

# Cheng-Liang Hsu

## List of Publications by Year in descending order

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115  
papers

4,609  
citations

81434

41  
h-index

124990

64  
g-index

115  
all docs

115  
docs citations

115  
times ranked

6050  
citing authors

#	ARTICLE	IF	CITATIONS
1	Solution-synthesized p-type CuMnO <sub>2</sub> and n-type ZnO to form the core-shell nanowires for photo and gas sensing. <i>Journal of Alloys and Compounds</i> , 2022, 899, 163380.	2.8	11
2	A vertical CuO-NWS/MEMS NO <sub>2</sub> gas sensor that is produced by sputtering. <i>Sensors and Actuators B: Chemical</i> , 2022, 355, 131260.	4.0	19
3	Perovskite Quantum Dot@ZnO Nanowire Composites for Ultraviolet-Visible Photodetectors. <i>ACS Applied Nano Materials</i> , 2022, 5, 7237-7245.	2.4	15
4	Elucidating the function of modified carbon blacks in high-voltage lithium-ion batteries: impact on electrolyte decomposition. <i>Materials Today Chemistry</i> , 2022, 25, 100934.	1.7	1
5	Improving the photoelectrical characteristics of self-powered p-GaN film/n-ZnO nanowires heterojunction ultraviolet photodetectors through gallium and indium co-doping. <i>Materials Science in Semiconductor Processing</i> , 2021, 121, 105295.	1.9	34
6	Enhanced Gas Sensing of p-Type Co <sub>3</sub> O <sub>4</sub> Nanoflowers by n-Type ZnO Nanowires. <i>IEEE Electron Device Letters</i> , 2021, 42, 1861-1863.	2.2	4
7	Ultraviolet/Visible Photodetectors Based on n NiO/ZnO Nanowires Decorated with Pd Nanoparticles. <i>ACS Applied Nano Materials</i> , 2019, 2, 6343-6351.	2.4	36
8	UV and Visible Light Induced Photocatalytic Degradation on n Cu <sub>2</sub> O/ZnO Nanowires Decorated with Au-Pd Alloy Nanoparticles. <i>Advanced Materials Interfaces</i> , 2019, 6, 1801744.	1.9	18
9	Improving the optical and crystal properties of ZnO nanotubes via a metallic glass quantum dot underlayer. <i>Journal of Materials Chemistry C</i> , 2019, 7, 5163-5171.	2.7	1
10	Solution-Processed UV and Visible Photodetectors Based on Y-Doped ZnO Nanowires with TiO <sub>2</sub> Nanosheets and Au Nanoparticles. <i>ACS Applied Energy Materials</i> , 2018, 1, 2087-2095.	2.5	48
11	Visible Illumination Enhanced Nonenzymatic Glucose Photobiosensor Based on TiO <sub>2</sub> Nanorods Decorated With Au Nanoparticles. <i>IEEE Transactions on Biomedical Engineering</i> , 2018, 65, 2052-2057.	2.5	5
12	UV-illumination and Au-nanoparticles enhanced gas sensing of p-type Na-doped ZnO nanowires operating at room temperature. <i>Sensors and Actuators B: Chemical</i> , 2018, 274, 565-574.	4.0	47
13	Transparent gas sensor and photodetector based on Al doped ZnO nanowires synthesized on glass substrate. <i>Ceramics International</i> , 2017, 43, 5434-5440.	2.3	36
14	Tunable Schottky contact humidity sensor based on S-doped ZnO nanowires on flexible PET substrate with piezotronic effect. <i>Journal of Alloys and Compounds</i> , 2017, 705, 722-733.	2.8	37
15	Light-activated humidity and gas sensing by ZnO nanowires grown on LED at room temperature. <i>Sensors and Actuators B: Chemical</i> , 2017, 249, 265-277.	4.0	70
16	Tunable UV- and Visible-Light Photoresponse Based on p-ZnO Nanostructures/n-ZnO/Glass Peppered with Au Nanoparticles. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 14935-14944.	4.0	57
17	Core-Shell P-N Junction Si Nanowires as Rapid Response and High-Sensitivity pH Sensor. <i>IEEE Sensors Journal</i> , 2017, 17, 3967-3974.	2.4	7
18	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.	1.2	27

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19	Few-Layer Thin-Film Metallic Glass-Enhanced Optical Properties of ZnO Nanostructures. ACS Applied Materials & Interfaces, 2017, 9, 39475-39483.	4.0	18
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.	4.0	71
21	Synthesis of In <sub>2</sub> O <sub>3</sub> Nanowires and Their Gas Sensing Properties. IEEE Sensors Journal, 2016, 16, 5850-5855.	2.4	8
22	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.	1.7	4
23	A dual-band photodetector based on ZnO nanowires decorated with Au nanoparticles synthesized on a glass substrate. RSC Advances, 2016, 6, 74201-74208.	1.7	21
24	Ethanol gas and humidity sensors of CuO/Cu <sub>2</sub> O composite nanowires based on a Cu through-silicon via approach. Sensors and Actuators B: Chemical, 2016, 224, 95-102.	4.0	94
25	c-Si solar cells and Si n-MOSFETs prepared by ICP assisted hot wire implantation doping. RSC Advances, 2015, 5, 96547-96550.	1.7	1
26	Electron field emission enhancement of hybrid Cu/CuO nanowires fabricated by rapid thermal reduction of CuO nanowires. RSC Advances, 2015, 5, 54220-54224.	1.7	11
27	Sulfur-doped-ZnO-nanospire-based transparent flexible nanogenerator self-powered by environmental vibration. RSC Advances, 2015, 5, 34019-34026.	1.7	32
28	Novel field emission structure of CuO/Cu <sub>2</sub> O composite nanowires based on copper through silicon via technology. RSC Advances, 2015, 5, 33762-33766.	1.7	20
29	Enhanced field emission properties based on In-In <sub>2</sub> O <sub>3</sub> composite nanopagodas. RSC Advances, 2015, 5, 5192-5196.	1.7	3
30	Doped ZnO 1D Nanostructures: Synthesis, Properties, and Photodetector Application. Small, 2014, 10, 4562-4585.	5.2	166
31	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.	4.0	59
32	Fabrication of Humidity Sensor Based on Bilayer Graphene. IEEE Electron Device Letters, 2014, 35, 590-592.	2.2	85
33	Highly Sensitive $\beta\text{-Ga}_2\text{O}_3$ Nanowire Nanowires Isopropyl Alcohol Sensor. IEEE Sensors Journal, 2014, 14, 401-405.	2.4	27
34	UV Photodetector of a Homojunction Based On p-Type Sb-Doped ZnO Nanoparticles and n-Type ZnO Nanowires. IEEE Transactions on Electron Devices, 2014, 61, 1347-1353.	1.6	16
35	Enhanced Field Emission of $\text{TiO}_2$ Nanowires With UV Illumination. IEEE Electron Device Letters, 2014, 35, 123-125.	2.2	9
36	Enhanced field emission of Al-doped ZnO nanowires grown on a flexible polyimide substrate with UV exposure. RSC Advances, 2014, 4, 2980-2983.	1.7	32

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37	Ga <sub>2</sub> O <sub>3</sub> Films for Photoelectrochemical Hydrogen Generation. Journal of the Electrochemical Society, 2014, 161, H508-H511.	1.3	23
38	Vertical p-Type Cu-Doped ZnO/n-Type ZnO Homojunction Nanowire-Based Ultraviolet Photodetector by the Furnace System with Hotwire Assistance. ACS Applied Materials & Interfaces, 2014, 6, 4277-4285.	4.0	93
39	$\text{Ga}_2\text{O}_3$ Nanowire Photodetector Prepared on $\text{SiO}_2/\text{Si}$ Template. IEEE Sensors Journal, 2013, 13, 2368-2373.	2.4	40
40	$\text{Ga}_2\text{O}_3$ Nanowires-Based Humidity Sensors Prepared on GaN/Sapphire Substrate. IEEE Sensors Journal, 2013, 13, 4891-4896.	2.4	11
41	UV Enhanced Field Emission for $\text{In}^2\text{-Ga}_2\text{O}_3$ Nanowires. IEEE Electron Device Letters, 2013, 34, 701-703.	2.2	3
42	Fabrication of gas sensor based on p-type ZnO nanoparticles and n-type ZnO nanowires. Sensors and Actuators B: Chemical, 2013, 182, 190-196.	4.0	112
43	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.	4.0	68
44	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.	2.2	3
45	GaN Nanowire Field Emitters With the Adsorption of Au Nanoparticles. IEEE Electron Device Letters, 2013, 34, 553-555.	2.2	7
46	VLS Growth of Cubic Structure Al-Doped SnO <sub>2</sub> Nanowire Using Al/Pd/Au Catalyst Diffusion. Journal of the Electrochemical Society, 2012, 159, K152-K155.	1.3	1
47	A Flexible ZnO Nanowire-Based Humidity Sensor. IEEE Nanotechnology Magazine, 2012, 11, 520-525.	1.1	24
48	A $\text{TiO}_2$ Nanowire MIS Photodetector With Polymer Insulator. IEEE Electron Device Letters, 2012, 33, 1577-1579.	2.2	15
49	A Visible-Blind $\text{TiO}_2$ Nanowire Photodetector. Journal of the Electrochemical Society, 2012, 159, J132-J135.	1.3	41
50	Field Emission of ZnO Nanowires in Low Vacuum Following Various Enhancements Made by Exposure to UV. IEEE Nanotechnology Magazine, 2012, 11, 1110-1116.	1.1	9
51	$\text{TiO}_2$ Nanowires UV Photodetectors With Ir Schottky Contacts. IEEE Photonics Technology Letters, 2012, 24, 1584-1586.	1.3	8
52	Enhanced Field Electron Emission From Zinc-Doped CuO Nanowires. IEEE Electron Device Letters, 2012, 33, 887-889.	2.2	17
53	Fabrication of a transparent ultraviolet detector by using n-type $\text{Ga}_2\text{O}_3$ and p-type Ga-doped SnO <sub>2</sub> core-shell nanowires. Nanoscale, 2012, 4, 5710.	2.8	54
54	Improving Piezoelectric Nanogenerator Comprises ZnO Nanowires by Bending the Flexible PET Substrate at Low Vibration Frequency. Journal of Physical Chemistry C, 2012, 116, 9351-9355.	1.5	85

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55	A Si Nanowire Photovoltaic Device Prepared by Selective Electroless Etching. IEEE Nanotechnology Magazine, 2012, 11, 1148-1150.	1.1	0
56	Crystalline-Si photovoltaic devices with ZnO nanowires. Solar Energy Materials and Solar Cells, 2012, 98, 494-498.	3.0	22
57	ZnO-Nanowire-Based Extended-Gate Field-Effect-Transistor pH Sensors Prepared on Glass Substrate. Science of Advanced Materials, 2012, 4, 1174-1178.	0.1	21
58	Isopropyl Alcohol Sensors of CuO Nanotubes by Thermal Oxidation of Copper Films on Glass. IEEE Sensors Journal, 2011, 11, 3276-3282.	2.4	5
59	A ZnO-Nanowire Phototransistor Prepared on Glass Substrates. ACS Applied Materials & Interfaces, 2011, 3, 162-166.	4.0	71
60	Electrical and Optical Characteristics of UV Photodetector With Interlaced ZnO Nanowires. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 990-995.	1.9	45
61	Fabrication of coaxial p-Cu <sub>2</sub> O/n-ZnO nanowire photodiodes. Superlattices and Microstructures, 2011, 49, 572-580.	1.4	20
62	p-Cu <sub>2</sub> O-shell/n-TiO <sub>2</sub> -nanowire-core heterostructure photodiodes. Nanoscale Research Letters, 2011, 6, 575.	3.1	48
63	CuO nanowire-based humidity sensors prepared on glass substrate. Sensors and Actuators B: Chemical, 2011, 156, 906-911.	4.0	95
64	A Novel Fabrication of p-n Diode Based on ZnO Nanowire/p-NiO Heterojunction. Japanese Journal of Applied Physics, 2011, 50, 01AJ05.	0.8	6
65	Fabrication of Fully Transparent Indium-Doped ZnO Nanowire Field-Effect Transistors on ITO/Glass Substrates. Journal of the Electrochemical Society, 2011, 158, K20.	1.3	27
66	Si Nanowire-Based Humidity Sensors Prepared on Glass Substrate. IEEE Sensors Journal, 2011, 11, 3036-3041.	2.4	18
67	A Study on One-Step Immobilization of Horse Immunoglobulin with Vertically Grown ZnO Nanorods Substrates. Journal of the Electrochemical Society, 2011, 158, K107.	1.3	4
68	Ethanol Gas Sensor of Crabwise CuO Nanowires Prepared on Glass Substrate. Journal of the Electrochemical Society, 2011, 158, J106.	1.3	33
69	A Novel Fabrication of p-n Diode Based on ZnO Nanowire/p-NiO Heterojunction. Japanese Journal of Applied Physics, 2011, 50, 01AJ05.	0.8	4
70	ZnO Nanowire-Based UV Photodetector. Journal of Nanoscience and Nanotechnology, 2010, 10, 1135-1138.	0.9	5
71	Enhanced field emission of well-aligned ZnO nanowire arrays illuminated by UV. Chemical Physics Letters, 2010, 490, 176-179.	1.2	34
72	High sensitivity of a ZnO nanowire-based ammonia gas sensor with Pt nano-particles. Nano Communication Networks, 2010, 1, 283-288.	1.6	69

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73	A ZnO nanowire-based humidity sensor. Superlattices and Microstructures, 2010, 47, 772-778.	1.4	118
74	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
75	Laterally Grown n-ZnO Nanowire/p-GaN Heterojunction Light Emitting Diodes. Journal of the Electrochemical Society, 2010, 157, H866.	1.3	6
76	A Lateral ZnO Nanowire Photodetector Prepared on Glass Substrate. Journal of the Electrochemical Society, 2010, 157, K30.	1.3	61
77	The Assessment for Sensitivity of a NO <sub>2</sub> Gas Sensor with ZnGa <sub>2</sub> O <sub>4</sub> /ZnO Core-Shell Nanowires—a Novel Approach. Sensors, 2010, 10, 3057-3072.	2.1	45
78	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.	1.5	54
79	ZnO Nanowire-Based Oxygen Gas Sensor. IEEE Sensors Journal, 2009, 9, 485-489.	2.4	58
80	A lateral ZnO nanowire UV photodetector prepared on a ZnO:Ga/glass template. Semiconductor Science and Technology, 2009, 24, 075005.	1.0	23
81	Surface Acoustic Wave Ammonia Sensors Based on ST-cut Quartz under Periodic Al Structure. Sensors, 2009, 9, 980-994.	2.1	17
82	Laterally-grown ZnO-nanowire photodetectors on glass substrate. Superlattices and Microstructures, 2009, 46, 797-802.	1.4	20
83	AlInN resistive ammonia gas sensors. Sensors and Actuators B: Chemical, 2009, 140, 139-142.	4.0	23
84	Novel fabrication of UV photodetector based on ZnO nanowire/p-GaN heterojunction. Chemical Physics Letters, 2009, 476, 69-72.	1.2	88
85	Electroluminescence from n-ZnO nanowires/p-GaN heterostructure light-emitting diodes. Applied Physics Letters, 2009, 95, .	1.5	99
86	Fabrication of gas sensing devices with ZnO nanostructure by the low-temperature oxidation of zinc particles. Sensors and Actuators B: Chemical, 2008, 131, 572-576.	4.0	95
87	ZnO Nanotube Ethanol Gas Sensors. Journal of the Electrochemical Society, 2008, 155, K152.	1.3	66
88	A ZnO nanowire vacuum pressure sensor. Nanotechnology, 2008, 19, 095505.	1.3	47
89	Highly Sensitive ZnO Nanowire Acetone Vapor Sensor With Au Adsorption. IEEE Nanotechnology Magazine, 2008, 7, 754-759.	1.1	95
90	Preparation of ZnO Nanoflakes and a Nanowire-Based Photodetector by Localized Oxidation at Low Temperature. Journal of the Electrochemical Society, 2008, 155, K59.	1.3	15

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91	ZnO Nanowire-Based CO Sensors Prepared at Various Temperatures. Journal of the Electrochemical Society, 2007, 154, J393.	1.3	30
92	Growth and Characterization of Sparsely Dispersed ZnO Nanowires. Journal of the Electrochemical Society, 2007, 154, H153.	1.3	13
93	Crabwise ZnO Nanowire UV Photodetector Prepared on ZnO:Ga/Glass Template. IEEE Nanotechnology Magazine, 2007, 6, 595-600.	1.1	13
94	Crabwise ZnO Nanowires: Growth and Field Emission Properties. Journal of Nanoscience and Nanotechnology, 2007, 7, 1076-1079.	0.9	6
95	Highly sensitive ZnO nanowire ethanol sensor with Pd adsorption. Applied Physics Letters, 2007, 91, .	1.5	199
96	Noise Characteristics of ZnO-Nanowire Photodetectors Prepared on ZnO:Ga/Glass Templates. IEEE Sensors Journal, 2007, 7, 1020-1024.	2.4	18
97	Synthesizing and Comparing the Photocatalytic Activities of Single-Crystalline TiO <sub>2</sub> Rutile Nanowires and Mesoporous Anatase Paste. Journal of the Electrochemical Society, 2007, 154, H157.	1.3	23
98	The interference of humidity on a shear horizontal surface acoustic wave ammonia sensor. Sensors and Actuators B: Chemical, 2007, 122, 457-460.	4.0	24
99	Cu <sub>2</sub> O/n-ZnO nanowire solar cells on ZnO:Ga/glass templates. Scripta Materialia, 2007, 57, 53-56.	2.6	114
100	ZnO nanowire-based CO sensors prepared on patterned ZnO:Ga/SiO <sub>2</sub> /Si templates. Sensors and Actuators B: Chemical, 2007, 125, 498-503.	4.0	85
101	Laterally grown ZnO nanowire ethanol gas sensors. Sensors and Actuators B: Chemical, 2007, 126, 473-477.	4.0	298
102	Influence of the Formation of the Second Phase in ZnO-Ga Nanowire Systems. Journal of the Electrochemical Society, 2006, 153, G333.	1.3	10
103	Indium-diffused ZnO nanowires synthesized on ITO-buffered Si substrate. Nanotechnology, 2006, 17, 516-519.	1.3	23
104	A New Negative Ion Generator Using ZnO Nanowire Array. Journal of the Electrochemical Society, 2006, 153, G894.	1.3	11
105	A Novel Method for the Formation of Ladder-like ZnO Nanowires. Crystal Growth and Design, 2006, 6, 1282-1284.	1.4	49
106	Ultraviolet photodetectors with ZnO nanowires prepared on ZnO:Ga/glass templates. Applied Physics Letters, 2006, 89, 153101.	1.5	101
107	Vertical ZnO/ZnGa <sub>2</sub> O <sub>4</sub> core-shell nanorods grown on ZnO/glass templates by reactive evaporation. Chemical Physics Letters, 2005, 411, 221-224.	1.2	20
108	Ultraviolet photodetectors with low temperature synthesized vertical ZnO nanowires. Chemical Physics Letters, 2005, 416, 75-78.	1.2	115

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109	Selective growth of vertical ZnO nanowires on ZnO:Ga <sup>+</sup> Si <sup>3+</sup> N <sup>4+</sup> SiO <sup>2+</sup> 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
110	Analysis of Shear Horizontal Surface Acoustic Wave Sensors with the Coupling of Modes Theory. Japanese Journal of Applied Physics, 2005, 44, 1510-1513.	0.8	11
111	Well-Aligned, Vertically Al-Doped ZnO Nanowires Synthesized on ZnO:Ga <sup>+</sup> Glass Templates. Journal of the Electrochemical Society, 2005, 152, G378.	1.3	44
112	Vertically well aligned P-doped ZnO nanowires synthesized on ZnO <sup>+</sup> Ga/glass templates. Chemical Communications, 2005, , 3571.	2.2	51
113	Buffer-Facilitated Epitaxial Growth of ZnO Nanowire. Crystal Growth and Design, 2005, 5, 579-583.	1.4	52
114	Vertical Single-Crystal ZnO Nanowires Grown on ZnO <sup>+</sup> Ga/Glass Templates. IEEE Nanotechnology Magazine, 2005, 4, 649-654.	1.1	47
115	A New and Simple Means for Self-Assembled Nanostructure: Facilitated by Buffer Layer. Journal of Physical Chemistry B, 2004, 108, 18799-18803.	1.2	16