

Hong-Yu Yu

List of Publications by Year in descending order

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146
papers

4,461
citations

136950

32
h-index

118850

62
g-index

148
all docs

148
docs citations

148
times ranked

5693
citing authors

#	ARTICLE	IF	CITATIONS
1	A Low Energy Oxide-Based Electronic Synaptic Device for Neuromorphic Visual Systems with Tolerance to Device Variation. <i>Advanced Materials</i> , 2013, 25, 1774-1779.	21.0	445
2	Pressure-induced decomposition of solid hydrogen sulfide. <i>Physical Review B</i> , 2015, 91, .	3.2	255
3	Si nanopillar array optimization on Si thin films for solar energy harvesting. <i>Applied Physics Letters</i> , 2009, 95, .	3.3	245
4	Buried Interfaces in Halide Perovskite Photovoltaics. <i>Advanced Materials</i> , 2021, 33, e2006435.	21.0	214
5	Fabrication and SERS Performance of Silver-Nanoparticle-Decorated Si/ZnO Nanotrees in Ordered Arrays. <i>ACS Applied Materials & Interfaces</i> , 2010, 2, 1824-1828.	8.0	198
6	Chronic Liver Injury Induces Conversion of Biliary Epithelial Cells into Hepatocytes. <i>Cell Stem Cell</i> , 2018, 23, 114-122.e3.	11.1	197
7	Design guidelines of periodic Si nanowire arrays for solar cell application. <i>Applied Physics Letters</i> , 2009, 95, .	3.3	167
8	Stochastic learning in oxide binary synaptic device for neuromorphic computing. <i>Frontiers in Neuroscience</i> , 2013, 7, 186.	2.8	129
9	The miR-34 family is upregulated and targets ACSL1 in dimethylnitrosamine-induced hepatic fibrosis in rats. <i>FEBS Journal</i> , 2011, 278, 1522-1532.	4.7	115
10	A Comprehensive Review of Recent Progress on GaN High Electron Mobility Transistors: Devices, Fabrication and Reliability. <i>Electronics (Switzerland)</i> , 2018, 7, 377.	3.1	109
11	Dielectric screening in perovskite photovoltaics. <i>Nature Communications</i> , 2021, 12, 2479.	12.8	88
12	Recent Advances in GaN-Based Power HEMT Devices. <i>Advanced Electronic Materials</i> , 2021, 7, 2001045.	5.1	86
13	Recent Progress on Perovskite Surfaces and Interfaces in Optoelectronic Devices. <i>Advanced Materials</i> , 2021, 33, e2006004.	21.0	86
14	Recent Advances in In^{2+} -Ga $_{2}\text{O}_3$ Metal Contacts. <i>Nanoscale Research Letters</i> , 2018, 13, 246.	5.7	76
15	Low aspect-ratio hemispherical nanopit surface texturing for enhancing light absorption in crystalline Si thin film-based solar cells. <i>Applied Physics Letters</i> , 2011, 98, .	3.3	68
16	Optical absorption enhancement in nanopore textured-silicon thin film for photovoltaic application. <i>Optics Letters</i> , 2010, 35, 40.	3.3	64
17	Modeling of Retention Failure Behavior in Bipolar Oxide-Based Resistive Switching Memory. <i>IEEE Electron Device Letters</i> , 2011, 32, 276-278.	3.9	61
18	A Study on Graphene Metal Contact. <i>Crystals</i> , 2013, 3, 257-274.	2.2	61

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19	Periodically Aligned Si Nanopillar Arrays as Efficient Antireflection Layers for Solar Cell Applications. <i>Nanoscale Research Letters</i> , 2010, 5, 1721-1726.	5.7	60
20	Thermally Robust HfN Metal as a Promising Gate Electrode for Advanced MOS Device Applications. <i>IEEE Transactions on Electron Devices</i> , 2004, 51, 609-615.	3.0	57
21	Transport properties of HfO ₂ -based resistive-switching memories. <i>Physical Review B</i> , 2012, 85, .	3.2	51
22	Novel Silicon Nanohemisphere Array Solar Cells with Enhanced Performance. <i>Small</i> , 2011, 7, 3138-3143.	10.0	50
23	Solar energy harnessing in hexagonally arranged Si nanowire arrays and effects of array symmetry on optical characteristics. <i>Nanotechnology</i> , 2012, 23, 194010.	2.6	48
24	A Novel Defect-Engineering-Based Implementation for High-Performance Multilevel Data Storage in Resistive Switching Memory. <i>IEEE Transactions on Electron Devices</i> , 2013, 60, 1379-1383.	3.0	48
25	The role of the miR-31/FIH1 pathway in TGF- β ² -induced liver fibrosis. <i>Clinical Science</i> , 2015, 129, 305-317.	4.3	48
26	Design guideline of high efficiency crystalline Si thin film solar cell with nanohole array textured surface. <i>Journal of Applied Physics</i> , 2011, 109, .	2.5	47
27	Aligned Si nanowire-based solar cells. <i>Nanoscale</i> , 2011, 3, 4888.	5.6	44
28	Si nanocone array optimization on crystalline Si thin films for solar energy harvesting. <i>Journal Physics D: Applied Physics</i> , 2010, 43, 255101.	2.8	43
29	Investigation of hole-tunneling current through ultrathin oxynitride/oxide stack gate dielectrics in p-MOSFETs. <i>IEEE Transactions on Electron Devices</i> , 2002, 49, 1158-1164.	3.0	42
30	Apatinib in patients with advanced chordoma: a single-arm, single-centre, phase 2 study. <i>Lancet Oncology</i> , The, 2020, 21, 1244-1252.	10.7	41
31	Isolated cases of remote dynamic triggering in Canada detected using cataloged earthquakes combined with a matched-filter approach. <i>Geophysical Research Letters</i> , 2015, 42, 5187-5196.	4.0	35
32	microRNA-625 inhibits tumorigenicity by suppressing proliferation, migration and invasion in malignant melanoma. <i>Oncotarget</i> , 2017, 8, 13253-13263.	1.8	34
33	Design principles for plasmonic thin film GaAs solar cells with high absorption enhancement. <i>Journal of Applied Physics</i> , 2012, 112, 054326.	2.5	33
34	High performance of La-doped Y2O3 transparent ceramics. <i>Journal of Advanced Ceramics</i> , 2020, 9, 493-502.	17.4	33
35	Spin Hamiltonians in Magnets: Theories and Computations. <i>Molecules</i> , 2021, 26, 803.	3.8	33
36	Monte Carlo Simulation of p- and n-channel GOI MOSFETs by Solving the Quantum Boltzmann Equation. <i>IEEE Transactions on Electron Devices</i> , 2005, 52, 2258-2264.	3.0	31

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37	High efficiency silicon nanohole/organic heterojunction hybrid solar cell. Applied Physics Letters, 2014, 104, 053104.	3.3	30
38	EWS-FLI1-mediated tenascin-C expression promotes tumour progression by targeting MALAT1 through integrin $\alpha 5 \beta 1$ -mediated YAP activation in Ewing sarcoma. British Journal of Cancer, 2019, 121, 922-933.	6.4	30
39	A Study on the Largest Hydraulic-Fracturing-Induced Earthquake in Canada: Observations and Static Stress-Drop Estimation. Bulletin of the Seismological Society of America, 2020, 110, 2283-2294.	2.3	30
40	Low-Dimensional Contact Layers for Enhanced Perovskite Photodiodes. Advanced Functional Materials, 2020, 30, 2001692.	14.9	30
41	Design guidelines for slanting silicon nanowire arrays for solar cell application. Journal of Applied Physics, 2013, 114, .	2.5	29
42	Ab Initio Approach and Its Impact on Superconductivity. Journal of Superconductivity and Novel Magnetism, 2019, 32, 53-60.	1.8	29
43	Preparation of Aluminum Nanomesh Thin Films from an Anodic Aluminum Oxide Template as Transparent Conductive Electrodes. Scientific Reports, 2016, 6, 20114.	3.3	25
44	Gate Leakage Suppression and Breakdown Voltage Enhancement in p-GaN HEMTs Using Metal/Graphene Gates. IEEE Transactions on Electron Devices, 2020, 67, 875-880.	3.0	25
45	Hydrogen sulfide detection properties of Pt-gated AlGaIn/GaN HEMT-sensor. Sensors and Actuators B: Chemical, 2018, 274, 636-644.	7.8	24
46	Ultra-Low Contact Resistivity of $\sim 0.1 \text{ m}\Omega$ for Au-Free Ti _x Al _y Alloy Contact on Non-Recessed AlGaIn/GaN. IEEE Electron Device Letters, 2020, 41, 143-146.	3.9	24
47	Evaluation of LPCVD SiN _x Gate Dielectric Reliability by TDDB Measurement in Si-Substrate-Based AlGaIn/GaN MIS-HEMT. IEEE Transactions on Electron Devices, 2018, 65, 1759-1764.	3.0	23
48	Well Proximity Governing Stress Drop Variation and Seismic Attenuation Associated With Hydraulic Fracturing Induced Earthquakes. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020103.	3.4	23
49	High-Pressure Formation of Cobalt Polyhydrides: A First-Principle Study. Inorganic Chemistry, 2018, 57, 181-186.	4.0	22
50	Impact of high temperature H ₂ pre-treatment on Pt-AlGaIn/GaN HEMT sensor for H ₂ S detection. Sensors and Actuators B: Chemical, 2019, 280, 138-143.	7.8	22
51	Fluid-injection-induced earthquakes characterized by hybrid-frequency waveforms manifest the transition from aseismic to seismic slip. Nature Communications, 2021, 12, 6862.	12.8	22
52	A Study on the Largest Hydraulic Fracturing Induced Earthquake in Canada: Numerical Modeling and Triggering Mechanism. Bulletin of the Seismological Society of America, 2021, 111, 1392-1404.	2.3	20
53	Oxide-based analog synapse: Physical modeling, experimental characterization, and optimization. , 2016, , .		19
54	Potentials of the elevated circulating miR-185 level as a biomarker for early diagnosis of HBV-related liver fibrosis. Scientific Reports, 2016, 6, 34157.	3.3	18

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73	Planar Bulk MOSFETs With Self-Aligned Pocket Well to Improve Short-Channel Effects and Enhance Device Performance. IEEE Transactions on Electron Devices, 2015, 62, 1411-1418.	3.0	12
74	Higher LRRFIP1 expression in glioblastoma multiforme is associated with better response to teniposide, a type II topoisomerase inhibitor. Biochemical and Biophysical Research Communications, 2014, 446, 1261-1267.	2.1	11
75	Trap behaviours characterization of AlGaIn/GaN high electron mobility transistors by room-temperature transient capacitance measurement. AIP Advances, 2016, 6, 095021.	1.3	11
76	Blue cooperative up-conversion luminescence of Yb:Y2O3 transparent ceramics. Ceramics International, 2019, 45, 9278-9282.	4.8	11
77	Determination of the Gate Breakdown Mechanisms in p-GaN Gate HEMTs by Multiple-Gate-Sweep Measurements. IEEE Transactions on Electron Devices, 2021, 68, 1518-1523.	3.0	11
78	Investigation of Band Alignment for Hybrid 2D-MoS2/3D-Î²-Ga2O3 Heterojunctions with Nitridation. Nanoscale Research Letters, 2019, 14, 360.	5.7	10
79	A new computational model for human thyroid cancer enhances the preoperative diagnostic efficacy. Oncotarget, 2015, 6, 28463-28477.	1.8	10
80	Simulated optical absorption enhancement in random silicon nanohole structure for solar cell application. Journal of Applied Physics, 2014, 116, .	2.5	9
81	Light trapping in hybrid nanopyramid and nanohole structure silicon solar cell beyond the Lambertian limit. Journal of Applied Physics, 2014, 116, 074310.	2.5	9
82	A simulation study of field plate termination in Ga₂O₃ Schottky barrier diodes. Chinese Physics B, 2018, 27, 127302.	1.4	9
83	Band alignment of indiumâ€“galliumâ€“zinc oxide/Î²-Ga₂O₃ \$(ar{2}01)\$ heterojunction determined by angle-resolved X-ray photoelectron spectroscopy. Japanese Journal of Applied Physics, 2018, 57, 100312.	1.5	9
84	Ab initio studies of copper hydrides under high pressure. Frontiers of Physics, 2019, 14, 1.	5.0	9
85	p-GaN Gate HEMTs With 10.6 V Maximum Gate Drive Voltages by Mg Doping Engineering. IEEE Transactions on Electron Devices, 2022, 69, 2282-2286.	3.0	8
86	Complex spin Hamiltonian represented by an artificial neural network. Physical Review B, 2022, 105, .	3.2	8
87	SIMS study on N diffusion in hafnium oxynitride. Applied Surface Science, 2004, 231-232, 590-593.	6.1	7
88	Band structures and optical gain of strained GaAsxP1âˆ“xâˆ“yNy/GaP quantum wells. Applied Physics Letters, 2011, 98, 121112.	3.3	7
89	Perspective of flash memory realized on vertical Si nanowires. Microelectronics Reliability, 2012, 52, 651-661.	1.7	7
90	Influence of feedstock concentration on tetragonality and particle size of hydrothermally synthesized barium titanate powders. Ceramics International, 2017, 43, 14813-14817.	4.8	7

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91	Dual-Mode Hybrid Quasi-SAW/BAW Resonators With High Effective Coupling Coefficient. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 1916-1921.	3.0	7
92	Atomic layer etching technique for InAlN/GaN heterostructure with AlN etch-stop layer. Materials Science in Semiconductor Processing, 2022, 143, 106544.	4.0	7
93	Dual beam-shear differential interference microscopy for full-field surface deformation gradient characterization. Journal of the Mechanics and Physics of Solids, 2020, 145, 104162.	4.8	6
94	Distinguishing various influences on the electrical properties of thin-barrier AlGaIn/GaN heterojunctions with in-situ SiN caps. Materials Science in Semiconductor Processing, 2021, 132, 105907.	4.0	6
95	Physical factors controlling the diverse seismogenic behavior of fluid injections in Western Canada. Earth and Planetary Science Letters, 2022, 589, 117555.	4.4	6
96	Enhancement of the Flatband Modulation of Ni-Silicided Gates on Hf-Based Dielectrics. IEEE Transactions on Electron Devices, 2008, 55, 2238-2245.	3.0	5
97	Work-Function Engineering for 32-nm-Node pMOS Devices: High-Performance TaCNO-Gated Films. IEEE Electron Device Letters, 2008, 29, 1203-1205.	3.9	5
98	Optical simulation of low aspect ratio hemisphere array surface texturing for crystalline Si film solar cells. Energy Procedia, 2011, 8, 180-184.	1.8	5
99	Investigation of AlGaIn/GaN HEMTs degradation with gate pulse stressing at cryogenic temperature. AIP Advances, 2017, 7, .	1.3	5
100	Impact of Preoperative Hepatitis B Virus Levels on Prognosis After Primary and Repeat Hepatectomies for Hepatocellular Carcinoma Patients—a Retrospective Study. Journal of Gastrointestinal Surgery, 2018, 22, 872-883.	1.7	5
101	Very-Low Resistance Contact to 2D Electron Gas by Annealing Induced Penetration Without Spikes Using TaAl/Au on Non-Recessed i-AlGaIn/GaN. IEEE Electron Device Letters, 2020, 41, 1484-1487.	3.9	5
102	Performance of InGaIn green light-emitting diodes with on-chip photodetectors based on wire-bonding and flip-chip configurations. Applied Optics, 2021, 60, 2599.	1.8	5
103	Optical absorption enhancement in a Si nanohole structure with hexagonal unit cell for solar cell application. Nanotechnology, 2014, 25, 415303.	2.6	4
104	Overshoot Stress on Ultra-Thin HfO ₂ /High- κ Layer and Its Impact on Lifetime Extraction. IEEE Electron Device Letters, 2015, 36, 1267-1270.	3.9	4
105	Volume-based predictive biomarkers of sequential FDG-PET/CT for sunitinib in cancer of unknown primary: identification of the best benefited patients. European Journal of Nuclear Medicine and Molecular Imaging, 2017, 44, 199-205.	6.4	4
106	AlGaIn/GaN HEMT micro-sensor technology for gas sensing applications. , 2018, , .		4
107	A Method to Determine Dielectric Model Parameters for Broadband Permittivity Characterization of Thin Film Substrates. IEEE Transactions on Electromagnetic Compatibility, 2021, 63, 229-236.	2.2	4
108	Improvement of $\text{In}^{2+}\text{Ga}_{2}\text{O}_{3}$ MIS-SBD Interface Using Al-Reacted Interfacial Layer. IEEE Transactions on Electron Devices, 2021, 68, 3314-3319.	3.0	4

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109	Low trap density of oxygen-rich HfO ₂ /GaN interface for GaN MIS-HEMT applications. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2022, 40, .	1.2	4
110	Pilomyxoid astrocytomas with rare rosenthal fibers. Brain Tumor Pathology, 2016, 33, 35-39.	1.7	3
111	A novel enhancement mode AlGaIn/GaN high electron mobility transistor with split floating gates. Chinese Physics B, 2017, 26, 047305.	1.4	3
112	Patient-oncologist alliance and psychosocial well-being in Chinese society strongly affect cancer management adherence with cancer of unknown primary. Psycho-Oncology, 2017, 26, 991-998.	2.3	3
113	Pt-AlGaIn/GaN HEMT-Sensor for Hydrogen Sulfide (H ₂ S) Detection. Proceedings (mdpi), 2017, 1, .	0.2	3
114	Application of a gateless AlGaIn/GaN HEMT sensor for diesel soot particulate detection. Sensors and Actuators B: Chemical, 2021, 349, 130811.	7.8	3
115	Carbon monoxide detection down to ppb-level realized by O ₂ plasma treated TiO ₂ -gated AlGaIn/GaN HEMT sensor. Sensors and Actuators B: Chemical, 2022, 359, 131556.	7.8	3
116	Surface Nanostructure Optimization for GaAs Solar Cell Application. Japanese Journal of Applied Physics, 2012, 51, 10ND13.	1.5	2
117	Si/PEDOT:PSS hybrid solar cells incorporated with silver plasmonic nanospheres. Thin Solid Films, 2016, 599, 37-41.	1.8	2
118	Study of the enhancement-mode AlGaIn/GaN high electron mobility transistor with split floating gates. Solid-State Electronics, 2017, 137, 52-57.	1.4	2
119	Detection of microRNA-33a-5p in serum, urine and renal tissue of patients with IgA nephropathy. Experimental and Therapeutic Medicine, 2021, 21, 205.	1.8	2
120	Study of bilayer Al ₂ O ₃ /in-situ SiN _x dielectric stacks for gate modulation in ultrathin-barrier AlGaIn/GaN MIS-HEMTs. , 2021, , .		2
121	A Miniature GaN Chip for Surface Roughness Measurement. IEEE Transactions on Electron Devices, 2021, 68, 4977-4981.	3.0	2
122	The Atomic Layer Etching Technique with Surface Treatment Function for InAlN/GaN Heterostructure. Crystals, 2022, 12, 722.	2.2	2
123	Novel low aspect-ratio Si nano-hemisphere array surface texture application to ultrathin film solar cells. , 2011, , .		1
124	Surface plasmon enhanced light absorption for thin film poly-silicon solar cell with hybrid structure and metal alloy nano-particles. , 2011, , .		1
125	Pt-AlGaIn/GaN HEMT-sensor layout optimization for enhancement of hydrogen detection. , 2017, , .		1
126	Low leakage GaN HEMTs with sub-100Ånm T-shape gates fabricated by a low-damage etching process. Journal of Materials Science: Materials in Electronics, 2020, 31, 5886-5891.	2.2	1

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127	Formation of ultra-high-resistance Au/Ti/p-GaN junctions and the applications in AlGaIn/GaN HEMTs. <i>AIP Advances</i> , 2021, 11, 045207.	1.3	1
128	Achieving A Low Contact Resistivity of 0.11 $\hat{\text{I}}\hat{\text{C}}\hat{\text{A}}\text{-mm}$ for Ti5Al1/TiN S/D Contact on Al0.2Ga0.8N/ AlN/GaN Structure without Barrier Recess. , 2021, , .		1
129	In situ characterization of buckling dynamics in silicon microribbon on an elastomer substrate. <i>Extreme Mechanics Letters</i> , 2021, 48, 101397.	4.1	1
130	Reply to the "Comment on "High-temperature superconductivity in transition metallic hydrides MH ₁₁ (M = Mo, W, Nb, and Ta) under high pressure" by X. Zheng and J. Zheng, <i>Phys. Chem. Chem. Phys.</i> , 2022, 24, 1898-1899. DOI: 10.1039/D1CP01474A. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 1898-1899.	2.8	1
131	InAlN/GaN HEMTs on Si with 0.18- $\hat{\text{I}}\hat{\text{C}}\hat{\text{A}}\text{-mm}$ Contact Resistance and 2.1-A/mm Drain Current Density. , 2021, , .		1
132	Surface texturing of Si thin film solar cells via low cost periodic nanopillars array to enhance efficiency. , 2010, , .		0
133	Highly conductive aligned carbon film for interconnect application. , 2010, , .		0
134	Periodic silicon nanocones arrays with controllable dimensions prepared by two-step etching using nanosphere lithography and NH ₄ OH/H ₂ O ₂ solution. , 2010, , .		0
135	Enhancement of Si-Based Solar Cell Efficiency via Nanostructure Integration. <i>Green Energy and Technology</i> , 2011, , 3-55.	0.6	0
136	Solar Cells: Novel Silicon Nanohemisphere-Array Solar Cells with Enhanced Performance (Small) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 38	10.0	0
137	Design guidelines for (111) Si inclined nanohole arrays in thin film solar cells. , 2013, , .		0
138	Shallow junction and contact realization by diffusion of heavily doped polycrystalline-germanium for Ge devices. , 2014, , .		0
139	Development of three-dimensional memory (3D-M). <i>Proceedings of SPIE</i> , 2016, , .	0.8	0
140	A novel enhance-mode AlGaIn/GaN HEMT with split floating gates. , 2016, , .		0
141	The enhancement mode AlGaIn/GaN high electron mobility transistor based on charge storage. , 2017, , .		0
142	Au-based and Au-free ohmic contacts to AlGaIn/GaN structures on silicon or Sapphire substrates. , 2018, , .		0
143	A new wet etching method for black phosphorus layer number engineering: experiment, modeling and DFT simulations. , 2019, , .		0
144	Nonuniform grid upscaling method for geologic model of oil reservoir: A case study of the W block in the northern part of the Songliao Basin. <i>Interpretation</i> , 2021, 9, T443-T452.	1.1	0

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145	Investigation on the release of residual stress in a folded structure applied to MEMS devices. Micro and Nano Letters, 2021, 16, 443-447.	1.3	0
146	Enhanced Si thin film solar cells short-circuit current with rational-designed Si nano-pillar array surface texturing. , 2011, , .		0