Toshio Itoh

List of Publications by Year
in descending order

118	2,100	236925	302126
papers	citations	25 h-index	39 g-index

118	118	118	2351
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Effect of oxygen vacancy sites in exposed crystal facet on the gas sensing performance of ZnO nanomaterial. Journal of the American Ceramic Society, 2022, 105, 2150-2160.	3.8	10
2	Examination of VOC Concentration of Aroma Essential Oils and Their Major VOCs Diffused in Room Air. International Journal of Environmental Research and Public Health, 2022, 19, 2904.	2.6	2
3	Self-Adaptive Gas Sensor System Based on Operating Conditions Using Data Prediction. ACS Sensors, 2022, 7, 142-150.	7.8	2
4	Atomic step formation on porous ZnO nanobelts: remarkable promotion of acetone gas detection up to the parts per trillion level. Journal of Materials Chemistry A, 2022, 10, 13839-13847.	10.3	19
5	High Temperature Electrical Properties of Co-Substituted La4BaCu5O13+Î´ Thin Films Fabricated by Sputtering Method. Materials, 2021, 14, 2685.	2.9	0
6	CH3SH and H2S Sensing Properties of V2O5/WO3/TiO2 Gas Sensor. Chemosensors, 2021, 9, 113.	3.6	13
7	Effect of Coordinatively Unsaturated Sites in MOFâ€Derived Highly Porous CuO for Catalystâ€Free ppbâ€Level Gas Sensors. Advanced Materials Interfaces, 2021, 8, 2100283.	3.7	15
8	Effect of Pt electrodes in cerium oxide semiconductor-type oxygen sensors evaluated using alternating current. Sensors and Actuators B: Chemical, 2021, 345, 130396.	7.8	7
9	Tin Oxide Nanosheets on Microelectromechanical System Devices for Improved Gas Discrimination. ACS Applied Nano Materials, 2021, 4, 14285-14291.	5.0	9
10	Breath analysis using a spirometer and volatile organic compound sensor on driving simulator. Journal of Breath Research, 2020, 14, 016003.	3.0	2
11	Catalyst-free Highly Sensitive SnO₂ Nanosheet Gas Sensors for Parts per Billion-Level Detection of Acetone. ACS Applied Materials & Interfaces, 2020, 12, 51637-51644.	8.0	79
12	Selective Detection of Target Volatile Organic Compounds in Contaminated Air Using Sensor Array with Machine Learning: Aging Notes and Mold Smells in Simulated Automobile Interior Contaminant Gases. Sensors, 2020, 20, 2687.	3.8	17
13	Gas sensor properties of nanopore-bearing Co₃O₄ particles containing Pt or Pd particles. Journal of Asian Ceramic Societies, 2020, 8, 138-148.	2.3	14
14	Thermoelectric gas sensors with selective combustion catalysts. Journal of the Ceramic Society of Japan, 2019, 127, 57-66.	1.1	7
15	Detection of Human Breath Gas by Ceramic Sensors. Journal of the Mass Spectrometry Society of Japan, 2018, 66, 82-86.	0.1	1
16	Decreasing the shell ratio of core-shell type nanoparticles with a ceria core and polymer shell by acid treatment. Solid State Sciences, 2018, 85, 32-37.	3.2	6
17	Trial of an All-Ceramic SnO2 Gas Sensor Equipped with CaCu3Ru4O12 Heater and Electrode. Materials, 2018, 11, 981.	2.9	9
18	Thermoelectric Array Sensors with Selective Combustion Catalysts for Breath Gas Monitoring. Sensors, 2018, 18, 1579.	3.8	9

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19	Heat transfer control of micro-thermoelectric gas sensor for breath gas monitoring. Sensors and Actuators B: Chemical, 2017, 249, 571-580.	7.8	24
20	Relationship between the CO sensing performance of micro-thermoelectric gas sensors and characteristics of PtPd/Co3O4 and PtPd/SnO2 catalysts. Sensors and Actuators B: Chemical, 2017, 243, 847-855.	7.8	8
21	Synthesis of spherical cobalt oxide nanoparticles by a polyol method. Journal of the Ceramic Society of Japan, 2017, 125, 701-704.	1.1	18
22	Effect of Core-shell Ceria/Poly(Vinylpyrrolidone) (PVP) Nanoparticles Incorporated in Polymer Films and Their Optical Properties (2): Increasing the Refractive Index. Materials, 2017, 10, 710.	2.9	6
23	Mixed-Potential Gas Sensors Using an Electrolyte Consisting of Zinc Phosphate Glass and Benzimidazole. Sensors, 2017, 17, 97.	3.8	4
24	Diagnosis by Volatile Organic Compounds in Exhaled Breath from Lung Cancer Patients Using Support Vector Machine Algorithm. Sensors, 2017, 17, 287.	3.8	78
25	Selective Detection of Target Volatile Organic Compounds in Contaminated Humid Air Using a Sensor Array with Principal Component Analysis. Sensors, 2017, 17, 1662.	3.8	36
26	Development of an Exhaled Breath Monitoring System with Semiconductive Gas Sensors, a Gas Condenser Unit, and Gas Chromatograph Columns. Sensors, 2016, 16, 1891.	3.8	54
27	Performance of a carbon monoxide sensor based on zirconia-doped ceria. Journal of Asian Ceramic Societies, 2016, 4, 205-208.	2.3	4
28	12P Volatolomic signatures of anaplastic lymphoma kinase gene rearrangement in adenocarcinoma. Journal of Thoracic Oncology, 2016, 11, S61.	1.1	0
29	CO sensing properties of Au/SnO 2 â€“Co 3 O 4 catalysts on a micro thermoelectric gas sensor. Sensors and Actuators B: Chemical, 2016, 223, 774-783.	7.8	50
30	Health care application of gas sensors. Synthesiology, 2015, 8, 211-219.	0.2	6
31	Rapid Synthesis and Formation Mechanism of Core-Shell-Structured La-Doped SrTiO3 with a Nb-Doped Shell. Materials, 2015, 8, 3992-4003.	2.9	4
32	CO Sensing Performance of a Micro Thermoelectric Gas Sensor with AuPtPd/SnO2 Catalyst and Effects of a Double Catalyst Structure with Pt/Î±-Al2O3. Sensors, 2015, 15, 31687-31698.	3.8	17
33	SnO2 Nanosheet/Nanoparticle Detector for the Sensing of 1-Nonanal Gas Produced by Lung Cancer. Scientific Reports, 2015, 5, 10122.	3.3	45
34	Sensing Properties of Pd-Loaded Co3O4 Film for a ppb-Level NO Gas Sensor. Sensors, 2015, 15, 8109-8120.	3.8	21
35	Elimination of Flammable Gas Effects in Cerium Oxide Semiconductor-Type Resistive Oxygen Sensors for Monitoring Low Oxygen Concentrations. Sensors, 2015, 15, 9427-9437.	3.8	9
36	Preparation of Î³-alumina large grain particles with large specific surface area via polyol synthesis. Ceramics International, 2015, 41, 3631-3638.	4.8	20

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37	Ppm level methane detection using micro-thermoelectric gas sensors with Pd/Al2O3 combustion catalyst films. Sensors and Actuators B: Chemical, 2015, 206, 488-494.	7.8	49
38	Health care application of gas sensors. Synthesiology, 2015, 8, 214-122.	0.2	2
39	Monitoring of disease-related volatile organic compounds in simulated room air. , 2014, , .		3
40	Thermal Balance Analysis of a Micro-Thermoelectric Gas Sensor Using Catalytic Combustion of Hydrogen. Sensors, 2014, 14, 1822-1834.	3.8	9
41	Calorimetric Thermoelectric Gas Sensor for the Detection of Hydrogen, Methane and Mixed Gases. Sensors, 2014, 14, 8350-8362.	3.8	55
42	Conductive glass sealants with Ag nanoparticles prepared by a heat reduction process. Journal of Non-Crystalline Solids, 2014, 394-395, 22-28.	3.1	2
43	Effects of ethyl cellulose polymers on rheological properties of (La,Sr)(Ti,Fe)O3-terpineol pastes for screen printing. Ceramics International, 2014, 40, 1661-1666.	4.8	29
44	Direct scanning electron microscopy-based observation of dispersed coreâ€“shell-type nanoparticles in a wet state. Ceramics International, 2014, 40, 16361-16364.	4.8	4
45	Polyol synthesis of Al-doped ZnO spherical nanoparticles and their UVâ€“visâ€“NIR absorption properties. Ceramics International, 2014, 40, 8775-8781.	4.8	22
46	Surfactant-assisted synthesis of mono-dispersed cubic BaTiO3 nanoparticles. Materials Research Bulletin, 2014, 57, 103-109.	5.2	22
47	Preparation of WO₃ nanoplatelet-based microspheres and their NO₂ gas-sensing properties. Journal of the Ceramic Society of Japan, 2014, 122, 674-678.	1.1	3
48	Nonanal gas sensing properties of platinum, palladium, and gold-loaded tin oxide VOCs sensors. Sensors and Actuators B: Chemical, 2013, 187, 135-141.	7.8	60
49	Development of Easy-Handling Ceramic Nanoparticles. , 2013, , 991-1000.		1
50	CO oxidation performance of Au/Co3O4 catalyst on the micro gas sensor device. Catalysis Today, 2013, 201, 85-91.	4.4	22
51	Thermoelectric gas sensor with CO combustion catalyst for ppm level carbon monoxide detection. Sensors and Actuators B: Chemical, 2013, 182, 789-794.	7.8	19
52	CO Responses of Sensors Based on Cerium Oxide Thick Films Prepared from Clustered Spherical Nanoparticles. Sensors, 2013, 13, 3252-3261.	3.8	21
53	NO and NO2 Sensing Properties of WO3 and Co3O4 Based Gas Sensors. Sensors, 2013, 13, 12467-12481.	3.8	103
54	Effect of Coreâ€“Shell Ceria/Poly(vinylpyrrolidone) (PVP) Nanoparticles Incorporated in Polymer Films and Their Optical Properties. Materials, 2013, 6, 2119-2129.	2.9	21

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55	Effects of noble metal addition on response of ceria thick film CO sensors. Sensors and Actuators B: Chemical, 2012, 171-172, 350-353.	7.8	33
56	Influence of particle size and aggregation state of alumina on the rheology of a ceramic paste with an organic binder of ethyleneâ€“vinyl acetate copolymer and stearic acid. Ceramics International, 2012, 38, 1591-1597.	4.8	14
57	Calibration Gas Preparation for Non-Disposable Portable MOx, PID, and IER VOC Detectors. Sensor Letters, 2012, 10, 985-992.	0.4	6
58	Formation mechanism of monodispersed spherical coreâ€“shell ceria/polymer hybrid nanoparticles. Materials Research Bulletin, 2011, 46, 1168-1176.	5.2	39
59	Planar-type thermoelectric micro devices using ceramic catalytic combustor. Current Applied Physics, 2011, 11, S36-S40.	2.4	16
60	CO combustion catalyst for micro gas sensor application. Journal of Materials Science, 2011, 46, 1176-1183.	3.7	11
61	Microgenerator Using BiSbTe-Pt Thermopile and Pt-Al2O3 Ceramic Combustor. Journal of Electronic Materials, 2011, 40, 817-822.	2.2	6
62	Surface Organic Modification of In₂O₃ Nanoparticle Assemblies and Their Flammable Gas Sensing Properties. Science of Advanced Materials, 2011, 3, 853-858.	0.7	1
63	Monitoring Breath Hydrogen Using Thermoelectric Sensor. Sensor Letters, 2011, 9, 684-687.	0.4	15
64	Alternating Current Impedance Analysis of CeO₂ Thick Films as Odor Sensors. Sensor Letters, 2011, 9, 703-705.	0.4	5
65	Thermoelectric Micro-Multi-Gas Sensor for the Detection of Hydrogen, Carbon Monoxide and Methane. Sensor Letters, 2011, 9, 773-777.	0.4	2
66	Thermoelectric hydrogen sensors using Si and SiGe thin films with a catalytic combustor. Journal of the Ceramic Society of Japan, 2010, 118, 188-192.	1.1	17
67	XPS study of organic/MoO3 hybrid thin films for aldehyde gas sensors: correlation between average Mo valence and sensitivity. Journal of the Ceramic Society of Japan, 2010, 118, 171-174.	1.1	8
68	Pt catalytic effects on a resistive oxygen sensor using Ce0.9Zr0.1O2 thick film in rich conditions. Journal of the Ceramic Society of Japan, 2010, 118, 175-179.	1.1	1
69	Development of an oxide semiconductor thick film gas sensor for the detection of total volatile organic compounds. Electronics and Communications in Japan, 2010, 93, 34-41.	0.5	28
70	Effects of High-Humidity Aging on Platinum, Palladium, and Gold Loaded Tin Oxideâ€”Volatile Organic Compound Sensors. Sensors, 2010, 10, 6513-6521.	3.8	42
71	Microheater Meander Configurations for Combustion Catalysts in Thermoelectric Gas Sensor. Sensor Letters, 2010, 8, 792-800.	0.4	2
72	Resistive Oxygen Sensor Using Ceria-Zirconia Sensor Material and Ceria-Yttria Temperature Compensating Material for Lean-Burn Engine. Sensors, 2009, 9, 8884-8895.	3.8	26

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73	Sensing performance of thermoelectric hydrogen sensor for breath hydrogen analysisâ˜†. Sensors and Actuators B: Chemical, 2009, 137, 524-528.	7.8	43
74	Fabrication of thermoelectric gas sensors on micro-hotplates. Sensors and Actuators B: Chemical, 2009, 139, 340-345.	7.8	25
75	Robust hydrogen detection system with a thermoelectric hydrogen sensor for hydrogen station application. International Journal of Hydrogen Energy, 2009, 34, 2834-2841.	7.1	48
76	Gas response, response time and selectivity of a resistive CO sensor based on two connected CeO2 thick films with various particle sizes. Sensors and Actuators B: Chemical, 2009, 136, 364-370.	7.8	52
77	High-Temperature Thermoelectric Measurement of B-Doped SiGe and Si Thin Films. Materials Transactions, 2009, 50, 1596-1602.	1.2	16
78	Ceramic catalyst combustors of Pt-loaded-alumina on microdevices. Journal of the Ceramic Society of Japan, 2009, 117, 659-665.	1.1	7
79	Preparation of core-shell type cerium oxide/polymer hybrid nanoparticles for ink-jet printing. Journal of the Ceramic Society of Japan, 2009, 117, 769-772.	1.1	13
80	Physicochemical properties and microstructures of core-shell type cerium oxide/organic polymer nanospheres. Journal of the Ceramic Society of Japan, 2009, 117, 773-776.	1.1	13
81	Preparation of total VOC sensor with sensor-response stability for humidity by noble metal addition to SnO2. Journal of the Ceramic Society of Japan, 2009, 117, 1297-1301.	1.1	26
82	Preparation of layered organicâ€“inorganic nanohybrid thin films of molybdenum trioxide with polyaniline derivatives for aldehyde gases sensors of several tens ppb level. Sensors and Actuators B: Chemical, 2008, 128, 512-520.	7.8	60
83	Fabrication and performance of free-standing hydrogen gas sensors. Sensors and Actuators B: Chemical, 2008, 129, 1-9.	7.8	14
84	Evaluation of response characteristics of resistive oxygen sensors using Ce0.9Zr0.1O2 thick film by pressure modulation method. Sensors and Actuators B: Chemical, 2008, 130, 466-469.	7.8	5
85	Long-term stability of Pt/alumina catalyst combustors for micro-gas sensor application. Journal of the European Ceramic Society, 2008, 28, 2183-2190.	5.7	25
86	Electrode contact study for SiGe thin film operated at high temperature. Applied Surface Science, 2008, 254, 4999-5006.	6.1	2
87	Characterizations of interlayer organicâ€“inorganic nanohybrid of molybdenum trioxide with polyaniline and poly(o-anisidine). Materials Chemistry and Physics, 2008, 110, 115-119.	4.0	8
88	Preparation of SnO2 nanoparticles less than 10Ânm in size by precipitation using hydrophilic carbon black powder. Materials Letters, 2008, 62, 313-316.	2.6	10
89	VOCs sensing properties of layered organicâ€“inorganic hybrid thin films: MoO3 with various interlayer organic components. Materials Letters, 2008, 62, 3021-3023.	2.6	26
90	Resistive Type Sensor Using Ceria Thick Film with Nano Particles. Advanced Materials Research, 2008, 47-50, 1522-1525.	0.3	1

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91	13C CP/MAS NMR Study of Cross-linked Poly(vinylpyrrolidone) on Surface of Cerium Oxide Nanoparticles. Chemistry Letters, 2008, 37, 1116-1117.	1.3	10
92	Controlled Synthesis of Monodispersed Cerium Oxide Nanoparticle Sols Applicable to Preparing Ordered Self-Assemblies. Bulletin of the Chemical Society of Japan, 2008, 81, 761-766.	3.2	29
93	Analytical Study of Resistance Drift Phenomena on (PANI)xMoO3 Hybrid Thin Films as Gas Sensors. Bulletin of the Chemical Society of Japan, 2008, 81, 1331-1335.	3.2	9
94	Monitoring of dispensed fluid with the quartz crystal microbalance (QCM) for the better control of inkjet or dispenser machine. Journal of the Ceramic Society of Japan, 2008, 116, 459-461.	1.1	7
95	Development of Oxide Semiconductor Thick Film Gas Sensor for the Detection of Total Volatile Organic Compounds. IEEJ Transactions on Sensors and Micromachines, 2008, 128, 125-130.	0.1	5
96	Sensor Application of Organic-Inorganic Hybrid Materials. Seikei-Kakou, 2008, 20, 217-222.	0.0	0
97	Safe membrane-releasing process for thermoelectric hydrogen gas sensor. , 2007, , .		0
98	CO Sensor Having Two Zr-Doped CeO[sub 2] Films with and Without Catalyst Layer. Electrochemical and Solid-State Letters, 2007, 10, J37.	2.2	12
99	Thermoelectric Gas Sensor using Au Loaded Titania CO Oxidation Catalyst. Journal of the Ceramic Society of Japan, 2007, 115, 37-41.	1.3	14
100	Output Evaluation of Resistive Oxygen Sensor having Ce0.9Zr0.1O2 Sensing Material and Zr0.8Y0.2O2-.DELTA. Temperature Compensating Material in Model Exhaust Gas. Journal of the Ceramic Society of Japan, 2007, 115, 688-691.	1.1	7
101	Highly Aldehyde Gas-Sensing Responsiveness and Selectivity of Layered Organic-Guest/MoO3-Host Hybrid Sensor. Journal of the Ceramic Society of Japan, 2007, 115, 742-744.	1.1	6
102	Preparation of Micro-Thermoelectric Hydrogen Sensor Loading Two Kinds of Catalysts to Enhance Gas Selectivity. Journal of the Ceramic Society of Japan, 2007, 115, 748-750.	1.1	5
103	Layered Hybrid Thin Film of Molybdenum Trioxide with Poly(2,5-dimethylaniline) for Gas Sensor Sensitive to VOC Gases in ppm Level. Chemistry Letters, 2007, 36, 100-101.	1.3	14
104	Preparation and Characterization of a Layered Molybdenum Trioxide with Poly(o-anisidine) Hybrid Thin Film and Its Aldehydic Gases Sensing Properties. Bulletin of the Chemical Society of Japan, 2007, 80, 1011-1016.	3.2	22
105	Boron-Doped Si[sub 0.8]Ge[sub 0.2] Thin Film Deposited by Helicon Sputtering for Microthermoelectric Hydrogen Sensor. Journal of the Electrochemical Society, 2007, 154, J53.	2.9	7
106	Reversible Redox Processes of Poly(anilines) in Layered Semiconductor Niobate Films under Alternate UVâ^'Vis Light Illumination. Journal of Physical Chemistry B, 2007, 111, 12162-12169.	2.6	12
107	The effect of hafnia doping on the resistance of ceria for use in resistive oxygen sensors. Sensors and Actuators B: Chemical, 2007, 123, 407-412.	7.8	18
108	Synthesis and characterization of layered organic/inorganic hybrid thin films based on molybdenum trioxide with poly(N-methylaniline) for VOC sensor. Materials Letters, 2007, 61, 4031-4034.	2.6	24

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109	Platinum Micro-Hotplates on Thermal Insulated Structure for Micro-Thermoelectric Gas Sensor. IEEJ Transactions on Sensors and Micromachines, 2006, 126, 568-572.	0.1	9
110	New Structural Design of Micro-Thermoelectric Sensor for Wide Range Hydrogen Detection. Journal of the Ceramic Society of Japan, 2006, 114, 853-856.	1.3	39
111	Pt Loaded Alumina Ceramic Catalysts for Micro Thermoelectric Hydrogen Sensors. Journal of the Ceramic Society of Japan, 2006, 114, 686-691.	1.3	1
112	Highly adhesive layered molybdenum oxide thin films prepared on a silicon substrate using suitable buffer materials. Thin Solid Films, 2006, 515, 2709-2716.	1.8	14
113	Micro-Thermoelectric Hydrogen Sensor of Three Different Membrane Structures. Japanese Journal of Applied Physics, 2006, 45, 6186-6191.	1.5	0
114	B- and P-Doped Si_{0.8}Ge_{0.2} Thin Film Deposited by Helicon Sputtering for the Micro-Thermoelectric Gas Sensor. Key Engineering Materials, 2006, 320, 99-102.	0.4	6
115	Preparation of Phosphorus-Doped Si0.8Ge0.2 Thermoelectric Thin Film Using RF Sputtering with Induction Coil. Journal of the Ceramic Society of Japan, 2005, 113, 558-561.	1.3	7
116	Layered double hydroxide hybrids with dicetylphosphate. Journal of Colloid and Interface Science, 2005, 291, 218-222.	9.4	12
117	Reversible Color Changes in Lamella Hybrids of Poly(diacetylenecarboxylates) Incorporated in Layered Double Hydroxide Nanosheets. Journal of Physical Chemistry B, 2005, 109, 3199-3206.	2.6	70
118	Characterization of Intercalation Type Organic/MoO₃ Nanohybrids and their VOC Sensing Properties. Advanced Materials Research, 0, 47-50, 1514-1517.	0.3	3