
115	Growth of multiwalled carbon nanotubes from acetylene over in situ formed Co nanoparticles on MgO support. Solid State Communications, 2006, 139, 102-107.	0.9	10
116	Facile synthesis of single-crystal nanoporous Î±-NiS nanosheets from Ni(OH)2 counterpart. Materials Letters, 2015, 161, 282-285.	1.3	10
117	Transition metal oxides as Pt-free counter electrodes for liquid-junction photovoltaic devices. Vietnam Journal of Chemistry, 2019, 57, 784-791.	0.7	9
118	Realization of a portable H2S sensing instrument based on SnO2 nanowires. Journal of Science: Advanced Materials and Devices, 2020, 5, 40-47.	1.5	9
119	Single crystal cupric oxide nanowires: Length- and density-controlled growth and gas-sensing characteristics. Physica E: Low-Dimensional Systems and Nanostructures, 2014, 58, 16-23.	1.3	8
120	Facile Synthesis of Pd-CuO Nanoplates with Enhanced SO2 and H2 Gas-Sensing Characteristics. Journal of Electronic Materials, 2021, 50, 2767-2778.	1.0	8
121	Single-Walled Carbon Nanotube Thin Film Gas Sensors Controlled by Diffusion. Journal of Nanoscience and Nanotechnology, 2011, 11, 1601-1604.	0.9	7
122	Tungsten Oxide Urchin-Flowers and Nanobundles: Effect of Synthesis Conditions and Heat Treatment on Assembly and Gas-Sensing Characteristics. Science of Advanced Materials, 2014, 6, 1081-1090.	0.1	6
123	Transparent Field Emission Device from a Spray Coating of Single-Wall Carbon Nanotubes. Journal of the Electrochemical Society, 2010, 157, J371.	1.3	4
124	SWNTâ€“SOG composite for transparent field emission device. Journal of Crystal Growth, 2009, 311, 662-665.	0.7	2
125	Synthesis of CuO/rGO nanocomposites for carcinogenic Congo red photodegradation. Advances in Natural Sciences: Nanoscience and Nanotechnology, 2021, 12, 045014.	0.7	2
126	Preparation and Gas Sensing Properties of rGO/CuO Nanocomposites. ECS Journal of Solid State Science and Technology, 2022, 11, 035009.	0.9	1

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127	Carbon Nanotube Gas Sensor Fabricated on Anodic Aluminum Oxide. Solid State Phenomena, 2007, 124-126, 1309-1312.	0.3	0