

Hao Xin

List of Publications by Year in descending order

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151
papers

2,807
citations

147726

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189801

50
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151
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151
docs citations

151
times ranked

2491
citing authors

#	ARTICLE	IF	CITATIONS
1	A 3-D Luneburg Lens Antenna Fabricated by Polymer Jetting Rapid Prototyping. IEEE Transactions on Antennas and Propagation, 2014, 62, 1799-1807.	3.1	273
2	3D Printed Dielectric Reflectarrays: Low-Cost High-Gain Antennas at Sub-Millimeter Waves. IEEE Transactions on Antennas and Propagation, 2014, 62, 2000-2008.	3.1	239
3	Terahertz electromagnetic crystal waveguide fabricated by polymer jetting rapid prototyping. Optics Express, 2011, 19, 3962.	1.7	114
4	Rapid and inexpensive fabrication of terahertz electromagnetic bandgap structures. Optics Express, 2008, 16, 16442.	1.7	112
5	A 3-D-Printed <i>W</i> -Band Slotted Waveguide Array Antenna Optimized Using Machine Learning. IEEE Antennas and Wireless Propagation Letters, 2018, 17, 2008-2012.	2.4	105
6	Machine Learning Techniques for Optimizing Design of Double T-Shaped Monopole Antenna. IEEE Transactions on Antennas and Propagation, 2020, 68, 5658-5663.	3.1	99
7	3-D-Printed Microwave and THz Devices Using Polymer Jetting Techniques. Proceedings of the IEEE, 2017, 105, 737-755.	16.4	98
8	3-D Printed Microwave Patch Antenna via Fused Deposition Method and Ultrasonic Wire Mesh Embedding Technique. IEEE Antennas and Wireless Propagation Letters, 2015, 14, 1346-1349.	2.4	83
9	Mechanical, Electromagnetic, and X-ray Shielding Characterization of a 3D Printable Tungsten ^{â€} Polycarbonate Polymer Matrix Composite for Space-Based Applications. Journal of Electronic Materials, 2015, 44, 2598-2607.	1.0	81
10	3D Printed Electronics With High Performance, Multi-Layered Electrical Interconnect. IEEE Access, 2017, 5, 25286-25294.	2.6	63
11	Computational Feasibility Study of Contrast-Enhanced Thermoacoustic Imaging for Breast Cancer Detection Using Realistic Numerical Breast Phantoms. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 1489-1501.	2.9	62
12	Wideband Elliptical Metasurface Cloaks in Printed Antenna Technology. IEEE Transactions on Antennas and Propagation, 2018, 66, 3512-3525.	3.1	57
13	Terahertz Horn Antenna Based on Hollow-Core Electromagnetic Crystal (EMXT) Structure. IEEE Transactions on Antennas and Propagation, 2012, 60, 5557-5563.	3.1	55
14	Spectroscopic thermoacoustic imaging of water and fat composition. Applied Physics Letters, 2012, 101, .	1.5	55
15	Microwave gain medium with negative refractive index. Nature Communications, 2014, 5, 5841.	5.8	51
16	Microwave (8â€“50 GHz) Characterization of Multiwalled Carbon Nanotube Papers Using Rectangular Waveguides. IEEE Transactions on Microwave Theory and Techniques, 2008, 56, 499-506.	2.9	47
17	3-D Printing Implementation of an X-band Eaton Lens for Beam Deflection. IEEE Antennas and Wireless Propagation Letters, 2016, 15, 1487-1490.	2.4	47
18	A metamaterial-inspired, electrically small rectenna for high-efficiency, low power harvesting and scavenging at the global positioning system L1 frequency. Applied Physics Letters, 2011, 99, .	1.5	46

#	ARTICLE	IF	CITATIONS
19	Mechanical Damage Detection in Polymer Tiles by THz Radiation. IEEE Sensors Journal, 2011, 11, 1720-1725.	2.4	41
20	Terahertz Characterization of Single-Walled Carbon Nanotube and Graphene On-Substrate Thin Films. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 2719-2725.	2.9	40
21	Microwave-Induced Thermoacoustic Communications. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 3369-3378.	2.9	40
22	A Dual-Band Dipole Antenna With Integrated-Balun. IEEE Transactions on Antennas and Propagation, 2009, 57, 786-789.	3.1	38
23	Microfluidic Devices for Terahertz Spectroscopy of Live Cells Toward Lab-on-a-Chip Applications. Sensors, 2016, 16, 476.	2.1	37
24	Impact of Microwave Pulses on Thermoacoustic Imaging Applications. IEEE Antennas and Wireless Propagation Letters, 2012, 11, 1634-1637.	2.4	36
25	Reconfigurable Array Design to Realize Principal Component Analysis (PCA)-Based Microwave Compressive Sensing Imaging System. IEEE Antennas and Wireless Propagation Letters, 2015, 14, 1039-1042.	2.4	36
26	Thermoacoustic and photoacoustic characterizations of few-layer graphene by pulsed excitations. Applied Physics Letters, 2016, 108, .	1.5	36
27	Using a portable terahertz spectrometer to measure the optical properties of <i>in vivo</i> human skin. Journal of Biomedical Optics, 2013, 18, 120503.	1.4	35
28	Liquid-based dielectric resonator antenna and its application for measuring liquid real permittivities. IET Microwaves, Antennas and Propagation, 2014, 8, 255-262.	0.7	35
29	Metallic Wire Array as Low-Effective Index of Refraction Medium for Directive Antenna Application. IEEE Transactions on Antennas and Propagation, 2010, 58, 79-87.	3.1	32
30	Electrically Small GPS L1 Rectennas. IEEE Antennas and Wireless Propagation Letters, 2011, 10, 935-938.	2.4	32
31	Quality Improvement of Thermoacoustic Imaging Based on Compressive Sensing. IEEE Antennas and Wireless Propagation Letters, 2015, 14, 1200-1203.	2.4	31
32	Monopoles Loaded With 3-D-Printed Dielectrics for Future Wireless Intrachip Communications. IEEE Transactions on Antennas and Propagation, 2017, 65, 6838-6846.	3.1	29
33	Terahertz characterization of multi-walled carbon nanotube films. Journal of Applied Physics, 2008, 103, 094324.	1.1	27
34	Designs of ultra wideband (UWB) printed elliptical monopole antennas with slots. Microwave and Optical Technology Letters, 2010, 52, 466-471.	0.9	26
35	Active Microwave Metamaterials Incorporating Ideal Gain Devices. Materials, 2011, 4, 73-83.	1.3	25
36	Microwave-Induced Thermoacoustic Imaging for Embedded Explosives Detection in High-Water Content Medium. IEEE Transactions on Antennas and Propagation, 2019, 67, 4803-4810.	3.1	25

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37	3D printed multilayer microstrip line structure with vertical transition toward integrated systems. , 2015, , .		22
38	Multi-layer archimedean spiral antenna fabricated using polymer extrusion 3D printing. Microwave and Optical Technology Letters, 2016, 58, 1662-1666.	0.9	22
39	Improved Two-Antenna Direction Finding Inspired by Human Ears. IEEE Transactions on Antennas and Propagation, 2011, 59, 2691-2697.	3.1	20
40	Stability Analysis of Non-Foster Circuit Using Normalized Determinant Function. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 3269-3277.	2.9	19
41	Designs of dual-band Wilkinson power dividers with flexible frequency ratios. , 2008, , .		18
42	Heat Induced Damage Detection by Terahertz (THz) Radiation. Journal of Infrared, Millimeter, and Terahertz Waves, 2011, 32, 848-856.	1.2	18
43	3-D Printed Parts for a Multilayer Phased Array Antenna System. IEEE Antennas and Wireless Propagation Letters, 2018, 17, 2150-2154.	2.4	15
44	THz Thermal Radiation Enhancement Using an Electromagnetic Crystal. IEEE Transactions on Antennas and Propagation, 2008, 56, 2970-2980.	3.1	12
45	Time-efficient contrast-enhanced thermoacoustic imaging modality for 3-D breast cancer detection using compressive sensing. , 2014, , .		12
46	Rotman lens design and optimization for 5G applications. International Journal of Microwave and Wireless Technologies, 2018, 10, 1048-1057.	1.5	12
47	3D printed microwave and THz components. , 2015, , .		10
48	Monopole Antenna Radiation Pattern Control via 3-D-Printed Dielectrics. IEEE Transactions on Antennas and Propagation, 2017, 65, 3869-3876.	3.1	10
49	Machine Learning Methods-Based Modeling and Optimization of 3-D-Printed Dielectrics Around Monopole Antenna. IEEE Transactions on Antennas and Propagation, 2022, 70, 4997-5006.	3.1	10
50	Experimental study of microwave radiation of carbon nanotube arrays. Applied Physics Letters, 2009, 95, , .	1.5	9
51	Fabrication of microwave patch antenna using additive manufacturing technique. , 2014, , .		9
52	Performance Evaluation of Wideband Microwave Direction-of-Arrival Estimation Using Luneburg Lens. IEEE Antennas and Wireless Propagation Letters, 2017, 16, 2453-2456.	2.4	9
53	Investigation of several terahertz electromagnetic band gap structures. Microwave and Optical Technology Letters, 2010, 52, 678-686.	0.9	8
54	Investigation of Microwave Negative Refractive Index (NRI) Transmission Lines Incorporating Tunnel Diodes. IEEE Antennas and Wireless Propagation Letters, 2012, 11, 671-674.	2.4	8

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55	Broadband electronically beam scanning structure using Luneburg lens. , 2013, , .		8
56	Performance improvement for thermoacoustic imaging using compressive sensing. , 2014, , .		8
57	Electromagnetic materials of artificially controlled properties for 3D printing applications. , 2014, , .		8
58	Stability analysis and parasitic effects of negative impedance converter circuits. , 2015, , .		8
59	Broadband Spectroscopic Thermoacoustic Characterization of Single-Walled Carbon Nanotubes. Journal of Spectroscopy, 2015, 2015, 1-7.	0.6	8
60	Real-Time Volumetric Thermoacoustic Imaging and Thermometry Using a 1.5-D Ultrasound Array. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 1234-1244.	1.7	8
61	Design of a high-efficiency rectenna for 1.575 GHz wireless low power transmission. , 2011, , .		7
62	Non-contact thermoacoustic imaging based on laser and microwave vibrometry. , 2014, , .		7
63	Design of wideband unit-cell element for 5G antenna arrays. , 2015, , .		7
64	A 300 THz tabletop radar range system with sub-micron distance accuracy. Scientific Reports, 2018, 8, 14443.	1.6	7
65	Contribution assessment of antenna structure and in-gap photocurrent in terahertz radiation of photoconductive antenna. Journal of Applied Physics, 2018, 124, 053107.	1.1	7
66	Ambipolar SB-FinFETs: A New Path to Ultra-Compact Sub-10 nm Logic Circuits. IEEE Transactions on Electron Devices, 2019, 66, 255-263.	1.6	7
67	Experimental demonstration of narrow beam monopole antenna embedded in low effective index of refraction ($n < 1$) wire medium. Microwave and Optical Technology Letters, 2008, 50, 2341-2345.	0.9	6
68	An improved two-antenna direction of arrival (DOA) technique inspired by human ears. , 2008, , .		6
69	Demetalization of single-walled carbon nanotube thin films with microwave irradiation. Applied Physics A: Materials Science and Processing, 2011, 102, 401-406.	1.1	6
70	Thermoacoustic imaging and spectroscopy for enhanced breast cancer detection. , 2011, , .		6
71	A hybrid microwave / acoustic communication scheme — Thermoacoustic communication. , 2013, , .		6
72	Graphene conductivity characterization at microwave and THz frequency. , 2014, , .		6

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73	Sparse linear regression for optimizing design parameters of double T-shaped monopole antennas. , 2017, , .		6
74	Sustainability in Network-on-Chips by Exploring Heterogeneity in Emerging Technologies. IEEE Transactions on Sustainable Computing, 2019, 4, 293-307.	2.2	6
75	Three-Dimensionally Printed/Additive Manufactured Antennas. , 2015, , 1-30.		6
76	Direction of arrival estimation using Luneburg lens. , 2012, , .		5
77	Direction of arrival estimation utilizing incident angle dependent spectra. , 2012, , .		5
78	A Microwave Direction of Arrival Estimation Technique Using a Single Antenna. IEEE Transactions on Antennas and Propagation, 2016, 64, 3189-3195.	3.1	5
79	Characterization of Multi-Walled Carbon Nanotube (MWNT) Papers Using X-Band Waveguides. , 2007, , .		4
80	All-dielectric low-loss terahertz waveguide fabricated by rapid prototyping. , 2009, , .		4
81	Computational study of thermoacoustic imaging for breast cancer detection using a realistic breast model. , 2013, , .		4
82	Numerical analysis of terahertz generation characteristics of photoconductive antenna. , 2014, , .		4
83	Modeling of non-contact thermoacoustic imaging. , 2015, , .		4
84	Antenna radiation pattern control through 3D printed inhomogeneous dielectrics. , 2015, , .		4
85	Nonlinear Microwave Characterization of CVD Grown Graphene. IEEE Antennas and Wireless Propagation Letters, 2016, 15, 1557-1560.	2.4	4
86	Ultra-compact sub-10nm logic circuits based on ambipolar SB-FinFETs. , 2017, , .		4
87	Reconfigurable reflectarray antenna for microwave detection and imaging. , 2017, , .		4
88	Direction-of-Arrival Estimation Enhancement for Closely Spaced Electrically Small Antenna Array. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 477-484.	2.9	4
89	Real-Time Thermoacoustic Imaging and Thermometry during Focused Microwave Heating in Multilayer Breast Phantom. , 2019, , .		4
90	A W-Band Low-Loss Dual-Polarization Quasi-TEM Waveguide. IEEE Transactions on Antennas and Propagation, 2008, 56, 1661-1668.	3.1	3

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91	Dual-band branch-line balun for millimeter-wave applications. , 2009, , .		3
92	Terahertz all-dielectric EMXT waveguide to planar microstrip transition structure. , 2011, , .		3
93	Microwave induced thermal acoustic imaging modeling for potential breast cancer detection. , 2011, , .		3
94	Balanced and symmetric design of active composite right- / left-handed transmission line with gain. , 2012, , .		3
95	Thermoacoustic imaging and spectroscopy for breast cancer detection applications. , 2013, , .		3
96	Comparison of carbon nanotubes and microbubbles as contrast agents for thermoacoustic imaging by computational studies. , 2014, , .		3
97	Beam scanning array based on Luneburg lens. , 2014, , .		3
98	Broadband Microwave Characterization of Nanostructured Thin Film With Giant Dielectric Response. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 3768-3774.	2.9	3
99	A novel compact reconfigurable UWB antenna for cognitive radio applications. , 2017, , .		3
100	Non-foster circuit for wideband matching of high frequency helical antenna. , 2017, , .		3
101	Thermoacoustic Image-Guided Focused Microwave Therapy for Enhanced Breast Cancer Treatment. , 2019, , .		3
102	A Reconfigurable UWB MIMO Antenna for Indoor and Outdoor Communication Applications. , 2019, , .		3
103	THz thermal radiation enhancement using electromagnetic crystals. , 2007, , .		2
104	Microwave-induced thermoacoustic imaging for embedded explosives detection. , 2014, , .		2
105	Fabrication of a realistic breast phantom based on 3D printing technology for thermoacoustic imaging application in breast cancer detection. , 2015, , .		2
106	Principal Component Analysis (PCA) based compressive sensing millimeter wave imaging system. , 2015, , .		2
107	Direction of arrival (DOA) estimation system using 3D printed Luneburg lens. , 2016, , .		2
108	Suspended individual SWCNT characterization via bottom gate FET configuration. Microwave and Optical Technology Letters, 2017, 59, 2610-2614.	0.9	2

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109	Novel 3D-printing enabled antenna design for future wireless intra-chip interconnect. , 2017, , .		2
110	Enhanced terahertz radiation of photoconductive antenna fabricated on GaAs-on-sapphire. AIP Advances, 2019, 9, .	0.6	2
111	A W-Band Quasi-TEM Waveguide Using Electromagnetic Crystal (EMXT) Surfaces. , 2006, , .		1
112	Design of novel printed elliptical monopole antenna for UWB applications. , 2008, , .		1
113	Electromagnetic invisibility cloak with circular-elliptical shaped boundary. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	1
114	A compact metamaterial-inspired mmW CPW-fed antenna. , 2009, , .		1
115	A compact metamaterial-inspired multilayered slot antenna. Microwave and Optical Technology Letters, 2011, 53, 219-223.	0.9	1
116	Characterization of anisotropic conduction of horizontally aligned carbon nanotube thin films. , 2013, , .		1
117	Impact of matching networks on direction finding performance utilizing two closely spaced electrically small antennas. , 2014, , .		1
118	Stability of tunnel diode based negative impedance circuit. , 2014, , .		1
119	THz Thermal Emission Control Via Electromagnetic Band Engineering. IEEE Transactions on Terahertz Science and Technology, 2014, 4, 213-224.	2.0	1
120	Theoretical and experimental study of a terahertz time-domain spectrometer based on photoconductive antenna. , 2014, , .		1
121	Direction of arrival estimation enhancement for closely spaced electrically small antenna array. , 2014, , .		1
122	Comparison of photoconductive antenna performance on LT-GaAs and SI-GaAs substrates. , 2014, , .		1
123	A dual-band amplifier with flexible frequency ratios. Microwave and Optical Technology Letters, 2015, 57, 2242-2247.	0.9	1
124	Design of additive manufactured Luneburg Lens working at W-band. , 2015, , .		1
125	THz photoconductive antenna array based near field imaging. , 2015, , .		1
126	A compact planar power combiner with complex impedance matching. Microwave and Optical Technology Letters, 2016, 58, 1121-1125.	0.9	1

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127	mm-Wave tunable colpitts oscillators based on FinFETs. , 2017, , .		1
128	A Reconfigurable UWB Multiple-Input Multiple-Output Antenna. , 2018, , .		1
129	Millimeter-Wave Components Utilizing Electromagnetic Crystal (EMXT) Surfaces. , 0, , .		0
130	Design of dual-band balun with tapped stubs. , 2008, , .		0
131	Dual-band balun with fully matched performance. , 2008, , .		0
132	Designs of metamaterials that enable electromagnetic cloaks for dual-frequency application. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	0
133	Electromagnetic crystal (EMXT) based THz waveguide and horn antenna fabricated by polymer jetting quick prototyping. , 2011, , .		0
134	Study of new magneto-dielectric substrate for compact antenna application. , 2011, , .		0
135	Metallic wire array characterization and waveguide design for terahertz applications. , 2011, , .		0
136	Design of a GPS L1 rectenna by using a metamaterial-inspired eclectically small antenna. , 2011, , .		0
137	3D rapid prototyping of terahertz computer-generated volume holograms. , 2012, , .		0
138	Active negative refraction index (NRI) transmission line with gain. , 2012, , .		0
139	Investigation of nonlinear modeling for active antenna design. , 2013, , .		0
140	Design of an Integrated Lens for Separating Microwave and Optical Wave. Microwave and Optical Technology Letters, 2013, 55, 2358-2363.	0.9	0
141	Design, fabrication, and measurement of dielectric reflectarray antennas at 100 GHz. , 2013, , .		0
142	Terahertz emission properties of butterfly-shaped photoconductive antennas based on LT-GaAs and SI-GaAs substrates. , 2014, , .		0
143	3D microwave eaton lens fabricated by polymer jetting rapid prototyping. , 2014, , .		0
144	Microwave (1.7–2.6 GHz) characterization of hydroxylapatite and oxalate using rectangular waveguide. , 2014, , .		0

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145	Anisotropic Microwave Conductivity Dispersion of Horizontally Aligned Multi-Walled Carbon-Nanotube Thin Film on Flexible Substrate. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 3588-3594.	2.9	0
146	A review of active metamaterials incorporating gain device / medium. , 2015, , .		0
147	3D printable multilayer phased array design. , 2015, , .		0
148	Time-domain THz near-field imaging incorporating Hadamard multiplexing method. , 2016, , .		0
149	Design of volumetric sub-THz negative refractive index metamaterial with gain. , 2016, , .		0
150	3D-Printed Phase Controlled Focusing Metalens at 1550 nm Wavelength. , 2018, , .		0
151	Introducing the New "Young Professionals" Column [Young Professionals]. IEEE Antennas and Propagation Magazine, 2018, 60, 122-122.	1.2	0