

Heng-Tung Hsu

List of Publications by Year in descending order

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108
papers

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citations

516710

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501196

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108
all docs

108
docs citations

108
times ranked

751
citing authors

#	ARTICLE	IF	CITATIONS
1	THz transmittance in one-dimensional superconducting nanomaterial-dielectric superlattice. <i>Materials Chemistry and Physics</i> , 2009, 113, 382-384.	4.0	109
2	InAs Thin-Channel High-Electron-Mobility Transistors with Very High Current-Gain Cutoff Frequency for Emerging Submillimeter-Wave Applications. <i>Applied Physics Express</i> , 2013, 6, 034001.	2.4	94
3	Computer-aided diagnosis and tuning of cascaded coupled resonators filters. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2002, 50, 1137-1145.	4.6	51
4	A Koch-Shaped Log-Periodic Dipole Array (LPDA) Antenna for Universal Ultra-High-Frequency (UHF) Radio Frequency Identification (RFID) Handheld Reader. <i>IEEE Transactions on Antennas and Propagation</i> , 2013, 61, 4852-4856.	5.1	51
5	Full-wave design of canonical waveguide filters by optimization. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2003, 51, 504-511.	4.6	40
6	Interconnected CPW Fed Flexible 4-Port MIMO Antenna for UWB, X, and Ku Band Applications. <i>IEEE Access</i> , 2022, 10, 57641-57654.	4.2	40
7	Investigation of Impact Ionization in InAs-Channel HEMT for High-Speed and Low-Power Applications. <i>IEEE Electron Device Letters</i> , 2007, 28, 856-858.	3.9	39
8	Synthesis of coupled-resonators group-delay equalizers. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2002, 50, 1960-1968.	4.6	37
9	Parameter extraction for symmetric coupled-resonator filters. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2002, 50, 2971-2978.	4.6	32
10	RF and Logic Performance Improvement of $\text{In}_{0.7}\text{Ga}_{0.3}\text{As}/\text{InAs}/\text{In}_{0.7}\text{Ga}_{0.3}\text{As}$ Composite-Channel HEMT Using Gate-Sinking Technology. <i>IEEE Electron Device Letters</i> , 2008, 29, 290-293.	3.9	26
11	DESIGN RULES FOR A FABRY-PEROT NARROW BAND TRANSMISSION FILTER CONTAINING A METAMATERIAL NEGATIVE-INDEX DEFECT. <i>Progress in Electromagnetics Research Letters</i> , 2009, 9, 101-107.	0.7	25
12	Reliability improvement in GaN HEMT power device using a field plate approach. <i>Solid-State Electronics</i> , 2017, 133, 64-69.	1.4	24
13	A 1×2 Dual-Band Antenna Array for Radio-Frequency Identification (RFID) Handheld Reader Applications. <i>IEEE Transactions on Antennas and Propagation</i> , 2014, 62, 5260-5267.	5.1	22
14	30-GHz Low-Noise Performance of 100-nm-Gate-Recessed n-GaN/AlGaIn/GaN HEMTs. <i>IEEE Electron Device Letters</i> , 2010, 31, 105-107.	3.9	21
15	High-Performance GaN MOSHEMTs Fabricated With ALD Al_2O_3 Dielectric and NBE Gate Recess Technology for High Frequency Power Applications. <i>IEEE Electron Device Letters</i> , 2017, 38, 771-774.	3.9	21
16	TUNABLE PHOTONIC BAND GAP IN A DOPED SEMICONDUCTOR PHOTONIC CRYSTAL IN NEAR INFRARED REGION. <i>Progress in Electromagnetics Research</i> , 2011, 114, 271-283.	4.4	19
17	Parameter extraction for symmetric coupled-resonator filters. , 0, , .		17
18	An Automatic Platform Based on Nanostructured Microfluidic Chip for Isolating and Identification of Circulating Tumor Cells. <i>Micromachines</i> , 2021, 12, 473.	2.9	17

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19	Optical properties of a high-temperature superconductor operating in near zero-permittivity region. Journal of Applied Physics, 2010, 107, .	2.5	16
20	Dual-Band and Dual-Polarization CPW Fed MIMO Antenna for Fifth-Generation Mobile Communications Technology at 28 and 38 GHz. IEEE Access, 2022, 10, 46853-46863.	4.2	16
21	Full wave optimization of stripline tapped-in ridge waveguide bandpass filters. , 0, , .		15
22	Design of WiFi/WiMAX dual-band E-shaped patch antennas through cavity model approach. Microwave and Optical Technology Letters, 2010, 52, 471-474.	1.4	15
23	Gallium Nitride (GaN) High-Electron-Mobility Transistors with Thick Copper Metallization Featuring a Power Density of 8.2 W/mm for Ka-Band Applications. Micromachines, 2020, 11, 222.	2.9	15
24	Aperture-coupled dual-band circularly polarized antenna for RFID reader applications. , 2012, , .		14
25	A MULTICHANNELED FILTER IN A PHOTONIC CRYSTAL CONTAINING COUPLED DEFECTS. Progress in Electromagnetics Research, 2011, 117, 379-392.	4.4	13
26	InAs High Electron Mobility Transistors with Buried Gate for Ultralow-Power-Consumption Low-Noise Amplifier Application. Japanese Journal of Applied Physics, 2008, 47, 7119-7121.	1.5	12
27	Adaptive Beam Steering Smart Antenna System for Ultra-High-Frequency Radio Frequency Identification Applications. , 2012, , .		11
28	Antipodal dual exponentially tapered slot antennas (DE TSA) with corrugations for front-to-back ratio improvement. , 2011, , .		9
29	Potential of Enhancement Mode In _{0.65} Ga _{0.35} As/In _{0.65} Ga _{0.35} As HEMTs for Using in High-Speed and Low-Power Logic Applications. ECS Journal of Solid State Science and Technology, 2015, 4, N157-N159.	1.8	9
30	InAs Channel-Based Quantum Well Transistors for High-Speed and Low-Voltage Digital Applications. Electrochemical and Solid-State Letters, 2008, 11, H193.	2.2	8
31	Novel Planar Wideband Omni-directional Quasi Log-Periodic Antenna. , 0, , .		7
32	Sub-10 nm Top Width Nanowire InGaAs Gate-All-Around MOSFETs With Improved Subthreshold Characteristics and Device Reliability. IEEE Journal of the Electron Devices Society, 2022, 10, 188-191.	2.1	7
33	Circulating tumor cells as a "real-time liquid biopsy": Recent advances and the application in ovarian cancer. Taiwanese Journal of Obstetrics and Gynecology, 2022, 61, 34-39.	1.3	7
34	InAs/In _{1-x} Ga _x As Composite Channel High Electron Mobility Transistors for High Speed Applications. , 2008, , .		6
35	A high-gain circularly-polarized dual-band antenna array for RFID reader applications. , 2012, , .		6
36	Investigation of the Flip-Chip Package With BCB Underfill for W-Band Applications. IEEE Microwave and Wireless Components Letters, 2014, 24, 11-13.	3.2	6

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37	Performance Enhancement of Flip-Chip Packaged AlGaIn/GaN HEMTs Using Active-Region Bumps-Induced Piezoelectric Effect. IEEE Electron Device Letters, 2014, 35, 735-737.	3.9	6
38	Investigation of electrical and thermal properties of multiple AlGaIn/GaN high-electron-mobility transistors flip-chip packaged in parallel for power electronics. Applied Physics Express, 2015, 8, 034101.	2.4	6
39	A 52-58 GHz Power Amplifier With 18.6-dBm Saturated Output Power for Space Applications. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 1927-1931.	3.0	6
40	Bias-Dependent Radio Frequency Performance for 40 nm InAs High-Electron-Mobility Transistor with a Cutoff Frequency Higher than 600 GHz. Japanese Journal of Applied Physics, 2012, 51, 110203.	1.5	5
41	Thickness-Dependent Transmission in a Finite Photonic Crystal Containing Nearly Ferroelectric Superconductor. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 1-5.	2.9	5
42	Miniaturized wilkinson power divider with complex isolation network for physical isolation. , 2017, , .		5
43	Evaluation of a 100-nm Gate Length E-Mode InAs High Electron Mobility Transistor With Ti/Pt/Au Ohmic Contacts and Mesa Sidewall Channel Etch for High-Speed and Low-Power Logic Applications. IEEE Journal of the Electron Devices Society, 2018, 6, 797-802.	2.1	5
44	Bandwidth Improvement of MMIC Single-Pole-Double-Throw Passive HEMT Switches with Radial Stubs in Impedance-Transformation Networks. Electronics (Switzerland), 2020, 9, 270.	3.1	5
45	SYSTEM LEVEL INTEGRATION OF SIMULATION METHODS FOR HIGH DATA-RATE TRANSMISSION CIRCUIT DESIGN APPLICATIONS. Progress in Electromagnetics Research, 2009, 90, 31-49.	4.4	4
46	Improvement on the noise performance of InAs-based HEMTs with gate sinking technology. Microelectronic Engineering, 2010, 87, 2253-2257.	2.4	4
47	Linearity Characteristics of Field-Plated AlGaIn/GaN High Electron Mobility Transistors for Microwave Applications. Japanese Journal of Applied Physics, 2010, 49, 014103.	1.5	4
48	Compact dual-band circularly polarized microstrip antenna with separated transmitting and receiving ports for RFID reader applications. , 2012, , .		4
49	Miniaturization of hairpin resonator filters with improved harmonic suppression by using lumped capacitors. , 2013, , .		4
50	A Compact Dual-band Antenna at Ka-band Frequencies for Next Generation Cellular Applications. , 2018, , .		4
51	Performance degradation of RFID system due to curving in tag antenna through radar cross section (RCS) analysis. , 2007, , .		3
52	RF Performance Improvement of Metamorphic High-Electron Mobility Transistor Using $(\text{In}_x\text{Ga}_{1-x}\text{As})_m/(\text{InAs})_n$ Superlattice-Channel Structure for Millimeter-Wave Applications. IEEE Electron Device Letters, 2010, 31, 677-679.	3.9	3
53	A flip-chip packaged 80-nm In _{0.7} Ga _{0.3} As MHEMT for millimeter-wave low-noise applications. Microelectronic Engineering, 2011, 88, 183-186.	2.4	3
54	A new design of wilkinson power divider using radial stubs featuring size reduction and bandwidth enhancement with physical isolation. , 2017, , .		3

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55	Ka-band antipodal dual exponentially tapered slot antenna for next generation mobile communication system applications. , 2017, , .		3
56	Adoption of the Wet Surface Treatment Technique for the Improvement of Device Performance of Enhancement-Mode AlGaIn/GaN MOSHEMTs for Millimeter-Wave Applications. Materials, 2021, 14, 6558.	2.9	3
57	A Novel GaN:C Millimeter-Wave HEMT with AlGaIn Electron-Blocking Layer. Materials, 2022, 15, 703.	2.9	3
58	Evaluation of RF and logic performance for 40 nm InAs/InGaAs composite channel HEMTs for high-speed and low-voltage applications. , 2008, , .		2
59	MIMO loop antennas and their isolations in WLAN card applications. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	2
60	On the performance degradation of RFID system due to curving in tag antenna: assessment and solutions. , 2012, , .		2
61	Log-periodic dipole array with improved front-to-back ratio for universal UHF RFID handheld reader applications. , 2012, , .		2
62	A compact low-profile circularly-polarized antenna for ultra high frequency (UHF) radio frequency identification (RFID) reader applications. , 2012, , .		2
63	A circularly-polarized shaped-beam antenna array for radio frequency identification (RFID) reader applications at 2.4 GHz. , 2012, , .		2
64	Performance Evaluation of InGaSb/AlSb P-Channel High-Hole-Mobility Transistor Fabricated Using BCl ₃ Dry Etching. Japanese Journal of Applied Physics, 2013, 52, 020203.	1.5	2
65	1-by-7 circularly-polarized shaped-beam antenna array for radio frequency identification (RFID) reader applications at 2.4 GHz. , 2013, , .		2
66	Terahertz Negative Refraction in a High-Temperature Superconducting Material. IEEE Transactions on Terahertz Science and Technology, 2015, 5, 230-235.	3.1	2
67	Performance Enhancement of Flip-Chip Packaged AlGaIn/GaN HEMTs by Strain Engineering Design. IEEE Transactions on Electron Devices, 2016, 63, 3876-3881.	3.0	2
68	Communicationâ€™Potential of the Î€-Gate InAs HEMTs for High-Speed and Low-Power Logic Applications. ECS Journal of Solid State Science and Technology, 2019, 8, P319-P321.	1.8	2
69	Bandwidth Improvement of Conventional Dual-Band Power Divider Using Physical Port Separation Structure. Electronics (Switzerland), 2020, 9, 2192.	3.1	2
70	Compact lowâ€™noise power amplifier design and implementation for millimetre wave frequencies. IET Circuits, Devices and Systems, 2020, 14, 1026-1031.	1.4	2
71	Design of coupled resonators group delay equalizers. , 0, , .		1
72	Design of Flip-Chip Interconnects with Vertical Coaxial Transitions and Its Fabrication. , 0, , .		1

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73	Dual band omni-directional planar antenna for WiMAX applications. , 2008, , .		1
74	InAs-Channel Metal-Oxide-Semiconductor HEMTs with Atomic-Layer-Deposited Al ₂ O ₃ Gate Dielectric. Electrochemical and Solid-State Letters, 2009, 12, H456.	2.2	1
75	InAs-Channel High-Electron-Mobility Transistors for Ultralow-Power Low Noise Amplifier Applications. Japanese Journal of Applied Physics, 2009, 48, 04C094.	1.5	1
76	Microwave Resonant Transmission in a Superconducting Fabry-Pérot Bilayer. Journal of Superconductivity and Novel Magnetism, 2009, 22, 487-493.	1.8	1
77	Wave propagation in general bi-isotropic media. , 2009, , .		1
78	DC and RF Performance Improvement of 70 nm Quantum Well Field Effect Transistor by Narrowing Source-Drain Spacing Technology. Japanese Journal of Applied Physics, 2010, 49, 010212.	1.5	1
79	Flip-Chip Packaging of Low-Noise Metamorphic High Electron Mobility Transistors on Low-Cost Organic Substrate. Japanese Journal of Applied Physics, 2011, 50, 096503.	1.5	1
80	Effect of Gate Length on Device Performances of AlSb/InAs High Electron Mobility Transistors Fabricated Using BCl ₃ Dry Etching. Japanese Journal of Applied Physics, 2012, 51, 060202.	1.5	1
81	A dual-frequency and dual-polarization antenna design for long term evolution applications. , 2015, , .		1
82	Effect of surface passivation on the electrical performance of AlGaIn/GaN high-electron-mobility transistors with slant field plates fabricated using deep-UV lithography. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 14, 1600230.	0.8	1
83	Flip-Chip Packaging of Low-Noise Metamorphic High Electron Mobility Transistors on Low-Cost Organic Substrate. Japanese Journal of Applied Physics, 2011, 50, 096503.	1.5	1
84	Equivalent Circuit Representation of Stripline Step Discontinuity for Multilayer MMIC Applications. , 2000, , .		0
85	High Performance InAs-Channel HEMT for Low Voltage Milimeter Wave Applications. , 2007, , .		0
86	Accurate Performance Evaluation of HEMT Devices for High-Speed Logic Applications through Rigorous Device Modelling Technique. , 2007, , .		0
87	Integration of HFSS and genetic algorithm for the optimum design of waveguide components. , 2007, , .		0
88	Investigation of impact ionization from In _x Ga _{1-x} As to InAs Channel HEMTs for high speed and low power applications. , 2008, , .		0
89	On the noise performance of 80nm InAs/In _{0.7} Ga _{0.3} As HEMTs using gate sinking technology. , 2008, , .		0
90	Convergence analysis of current sampling profiles for antenna design in the presence of electrically large and complex platforms. , 2009, , .		0

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91	A novel metamorphic high electron mobility transistors with $(\text{In}_{1-x}\text{Ga}_x)_m(\text{InAs})_n$ superlattice channel layer for millimeter-wave applications. , 2009, , .		0
92	InAs-Channel Metal-Oxide-Semiconductor HEMTs with Atomic-Layer-Deposited Al ₂ O ₃ Gate Dielectric. ECS Transactions, 2009, 25, 87-92.	0.5	0
93	A 40-nm-Gate InAs/ $\text{In}_{0.7}\text{Ga}_{0.3}\text{As}$ Composite-Channel HEMT with 2200 mS/mm and 500-GHz f_T . , 2009, , .		0
94	Bonding temperature effect on the performance of flip chip assembled 150nm mHEMT device on organic substrate. , 2010, , .		0
95	Logic performance of 40 nm InAs/ $\text{In}_x\text{Ga}_{1-x}\text{As}$ composite channel HEMTs. , 2010, , .		0
96	An 80 nm $\text{In}_{0.7}\text{Ga}_{0.3}\text{As}$ MHEMT with flip-chip packaging for W-band low noise applications. , 2010, , .		0
97	Bias-Dependent Radio Frequency Performance for 40 nm InAs High-Electron-Mobility Transistor with a Cutoff Frequency Higher than 600 GHz. Japanese Journal of Applied Physics, 2012, 51, 110203.	1.5	0
98	Dual-band circularly polarized antenna for RFID reader applications. , 2012, , .		0
99	30 GHz 2-stage MMIC low noise amplifier using GaAs pseudomorphic HEMT. , 2013, , .		0
100	Assessment of Thermal Impact on Performance of Metamorphic High-Electron-Mobility Transistors on Polymer Substrates Using Flip-Chip-on-Board Technology. Applied Physics Express, 2013, 6, 126701.	2.4	0
101	Antenna miniaturisation and broadband design via a decomposition of structure into conjugated elemental antennas for natural impedance matching. IET Microwaves, Antennas and Propagation, 2013, 7, 1238-1246.	1.4	0
102	Frequency Response of a Ferroelectric Material in Double-Negative Region. IEEE Photonics Journal, 2014, 6, 1-11.	2.0	0
103	A dual-frequency and dual-polarized antenna with improved front-to-back ratio for LTE applications. , 2014, , .		0
104	Corrections to "AlGaIn/GaN HEMTs With Damage-Free Neutral Beam Etched Gate Recess for High-Performance Millimeter-Wave Applications" [Nov 16 1395-1398]. IEEE Electron Device Letters, 2017, 38, 149-149.	3.9	0
105	Planar Diplexer Design Using Hairpin Resonators Loaded with External Capacitors for Improvement of Isolation and Stopband Rejection Levels. , 2019, , .		0
106	Novel Low-Cost Power Divider for 5.8 GHz. Electronics (Switzerland), 2020, 9, 699.	3.1	0
107	Compact phase shifter using arbitrary length of two coupled transmission lines. IET Circuits, Devices and Systems, 2021, 15, 403-414.	1.4	0
108	Effect of Gate Length on Device Performances of AlSb/InAs High Electron Mobility Transistors Fabricated Using BCl ₃ Dry Etching. Japanese Journal of Applied Physics, 2012, 51, 060202.	1.5	0