Takeshi Yanagida

List of Publications by Year
in descending order

105 papers	3,077 citations	147801 31 h-index	175258 52 g-index
107 all docs	107 docs citations	107 times ranked	3833 citing authors

#	Article	IF	Citations
1	Resistive Switching Multistate Nonvolatile Memory Effects in a Single Cobalt Oxide Nanowire. Nano Letters, 2010, 10, 1359-1363.	9.1	239
2	Nanostructuration of PEDOT in Porous Coordination Polymers for Tunable Porosity and Conductivity. Journal of the American Chemical Society, 2016, 138, 10088-10091.	13.7	193
3	Unveiling massive numbers of cancer-related urinary-microRNA candidates via nanowires. Science Advances, 2017, 3, e1701133.	10.3	170
4	Nonvolatile Bipolar Resistive Memory Switching in Single Crystalline NiO Heterostructured Nanowires. Journal of the American Chemical Society, 2009, 131, 3434-3435.	13.7	147
5	Resistive-Switching Memory Effects of NiO Nanowire/Metal Junctions. Journal of the American Chemical Society, 2010, 132, 6634-6635.	13.7	125
6	Cellulose Nanofiber Paper as an Ultra Flexible Nonvolatile Memory. Scientific Reports, 2014, 4, 5532.	3.3	122
7	Intrinsic Mechanisms of Memristive Switching. Nano Letters, 2011, 11, 2114-2118.	9.1	110
8	Scaling Effect on Unipolar and Bipolar Resistive Switching of Metal Oxides. Scientific Reports, 2013, 3, 1657.	3.3	87
9	Crystal-Plane Dependence of Critical Concentration for Nucleation on Hydrothermal ZnO Nanowires. Journal of Physical Chemistry C, 2013, 117, 1197-1203.	3.1	67
10	All-nanocellulose nonvolatile resistive memory. NPG Asia Materials, 2016, 8, e310-e310.	7.9	64
11	DNA Manipulation and Separation in Sublithographic-Scale Nanowire Array. ACS Nano, 2013, 7, 3029-3035.	14.6	61
12	Discrimination of VOCs molecules via extracting concealed features from a temperature-modulated p-type NiO sensor. Sensors and Actuators B: Chemical, 2019, 293, 342-349.	7.8	60
13	Discriminating single-bacterial shape using low-aspect-ratio pores. Scientific Reports, 2017, 7, 17371.	3.3	58
14	Mechanism and control of sidewall growth and catalyst diffusion on oxide nanowire vapor-liquid-solid growth. Applied Physics Letters, 2008, 93, .	3.3	56
15	Nanoscale Thermal Management of Single SnO₂ Nanowire: pico-Joule Energy Consumed Molecule Sensor. ACS Sensors, 2016, 1, 997-1002.	7.8	56
16	Mechanism of catalyst diffusion on magnesium oxide nanowire growth. Applied Physics Letters, 2007, 91, .	3.3	54
17	Ultrafast and Wide Range Analysis of DNA Molecules Using Rigid Network Structure of Solid Nanowires. Scientific Reports, 2014, 4, 5252.	3.3	54
18	Paper-Based Disposable Molecular Sensor Constructed from Oxide Nanowires, Cellulose Nanofibers, and Pencil-Drawn Electrodes. ACS Applied Materials & Interfaces, 2019, 11, 15044-15050.	8.0	54

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19	Artificial visual systems enabled by quasiâ€“two-dimensional electron gases in oxide superlattice nanowires. Science Advances, 2020, 6, .	10.3	51
20	Rational Concept for Designing Vaporâ€“Liquidâ€“Solid Growth of Single Crystalline Metal Oxide Nanowires. Nano Letters, 2015, 15, 6406-6412.	9.1	46
21	Dual Defects of Cation and Anion in Memristive Nonvolatile Memory of Metal Oxides. Journal of the American Chemical Society, 2012, 134, 2535-2538.	13.7	44
22	Impact of Preferential Indium Nucleation on Electrical Conductivity of Vaporâ€“Liquidâ€“Solid Grown Indiumâ€“Tin Oxide Nanowires. Journal of the American Chemical Society, 2013, 135, 7033-7038.	13.7	44
23	Enhancement of Oxide VLS Growth by Carbon on Substrate Surface. Journal of Physical Chemistry C, 2008, 112, 18923-18926.	3.1	41
24	Role of surrounding oxygen on oxide nanowire growth. Applied Physics Letters, 2010, 97, 073114.	3.3	40
25	Prominent Thermodynamical Interaction with Surroundings on Nanoscale Memristive Switching of Metal Oxides. Nano Letters, 2012, 12, 5684-5690.	9.1	40
26	Synthesis of Monodispersedly Sized ZnO Nanowires from Randomly Sized Seeds. Nano Letters, 2020, 20, 599-605.	9.1	40
27	Crucial role of doping dynamics on transport properties of Sb-doped SnO2 nanowires. Applied Physics Letters, 2009, 95, 053105.	3.3	39
28	Three-dimensional Nanowire Structures for Ultra-Fast Separation of DNA, Protein and RNA Molecules. Scientific Reports, 2015, 5, 10584.	3.3	39
29	Substantial Expansion of Detectable Size Range in Ionic Current Sensing through Pores by Using a Microfluidic Bridge Circuit. Journal of the American Chemical Society, 2017, 139, 14137-14142.	13.7	39
30	Perovskite Coreâ€“Shell Nanowire Transistors: Interfacial Transfer Doping and Surface Passivation. ACS Nano, 2020, 14, 12749-12760.	14.6	34
31	Rational Concept for Reducing Growth Temperature in Vaporâ€“Liquidâ€“Solid Process of Metal Oxide Nanowires. Nano Letters, 2016, 16, 7495-7502.	9.1	33
32	Substantial Narrowing on the Width of â€œConcentration Windowâ€•of Hydrothermal ZnO Nanowires via Ammonia Addition. Scientific Reports, 2019, 9, 14160.	3.3	33
33	Metalâ€“Oxide Nanowire Molecular Sensors and Their Promises. Chemosensors, 2021, 9, 41.	3.6	30
34	Interfacial effect on metal/oxide nanowire junctions. Applied Physics Letters, 2010, 96, 073110.	3.3	29
35	Fundamental Strategy for Creating VLS Grown TiO₂ Single Crystalline Nanowires. Journal of Physical Chemistry C, 2012, 116, 24367-24372.	3.1	28
36	Long-Term Stability of Oxide Nanowire Sensors via Heavily Doped Oxide Contact. ACS Sensors, 2017, 2, 1854-1859.	7.8	24

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37	Rational Method of Monitoring Molecular Transformations on Metal-Oxide Nanowire Surfaces. Nano Letters, 2019, 19, 2443-2449.	9.1	21
38	Nanocellulose Paper Semiconductor with a 3D Network Structure and Its Nanoâ€“Microâ€“Macro Trans-Scale Design. ACS Nano, 2022, 16, 8630-8640.	14.6	21
39	Study on transport pathway in oxide nanowire growth by using spacing-controlled regular array. Applied Physics Letters, 2011, 99, 193105.	3.3	20
40	Essential role of catalyst in vapor-liquid-solid growth of compounds. Physical Review E, 2011, 83, 061606.	2.1	20
41	A flux induced crystal phase transition in the vaporâ€“liquidâ€“solid growth of indium-tin oxide nanowires. Nanoscale, 2014, 6, 7033.	5.6	20
42	True Vaporâ€“Liquidâ€“Solid Process Suppresses Unintentional Carrier Doping of Single Crystalline Metal Oxide Nanowires. Nano Letters, 2017, 17, 4698-4705.	9.1	20
43	Phosphonic Acid Modified ZnO Nanowire Sensors: Directing Reaction Pathway of Volatile Carbonyl Compounds. ACS Applied Materials & Interfaces, 2020, 12, 44265-44272.	8.0	19
44	Discriminating BTX Molecules by the Nonselective Metal Oxide Sensor-Based Smart Sensing System. ACS Sensors, 2021, 6, 4167-4175.	7.8	19
45	Ammonia-Induced Seed Layer Transformations in a Hydrothermal Growth Process of Zinc Oxide Nanowires. Journal of Physical Chemistry C, 2020, 124, 20563-20568.	3.1	18
46	A real-time simultaneous measurement on a microfluidic device for individual bacteria discrimination. Sensors and Actuators B: Chemical, 2018, 260, 746-752.	7.8	17
47	Engineering Nanowire-Mediated Cell Lysis for Microbial Cell Identification. ACS Nano, 2019, 13, 2262-2273.	14.6	17
48	Mechanical Rupture-Based Antibacterial and Cell-Compatible ZnO/SiO2 Nanowire Structures Formed by Bottom-Up Approaches. Micromachines, 2020, 11, 610.	2.9	17
49	Modulation of Thermoelectric Power Factor via Radial Dopant Inhomogeneity in B-Doped Si Nanowires. Journal of the American Chemical Society, 2014, 136, 14100-14106.	13.7	16
50	Nanowire-based sensor electronics for chemical and biological applications. Analyst, The, 2021, 146, 6684-6725.	3.5	16
51	Selfâ€Antiâ€Stacking 2D Metal Phosphide Loopâ€Sheet Heterostructures by Edgeâ€Topological Regulation for Highly Efficient Water Oxidation. Small, 2021, 17, e2006860.	10.0	16
52	Biomolecular recognition on nanowire surfaces modified by the self-assembled monolayer. Lab on A Chip, 2018, 18, 3225-3229.	6.0	15
53	Low-Power and ppm-Level Multimolecule Detection by Integration of Self-Heated Metal Nanosheet Sensors. IEEE Transactions on Electron Devices, 2019, 66, 5393-5398.	3.0	15
54	Molecular profiling of extracellular vesicles via charge-based capture using oxide nanowire microfluidics. Biosensors and Bioelectronics, 2021, 194, 113589.	10.1	15

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55	A millisecond micro-RNA separation technique by a hybrid structure of nanopillars and nanoslits. Scientific Reports, 2017, 7, 43877.	3.3	13
56	Robust Ionic Current Sensor for Bacterial Cell Size Detection. ACS Sensors, 2018, 3, 574-579.	7.8	13
57	Peptide Screening from a Phage Display Library for Benzaldehyde Recognition. Chemistry Letters, 2019, 48, 978-981.	1.3	12
58	Redox-Inactive CO₂ Determines Atmospheric Stability of Electrical Properties of ZnO Nanowire Devices through a Room-Temperature Surface Reaction. ACS Applied Materials & Interfaces, 2019, 11, 40260-40266.	8.0	12
59	Face-selective tungstate ions drive zinc oxide nanowire growth direction and dopant incorporation. Communications Materials, 2020, 1, .	6.9	12
60	Numerical study on the difference in mechanism between vapor-solid and vapor-liquid-solid solidification processes. Physical Review E, 2010, 82, 011605.	2.1	11
61	Advanced Photoassisted Atomic Switches Produced Using ITO Nanowire Electrodes and Molten Photoconductive Organic Semiconductors. Advanced Materials, 2013, 25, 5893-5897.	21.0	11
62	Identifying DNA methylation in a nanochannel. Science and Technology of Advanced Materials, 2016, 17, 644-649.	6.1	11
63	Controlling Bi-Provoked Nanostructure Formation in GaAs/GaAsBi Coreâ€"Shell Nanowires. Nano Letters, 2019, 19, 8510-8518.	9.1	11
64	A thermally robust and strongly oxidizing surface of WO₃hydrate nanowires for electrical aldehyde sensing with long-term stability. Journal of Materials Chemistry A, 2021, 9, 5815-5824.	10.3	11
65	Impurity induced periodic mesostructures in Sb-doped SnO2 nanowires. Journal of Crystal Growth, 2010, 312, 3251-3256.	1.5	10
66	Switching Properties of Titanium Dioxide Nanowire Memristor. Japanese Journal of Applied Physics, 2012, 51, 11PE09.	1.5	10
67	Waterâ€"Organic Cosolvent Effect on Nucleation of Solution-Synthesized ZnO Nanowires. ACS Omega, 2019, 4, 8299-8304.	3.5	10
68	Unusual Sequential Annealing Effect in Achieving High Thermal Stability of Conductive Al-Doped ZnO Nanofilms. ACS Applied Electronic Materials, 2020, 2, 2064-2070.	4.3	10
69	Image Processing and Machine Learning for Automated Identification of Chemo-/Biomarkers in Chromatographyâ€"Mass Spectrometry. Analytical Chemistry, 2021, 93, 14708-14715.	6.5	9
70	Breath odor-based individual authentication by an artificial olfactory sensor system and machine learning. Chemical Communications, 2022, 58, 6377-6380.	4.1	9
71	Thermal conductivity of Si nanowires with Î´-modulated dopant distribution by self-heated 3Ï‰ method and its length dependence. Journal of Applied Physics, 2018, 124, 065105.	2.5	8
72	Fabrication of a Robust In2O3 Nanolines FET Device as a Biosensor Platform. Micromachines, 2021, 12, 642.	2.9	8

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73	Face-Selective Crystal Growth of Hydrothermal Tungsten Oxide Nanowires for Sensing Volatile Molecules. ACS Applied Nano Materials, 2020, 3, 10252-10260.	5.0	8
74	Monovalent sulfur oxoanions enable millimeter-long single-crystalline <i>h</i>-WO₃ nanowire synthesis. Nanoscale, 2020, 12, 9058-9066.	5.6	7
75	Oxide Nanowire Microfluidic Devices for Capturing Single-stranded DNAs. Analytical Sciences, 2021, 37, 1139-1145.	1.6	7
76	Photolithographically Constructed Single ZnO Nanowire Device and Its Ultraviolet Photoresponse. Analytical Sciences, 2020, 36, 1125-1129.	1.6	7
77	Tailoring Nucleation at Two Interfaces Enables Single Crystalline NiO Nanowires via Vaporâ€“Liquidâ€“Solid Route. ACS Applied Materials & Interfaces, 2016, 8, 27892-27899.	8.0	6
78	PM_{2.5} Particle Detection in a Microfluidic Device by Using Ionic Current Sensing. Analytical Sciences, 2018, 34, 1347-1349.	1.6	6
79	Oxygen-Induced Reversible Sn-Dopant Deactivation between Indium Tin Oxide and Single-Crystalline Oxide Nanowire Leading to Interfacial Switching. ACS Applied Materials & Interfaces, 2020, 12, 52929-52936.	8.0	6
80	Quantitatively Discriminating Alcohol Molecules by Thermally Modulating NiOâ€Based Sensor Arrays. Advanced Materials Technologies, 2022, 7, 2100762.	5.8	6
81	Impact of Lateral SnO₂ Nanofilm Channel Geometry on a 1024 Crossbar Chemical Sensor Array. ACS Sensors, 2022, 7, 460-468.	7.8	6
82	Effect of Channel Geometry on Ionic Current Signal of a Bridge Circuit Based Microfluidic Channel. Chemistry Letters, 2018, 47, 350-353.	1.3	5
83	Unusual Oxygen Partial Pressure Dependence of Electrical Transport of Single-Crystalline Metal Oxide Nanowires Grown by the Vaporâ€“Liquidâ€“Solid Process. Nano Letters, 2019, 19, 1675-1681.	9.1	5
84	The impact of surface Cu²⁺ of ZnO/(Cu_{1âˆ’x}Zn_x)O heterostructured nanowires on the adsorption and chemical transformation of carbonyl compounds. Chemical Science, 2021, 12, 5073-5081.	7.4	5
85	Robust and Electrically Conductive ZnO Thin Films and Nanostructures: Their Applications in Thermally and Chemically Harsh Environments. ACS Applied Electronic Materials, 2021, 3, 2925-2940.	4.3	5
86	Enhancement of pH Tolerance in Conductive Al-Doped ZnO Nanofilms via Sequential Annealing. ACS Applied Electronic Materials, 2021, 3, 955-962.	4.3	4
87	Rational Strategy for Space-Confined Seeded Growth of ZnO Nanowires in Meter-Long Microtubes. ACS Applied Materials & Interfaces, 2021, 13, 16812-16819.	8.0	4
88	ZnO/SiO₂ core/shell nanowires for capturing CpG rich single-stranded DNAs. Analytical Methods, 2021, 13, 337-344.	2.7	4
89	Maximizing Conversion of Surface Click Reactions for Versatile Molecular Modification on Metal Oxide Nanowires. Langmuir, 2021, 37, 5172-5179.	3.5	3
90	Mechanistic Approach for Long-Term Stability of a Polyethylene Glycolâ€“Carbon Black Nanocomposite Sensor. ACS Sensors, 2022, 7, 151-158.	7.8	3

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91	Water-Selective Nanostructured Dehumidifiers for Molecular Sensing Spaces. ACS Sensors, 2022, 7, 534-544.	7.8	3
92	Edge-Topological Regulation for <i>in Situ</i> Fabrication of Bridging Nanosensors. Nano Letters, 2022, 22, 2569-2577.	9.1	3
93	Surface Dissociation Effect on Phosphonic Acid Self-Assembled Monolayer Formation on ZnO Nanowires. ACS Omega, 2022, 7, 1462-1467.	3.5	3
94	Effect of DNA Methylation on the Velocity of DNA Translocation through a Nanochannel. Analytical Sciences, 2017, 33, 727-730.	1.6	1
95	Nanostructures Integrated with a Nanochannel for Slowing Down DNA Translocation Velocity for Nanopore Sequencing. Analytical Sciences, 2017, 33, 735-738.	1.6	1
96	Growth Kinetics and Magnetic Property of Single-Crystal Fe Nanowires Grown via Vaporâ€“Solid Mechanism Using Chemically Synthesized FeO Nanoparticle Catalysts. Crystal Growth and Design, 2019, 19, 7257-7263.	3.0	1
97	Core-shell Metal Oxide Nanowire Array to Analyze Adsorption Behaviors of Volatile Molecules. Chemistry Letters, 2022, 51, 424-427.	1.3	1
98	Moderate molecular recognitions on ZnO <i>m</i>-plane and their selective capture/release of bio-related phosphoric acids. Nanoscale Advances, 2022, 4, 1649-1658.	4.6	1
99	A oxide nanowire for probing nanoscale memristive switching. , 2015, , .		0
100	Integrated molecule recognition sensor electronics using nanostructured metal oxides on silicon. , 2018, , .		0
101	Identification of Genetic Variants via Bacterial Respiration Gas Analysis. Frontiers in Microbiology, 2020, 11, 581571.	3.5	0
102	Facile Synthesis of Zinc Titanate Nanotubes via Reaction-byproduct Etching. Chemistry Letters, 2020, 49, 1220-1223.	1.3	0
103	Fabrication of Single Crystalline Metal Oxide Nanowires Based on Spatial Selectivity of Molecules. Hyomen Kagaku, 2017, 38, 351-356.	0.0	0
104	Micro- and Nanopore Technologies for Single-Cell Analysis. , 2022, , 343-373.		0
105	Micro- and Nanopore Technologies for Single-Cell Analysis. , 2020, , 1-31.		0