

Cheng-Liang Hsu

List of Publications by Year in descending order

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115
papers

4,609
citations

71102

41
h-index

110387

64
g-index

115
all docs

115
docs citations

115
times ranked

5214
citing authors

#	ARTICLE	IF	CITATIONS
1	Laterally grown ZnO nanowire ethanol gas sensors. <i>Sensors and Actuators B: Chemical</i> , 2007, 126, 473-477.	7.8	298
2	Highly sensitive ZnO nanowire ethanol sensor with Pd adsorption. <i>Applied Physics Letters</i> , 2007, 91, .	3.3	199
3	Doped ZnO 1D Nanostructures: Synthesis, Properties, and Photodetector Application. <i>Small</i> , 2014, 10, 4562-4585.	10.0	166
4	A ZnO nanowire-based humidity sensor. <i>Superlattices and Microstructures</i> , 2010, 47, 772-778.	3.1	118
5	Ultraviolet photodetectors with low temperature synthesized vertical ZnO nanowires. <i>Chemical Physics Letters</i> , 2005, 416, 75-78.	2.6	115
6	Cu ₂ O/n-ZnO nanowire solar cells on ZnO:Ga/glass templates. <i>Scripta Materialia</i> , 2007, 57, 53-56.	5.2	114
7	Fabrication of gas sensor based on p-type ZnO nanoparticles and n-type ZnO nanowires. <i>Sensors and Actuators B: Chemical</i> , 2013, 182, 190-196.	7.8	112
8	Ultraviolet photodetectors with ZnO nanowires prepared on ZnO:Ga/glass templates. <i>Applied Physics Letters</i> , 2006, 89, 153101.	3.3	101
9	Electroluminescence from n-ZnO nanowires/p-GaN heterostructure light-emitting diodes. <i>Applied Physics Letters</i> , 2009, 95, .	3.3	99
10	Fabrication of gas sensing devices with ZnO nanostructure by the low-temperature oxidation of zinc particles. <i>Sensors and Actuators B: Chemical</i> , 2008, 131, 572-576.	7.8	95
11	Highly Sensitive ZnO Nanowire Acetone Vapor Sensor With Au Adsorption. <i>IEEE Nanotechnology Magazine</i> , 2008, 7, 754-759.	2.0	95
12	CuO nanowire-based humidity sensors prepared on glass substrate. <i>Sensors and Actuators B: Chemical</i> , 2011, 156, 906-911.	7.8	95
13	Ethanol gas and humidity sensors of CuO/Cu ₂ O composite nanowires based on a Cu through-silicon via approach. <i>Sensors and Actuators B: Chemical</i> , 2016, 224, 95-102.	7.8	94
14	Vertical p-Type Cu-Doped ZnO/n-Type ZnO Homojunction Nanowire-Based Ultraviolet Photodetector by the Furnace System with Hotwire Assistance. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 4277-4285.	8.0	93
15	Novel fabrication of UV photodetector based on ZnO nanowire/p-GaN heterojunction. <i>Chemical Physics Letters</i> , 2009, 476, 69-72.	2.6	88
16	ZnO nanowire-based CO sensors prepared on patterned ZnO:Ga/SiO ₂ /Si templates. <i>Sensors and Actuators B: Chemical</i> , 2007, 125, 498-503.	7.8	85
17	Improving Piezoelectric Nanogenerator Comprises ZnO Nanowires by Bending the Flexible PET Substrate at Low Vibration Frequency. <i>Journal of Physical Chemistry C</i> , 2012, 116, 9351-9355.	3.1	85
18	Fabrication of Humidity Sensor Based on Bilayer Graphene. <i>IEEE Electron Device Letters</i> , 2014, 35, 590-592.	3.9	85

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19	A ZnO-Nanowire Phototransistor Prepared on Glass Substrates. ACS Applied Materials & Interfaces, 2011, 3, 162-166.	8.0	71
20	Enhanced non-enzymatic glucose biosensor of ZnO nanowires via decorated Pt nanoparticles and illuminated with UV/green light emitting diodes. Sensors and Actuators B: Chemical, 2017, 238, 150-159.	7.8	71
21	Light-activated humidity and gas sensing by ZnO nanowires grown on LED at room temperature. Sensors and Actuators B: Chemical, 2017, 249, 265-277.	7.8	70
22	High sensitivity of a ZnO nanowire-based ammonia gas sensor with Pt nano-particles. Nano Communication Networks, 2010, 1, 283-288.	2.9	69
23	Water- and Humidity-Enhanced UV Detector by Using p-Type La-Doped ZnO Nanowires on Flexible Polyimide Substrate. ACS Applied Materials & Interfaces, 2013, 5, 11142-11151.	8.0	68
24	ZnO Nanotube Ethanol Gas Sensors. Journal of the Electrochemical Society, 2008, 155, K152.	2.9	66
25	A Lateral ZnO Nanowire Photodetector Prepared on Glass Substrate. Journal of the Electrochemical Society, 2010, 157, K30.	2.9	61
26	Vertical Ti doped ZnO nanorods based on ethanol gas sensor prepared on glass by furnace system with hotwire assistance. Sensors and Actuators B: Chemical, 2014, 192, 550-557.	7.8	59
27	ZnO Nanowire-Based Oxygen Gas Sensor. IEEE Sensors Journal, 2009, 9, 485-489.	4.7	58
28	Tunable UV- and Visible-Light Photoresponse Based on p-ZnO Nanostructures/n-ZnO/Glass Peppered with Au Nanoparticles. ACS Applied Materials & Interfaces, 2017, 9, 14935-14944.	8.0	57
29	Fabrication of a White-Light-Emitting Diode by Doping Gallium into ZnO Nanowire on a p-GaN Substrate. Journal of Physical Chemistry C, 2010, 114, 12422-12426.	3.1	54
30	Fabrication of a transparent ultraviolet detector by using n-type Ga ₂ O ₃ and p-type Ga-doped SnO ₂ core-shell nanowires. Nanoscale, 2012, 4, 5710.	5.6	54
31	Buffer-Facilitated Epitaxial Growth of ZnO Nanowire. Crystal Growth and Design, 2005, 5, 579-583.	3.0	52
32	Vertically well aligned P-doped ZnO nanowires synthesized on ZnO/Ga/glass templates. Chemical Communications, 2005, , 3571.	4.1	51
33	A Novel Method for the Formation of Ladder-like ZnO Nanowires. Crystal Growth and Design, 2006, 6, 1282-1284.	3.0	49
34	p-Cu ₂ O-shell/n-TiO ₂ -nanowire-core heterostucture photodiodes. Nanoscale Research Letters, 2011, 6, 575.	5.7	48
35	Solution-Processed UV and Visible Photodetectors Based on Y-Doped ZnO Nanowires with TiO ₂ Nanosheets and Au Nanoparticles. ACS Applied Energy Materials, 2018, 1, 2087-2095.	5.1	48
36	Vertical Single-Crystal ZnO Nanowires Grown on ZnO/Ga/Glass Templates. IEEE Nanotechnology Magazine, 2005, 4, 649-654.	2.0	47

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37	A ZnO nanowire vacuum pressure sensor. Nanotechnology, 2008, 19, 095505.	2.6	47
38	UV-illumination and Au-nanoparticles enhanced gas sensing of p-type Na-doped ZnO nanowires operating at room temperature. Sensors and Actuators B: Chemical, 2018, 274, 565-574.	7.8	47
39	The Assessment for Sensitivity of a NO ₂ Gas Sensor with ZnGa ₂ O ₄ /ZnO Core-Shell Nanowires—a Novel Approach. Sensors, 2010, 10, 3057-3072.	3.8	45
40	Electrical and Optical Characteristics of UV Photodetector With Interlaced ZnO Nanowires. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 990-995.	2.9	45
41	Well-Aligned, Vertically Al-Doped ZnO Nanowires Synthesized on ZnO:Ga—Glass Templates. Journal of the Electrochemical Society, 2005, 152, G378.	2.9	44
42	A Visible-Blind TiO ₂ Nanowire Photodetector. Journal of the Electrochemical Society, 2012, 159, J132-J135.	2.9	41
43	$\text{Ga}_{0.2}\text{O}_{0.3}$ Nanowire Photodetector Prepared on SiO_2/Si Template. IEEE Sensors Journal, 2013, 13, 2368-2373.	4.7	40
44	Tunable Schottky contact humidity sensor based on S-doped ZnO nanowires on flexible PET substrate with piezotronic effect. Journal of Alloys and Compounds, 2017, 705, 722-733.	5.5	37
45	Transparent gas sensor and photodetector based on Al doped ZnO nanowires synthesized on glass substrate. Ceramics International, 2017, 43, 5434-5440.	4.8	36
46	Ultraviolet/Visible Photodetectors Based on n NiO/ZnO Nanowires Decorated with Pd Nanoparticles. ACS Applied Nano Materials, 2019, 2, 6343-6351.	5.0	36
47	Enhanced field emission of well-aligned ZnO nanowire arrays illuminated by UV. Chemical Physics Letters, 2010, 490, 176-179.	2.6	34
48	Improving the photoelectrical characteristics of self-powered p-GaN film/n-ZnO nanowires heterojunction ultraviolet photodetectors through gallium and indium co-doping. Materials Science in Semiconductor Processing, 2021, 121, 105295.	4.0	34
49	Ethanol Gas Sensor of Crabwise CuO Nanowires Prepared on Glass Substrate. Journal of the Electrochemical Society, 2011, 158, J106.	2.9	33
50	Enhanced field emission of Al-doped ZnO nanowires grown on a flexible polyimide substrate with UV exposure. RSC Advances, 2014, 4, 2980-2983.	3.6	32
51	Sulfur-doped-ZnO-nanospire-based transparent flexible nanogenerator self-powered by environmental vibration. RSC Advances, 2015, 5, 34019-34026.	3.6	32
52	ZnO Nanowire-Based CO Sensors Prepared at Various Temperatures. Journal of the Electrochemical Society, 2007, 154, J393.	2.9	30
53	Fabrication of Fully Transparent Indium-Doped ZnO Nanowire Field-Effect Transistors on ITO/Glass Substrates. Journal of the Electrochemical Society, 2011, 158, K20.	2.9	27
54	Highly Sensitive $\text{Ga}_{0.2}\text{O}_{0.3}$ Nanowire Nanowires Isopropyl Alcohol Sensor. IEEE Sensors Journal, 2014, 14, 401-405.	4.7	27

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55	Nonenzymatic Glucose Sensor Based on Au/ZnO Core–Shell Nanostructures Decorated with Au Nanoparticles and Enhanced with Blue and Green Light. <i>Journal of Physical Chemistry B</i> , 2017, 121, 2931-2941.	2.6	27
56	The interference of humidity on a shear horizontal surface acoustic wave ammonia sensor. <i>Sensors and Actuators B: Chemical</i> , 2007, 122, 457-460.	7.8	24
57	A Flexible ZnO Nanowire-Based Humidity Sensor. <i>IEEE Nanotechnology Magazine</i> , 2012, 11, 520-525.	2.0	24
58	Indium-diffused ZnO nanowires synthesized on ITO-buffered Si substrate. <i>Nanotechnology</i> , 2006, 17, 516-519.	2.6	23
59	Synthesizing and Comparing the Photocatalytic Activities of Single-Crystalline TiO ₂ Rutile Nanowires and Mesoporous Anatase Paste. <i>Journal of the Electrochemical Society</i> , 2007, 154, H157.	2.9	23
60	A lateral ZnO nanowire UV photodetector prepared on a ZnO:Ga/glass template. <i>Semiconductor Science and Technology</i> , 2009, 24, 075005.	2.0	23
61	AlN resistive ammonia gas sensors. <i>Sensors and Actuators B: Chemical</i> , 2009, 140, 139-142.	7.8	23
62	Ga ₂ O ₃ Films for Photoelectrochemical Hydrogen Generation. <i>Journal of the Electrochemical Society</i> , 2014, 161, H508-H511.	2.9	23
63	Crystalline-Si photovoltaic devices with ZnO nanowires. <i>Solar Energy Materials and Solar Cells</i> , 2012, 98, 494-498.	6.2	22
64	A dual-band photodetector based on ZnO nanowires decorated with Au nanoparticles synthesized on a glass substrate. <i>RSC Advances</i> , 2016, 6, 74201-74208.	3.6	21
65	ZnO-Nanowire-Based Extended-Gate Field-Effect-Transistor pH Sensors Prepared on Glass Substrate. <i>Science of Advanced Materials</i> , 2012, 4, 1174-1178.	0.7	21
66	Vertical ZnO/ZnGa ₂ O ₄ core–shell nanorods grown on ZnO/glass templates by reactive evaporation. <i>Chemical Physics Letters</i> , 2005, 411, 221-224.	2.6	20
67	Laterally-grown ZnO-nanowire photodetectors on glass substrate. <i>Superlattices and Microstructures</i> , 2009, 46, 797-802.	3.1	20
68	Fabrication of coaxial p-Cu ₂ O/n-ZnO nanowire photodiodes. <i>Superlattices and Microstructures</i> , 2011, 49, 572-580.	3.1	20
69	Novel field emission structure of CuO/Cu ₂ O composite nanowires based on copper through silicon via technology. <i>RSC Advances</i> , 2015, 5, 33762-33766.	3.6	20
70	A vertical CuO-NWS/MEMS NO ₂ gas sensor that is produced by sputtering. <i>Sensors and Actuators B: Chemical</i> , 2022, 355, 131260.	7.8	19
71	Noise Characteristics of ZnO-Nanowire Photodetectors Prepared on ZnO:Ga/Glass Templates. <i>IEEE Sensors Journal</i> , 2007, 7, 1020-1024.	4.7	18
72	Si Nanowire-Based Humidity Sensors Prepared on Glass Substrate. <i>IEEE Sensors Journal</i> , 2011, 11, 3036-3041.	4.7	18

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73	Few-Layer Thin-Film Metallic Glass-Enhanced Optical Properties of ZnO Nanostructures. ACS Applied Materials & Interfaces, 2017, 9, 39475-39483.	8.0	18
74	UV and Visible Light Induced Photocatalytic Degradation on $\text{Cu}_2\text{O}/\text{ZnO}$ Nanowires Decorated with Au-Pd Alloy Nanoparticles. Advanced Materials Interfaces, 2019, 6, 1801744.	3.7	18
75	Surface Acoustic Wave Ammonia Sensors Based on ST-cut Quartz under Periodic Al Structure. Sensors, 2009, 9, 980-994.	3.8	17
76	Enhanced Field Electron Emission From Zinc-Doped CuO Nanowires. IEEE Electron Device Letters, 2012, 33, 887-889.	3.9	17
77	A New and Simple Means for Self-Assembled Nanostructure: Facilitated by Buffer Layer. Journal of Physical Chemistry B, 2004, 108, 18799-18803.	2.6	16
78	UV Photodetector of a Homo Junction Based On p-Type Sb-Doped ZnO Nanoparticles and n-Type ZnO Nanowires. IEEE Transactions on Electron Devices, 2014, 61, 1347-1353.	3.0	16
79	Preparation of ZnO Nanoflakes and a Nanowire-Based Photodetector by Localized Oxidation at Low Temperature. Journal of the Electrochemical Society, 2008, 155, K59.	2.9	15
80	A TiO_2 Nanowire MIS Photodetector With Polymer Insulator. IEEE Electron Device Letters, 2012, 33, 1577-1579.	3.9	15
81	Perovskite Quantum Dot ZnO Nanowire Composites for Ultraviolet-Visible Photodetectors. ACS Applied Nano Materials, 2022, 5, 7237-7245.	5.0	15
82	Growth and Characterization of Sparsely Dispersed ZnO Nanowires. Journal of the Electrochemical Society, 2007, 154, H153.	2.9	13
83	Crabwise ZnO Nanowire UV Photodetector Prepared on $\text{ZnO}/\text{Ga}/\text{Glass}$ Template. IEEE Nanotechnology Magazine, 2007, 6, 595-600.	2.0	13
84	Selective growth of vertical ZnO nanowires on $\text{ZnO}:\text{Ga}/\text{Si}$ $\text{N}/\text{SiO}_2/\text{Si}$ templates. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 2292.	1.6	12
85	Analysis of Shear Horizontal Surface Acoustic Wave Sensors with the Coupling of Modes Theory. Japanese Journal of Applied Physics, 2005, 44, 1510-1513.	1.5	11
86	A New Negative Ion Generator Using ZnO Nanowire Array. Journal of the Electrochemical Society, 2006, 153, G894.	2.9	11
87	Ga_2O_3 Nanowires-Based Humidity Sensors Prepared on GaN/Sapphire Substrate. IEEE Sensors Journal, 2013, 13, 4891-4896.	4.7	11
88	Electron field emission enhancement of hybrid Cu/CuO nanowires fabricated by rapid thermal reduction of CuO nanowires. RSC Advances, 2015, 5, 54220-54224.	3.6	11
89	Solution-synthesized p-type CuMnO_2 and n-type ZnO to form the core-shell nanowires for photo and gas sensing. Journal of Alloys and Compounds, 2022, 899, 163380.	5.5	11
90	Influence of the Formation of the Second Phase in ZnO/Ga Nanowire Systems. Journal of the Electrochemical Society, 2006, 153, G333.	2.9	10

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91	Field Emission of ZnO Nanowires in Low Vacuum Following Various Enhancements Made by Exposure to UV. IEEE Nanotechnology Magazine, 2012, 11, 1110-1116.	2.0	9
92	Enhanced Field Emission of TiO_2 Nanowires With UV Illumination. IEEE Electron Device Letters, 2014, 35, 123-125.	3.9	9
93	TiO_2 Nanowires UV Photodetectors With Ir Schottky Contacts. IEEE Photonics Technology Letters, 2012, 24, 1584-1586.	2.5	8
94	Synthesis of In_2O_3 Nanowires and Their Gas Sensing Properties. IEEE Sensors Journal, 2016, 16, 5850-5855.	4.7	8
95	GaN Nanowire Field Emitters With the Adsorption of Au Nanoparticles. IEEE Electron Device Letters, 2013, 34, 553-555.	3.9	7
96	Core-Shell P-N Junction Si Nanowires as Rapid Response and High-Sensitivity pH Sensor. IEEE Sensors Journal, 2017, 17, 3967-3974.	4.7	7
97	Crabwise ZnO Nanowires: Growth and Field Emission Properties. Journal of Nanoscience and Nanotechnology, 2007, 7, 1076-1079.	0.9	6
98	Laterally Grown n-ZnO Nanowire/p-GaN Heterojunction Light Emitting Diodes. Journal of the Electrochemical Society, 2010, 157, H866.	2.9	6
99	A Novel Fabrication of p-n Diode Based on ZnO Nanowire/p-NiO Heterojunction. Japanese Journal of Applied Physics, 2011, 50, 01AJ05.	1.5	6
100	ZnO Nanowire-Based UV Photodetector. Journal of Nanoscience and Nanotechnology, 2010, 10, 1135-1138.	0.9	5
101	Isopropyl Alcohol Sensors of CuO Nanotubes by Thermal Oxidation of Copper Films on Glass. IEEE Sensors Journal, 2011, 11, 3276-3282.	4.7	5
102	Visible Illumination Enhanced Nonenzymatic Glucose Photobiosensor Based on TiO_2 Nanorods Decorated With Au Nanoparticles. IEEE Transactions on Biomedical Engineering, 2018, 65, 2052-2057.	4.2	5
103	A Study on One-Step Immobilization of Horse Immunoglobulin with Vertically Grown ZnO Nanorods Substrates. Journal of the Electrochemical Society, 2011, 158, K107.	2.9	4
104	Electron field emitters made of 3-D CuO nanowires on flexible silicon substrate fabricated by heating Cu rods with through silicon via process. RSC Advances, 2016, 6, 47292-47297.	3.6	4
105	A Novel Fabrication of p-n Diode Based on ZnO Nanowire/p-NiO Heterojunction. Japanese Journal of Applied Physics, 2011, 50, 01AJ05.	1.5	4
106	Enhanced Gas Sensing of p-Type Co_3O_4 Nanoflowers by n-Type ZnO Nanowires. IEEE Electron Device Letters, 2021, 42, 1861-1863.	3.9	4
107	Selective Growth of Silicon Nanowires on Glass Substrate with an Ultrathin a-Si:H Layer. Electrochemical and Solid-State Letters, 2010, 13, K29.	2.2	3
108	UV Enhanced Field Emission for $\text{In}_2\text{Ga}_2\text{O}_3$ Nanowires. IEEE Electron Device Letters, 2013, 34, 701-703.	3.9	3

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109	Fabrication, Novel Morphology, and Field Emission Properties of $\text{Ga}_{2}\text{O}_{3}/\text{In}_{2}\text{O}_{3}$ Core-Shell Nanowires. IEEE Electron Device Letters, 2013, 34, 96-98.	3.9	3
110	Enhanced field emission properties based on $\text{In}/\text{In}_{2}\text{O}_{3}$ composite nanopagodas. RSC Advances, 2015, 5, 5192-5196.	3.6	3
111	VLS Growth of Cubic Structure Al-Doped SnO_{2} Nanowire Using Al/Pd/Au Catalyst Diffusion. Journal of the Electrochemical Society, 2012, 159, K152-K155.	2.9	1
112	c-Si solar cells and Si n-MOSFETs prepared by ICP assisted hot wire implantation doping. RSC Advances, 2015, 5, 96547-96550.	3.6	1
113	Improving the optical and crystal properties of ZnO nanotubes via a metallic glass quantum dot underlayer. Journal of Materials Chemistry C, 2019, 7, 5163-5171.	5.5	1
114	Elucidating the function of modified carbon blacks in high-voltage lithium-ion batteries: impact on electrolyte decomposition. Materials Today Chemistry, 2022, 25, 100934.	3.5	1
115	A Si Nanowire Photovoltaic Device Prepared by Selective Electroless Etching. IEEE Nanotechnology Magazine, 2012, 11, 1148-1150.	2.0	0