

Ken Watanabe

List of Publications by Year in descending order

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Version: 2024-02-01

40
papers

512
citations

687363

13
h-index

677142

22
g-index

40
all docs

40
docs citations

40
times ranked

791
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly sensitive isoprene gas sensor using Au-loaded pyramid-shaped ZnO particles. <i>Sensors and Actuators B: Chemical</i> , 2021, 326, 128999.	7.8	53
2	Pulse-Driven Semiconductor Gas Sensors Toward ppt Level Toluene Detection. <i>Analytical Chemistry</i> , 2018, 90, 11219-11223.	6.5	49
3	Highly Sensitive Ethanol Gas Sensor Using Pyramid-Shaped ZnO Particles with (0001) Basal Plane. <i>Journal of Physical Chemistry C</i> , 2018, 122, 7353-7360.	3.1	46
4	Effect of Humid Aging on the Oxygen Adsorption in SnO ₂ Gas Sensors. <i>Sensors</i> , 2018, 18, 254.	3.8	45
5	Electrical properties of scandium nitride epitaxial films grown on (100) magnesium oxide substrates by molecular beam epitaxy. <i>Journal of Applied Physics</i> , 2013, 114, .	2.5	30
6	Unexpected gas sensing properties of SiO ₂ /SnO ₂ core-shell nanofibers under dry and humid conditions. <i>Journal of Materials Chemistry C</i> , 2017, 5, 6369-6376.	5.5	30
7	Selective Detection of Toluene Using Pulse-Driven SnO ₂ Micro Gas Sensors. <i>ACS Applied Electronic Materials</i> , 2020, 2, 2913-2920.	4.3	30
8	Development of ZnO-based surface plasmon resonance gas sensor and analysis of UV irradiation effect on NO ₂ desorption from ZnO thin films. <i>Journal of the Ceramic Society of Japan</i> , 2010, 118, 193-196.	1.1	18
9	Hydrogen diffusion in the apatite-water system: Fluorapatite parallel to the <i>c</i> -axis. <i>Geochemical Journal</i> , 2017, 51, 115-122.	1.0	17
10	Oxygen adsorption on ZrO ₂ -loaded SnO ₂ gas sensors in humid atmosphere. <i>Journal of Materials Science</i> , 2019, 54, 3135-3143.	3.7	16
11	Double-Step Modulation of the Pulse-Driven Mode for a High-Performance SnO ₂ Micro Gas Sensor: Designing the Particle Surface via a Rapid Preheating Process. <i>ACS Sensors</i> , 2020, 5, 3449-3456.	7.8	16
12	Correlation Between High Gas Sensitivity and Dopant Structure in W-doped ZnO. <i>Physical Review Applied</i> , 2017, 7, .	3.8	15
13	Effect of Ambient Oxygen Partial Pressure on the Hydrogen Response of SnO ₂ Semiconductor Gas Sensors. <i>Journal of the Electrochemical Society</i> , 2019, 166, B618-B622.	2.9	14
14	Ion implantation and diffusion behavior of silver in zinc oxide. <i>Journal of the Ceramic Society of Japan</i> , 2010, 118, 217-219.	1.1	12
15	Microscopic and Isotope Tracer Study on the Growth of Spherical ZnO Particles in Water-Ethylene Glycol Solvent. <i>Crystal Growth and Design</i> , 2015, 15, 2609-2619.	3.0	11
16	Effect of Boron Substitution on Oxide-Ion Conduction in <i>c</i> -Axis-Oriented Apatite-Type Lanthanum Silicate. <i>Journal of Physical Chemistry C</i> , 2020, 124, 2879-2885.	3.1	11
17	Novel Solid Electrolyte CO ₂ Gas Sensors Based on <i>c</i> -Axis-Oriented Y-Doped La _{0.66} Si _{0.3} B _{0.7} O _{26.14} . <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 21515-21520.	8.0	11
18	Oxygen tracer diffusion in magnesium-doped ZnO ceramics. <i>Journal of the Ceramic Society of Japan</i> , 2010, 118, 362-365.	1.1	10

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19	Solvothermal synthesis of ZnO spherical particles and VOC sensor application. Journal of the Ceramic Society of Japan, 2014, 122, 488-491.	1.1	10
20	One-Trillionth Level Toluene Detection Using a Dual-Designed Semiconductor Gas Sensor: Material and Sensor-Driven Designs. ACS Applied Electronic Materials, 2020, 2, 4122-4126.	4.3	8
21	Gas sensing properties of c -axis-oriented Al-incorporated ZnO films epitaxially grown on (11-20) sapphire substrates using pulsed laser deposition. Journal of the Ceramic Society of Japan, 2016, 124, 668-672.	1.1	7
22	Oxygen pumping based on c -axis-oriented lanthanum silicate ceramics: challenge toward low operating temperature. Journal of the Ceramic Society of Japan, 2019, 127, 1-4.	1.1	7
23	Impact of Pd nanoparticle loading method on SnO ₂ surface for natural gas detection in humid atmosphere. Journal of Materials Science, 2021, 56, 13975-13988.	3.7	7
24	Lowering the sintering temperature of Li ₇ La ₃ Zr ₂ O ₁₂ electrolyte for co-fired all-solid-state batteries via partial Bi substitution and precise control of compositional deviation. Journal of the Ceramic Society of Japan, 2022, 130, 416-423.	1.1	7
25	Chemical Activation of Nitrogen-doped Carbon Derived from Chitosan with ZnCl ₂ to Produce a High-performance Gas Diffusion-type Oxygen Electrode. Electrochemistry, 2021, 89, 36-42.	1.4	5
26	Annealing effect on microstructure of ZnO nano-particulate films and VOC gas sensing property. Journal of the Ceramic Society of Japan, 2014, 122, 267-270.	1.1	4
27	Isotope tracer investigation and ab-initio simulation of anisotropic hydrogen transport and possible multi-hydrogen centers in tin dioxide. Journal of Applied Physics, 2016, 119, 225704.	2.5	4
28	Oxygen Tracer Diffusion in BaTiO ₃ Ceramics - Effect of Zr Impurity from Planetary Ball Milling. Key Engineering Materials, 0, 566, 262-265.	0.4	3
29	Crystal Growth Mechanism of Highly c -Axis-Oriented Apatite-Type Lanthanum Borosilicate Using B ₂ O ₃ Vapor. ACS Omega, 2020, 5, 31936-31942.	3.5	3
30	Highly Sensitive Carbon Monoxide Sensor Element with Wide-Range Humidity Resistance by Loading Pd Nanoparticles on SnO ₂ Surface. Sensors, 2022, 22, 2934.	3.8	3
31	Microstructure Effect on the Oxygen Permeation through Ba _{0.95} La _{0.05} FeO _{3-δ} Membranes Fabricated by Different Methods. Journal of the American Ceramic Society, 2010, 93, 2012-2017.	3.8	2
32	Relationship between Aluminum and Lithium and Annealing for Reducing Lithium Contamination in Aluminum-Implanted Zinc Oxide. Key Engineering Materials, 2010, 445, 205-208.	0.4	2
33	Ultra-High Sensitive Gas Detection Using Pulse-Driven MEMS Sensor Based on Tin Dioxide. , 2019, , .		2
34	Oxygen Diffusion Phenomena and Hydrogen Incorporation in Reducing BaTiO ₃ Ceramics Doped with Ho below Solubility Limit. Japanese Journal of Applied Physics, 2012, 51, 101801.	1.5	2
35	Effect of Annealing Atmosphere on Oxygen Diffusion through Ba-Fe-Based Perovskite Oxide. Key Engineering Materials, 0, 485, 141-144.	0.4	1
36	Effects of dielectric film surface on oxygen diffusion. Journal of the Ceramic Society of Japan, 2014, 122, 410-414.	1.1	1

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37	Oxygen Tracer Diffusion in A-Axis Oriented ZnO Thin Films Grown on (01-12) Sapphire by Pulsed Laser Deposition. Key Engineering Materials, 0, 566, 266-270.	0.4	0
38	Consideration for Oxygen Adsorption Species on SnO ₂ Semiconductor Gas Sensors. Proceedings (mdpi), 2019, 14, .	0.2	0
39	Ultra-High Sensitive (Ppt) Gas Sensor Based on the Pulse Heating Using MEMS Technique. Proceedings (mdpi), 2019, 14, .	0.2	0
40	DC-Voltage-Induced High Oxygen Permeation through a Lanthanum Silicate Electrolyte with a Cerium Oxide Thin Film. Electrochemistry, 2021, 89, 427-432.	1.4	0