Goutam Chattopadhyay

List of Publications by Year
in descending order

169	5,529	94433 37	88630 70
papers	citations	h-index	g-index

171	171	171	3555
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Large Array of Single-Photon Counting Quantum Capacitance Detectors. IEEE Transactions on Terahertz Science and Technology, 2022, 12, 211-216.	3.1	3
2	Multibeam Si/GaAs Holographic Metasurface Antenna at W-Band. IEEE Transactions on Antennas and Propagation, 2021, 69, 3523-3528.	5.1	20
3	Wideband Multimode Leaky-Wave Feed for Scanning Lens-Phased Array at Submillimeter Wavelengths. IEEE Transactions on Terahertz Science and Technology, 2021, 11, 205-217.	3.1	27
4	Sub-Orbital Flight Demonstration of a 183/540â€“600 GHz Hybrid CMOS-InP and CMOS-Schottky-MEMS Limb-Sounder. IEEE Journal of Microwaves, 2021, 1, 560-573.	6.5	4
5	Dual Local Oscillator SIS Receiver for Simultaneous Observations of Water Isotopologues in the Solar System. IEEE Transactions on Terahertz Science and Technology, 2021, 11, 183-193.	3.1	1
6	A Low-Loss Silicon MEMS Phase Shifter Operating in the 550-GHz Band. IEEE Transactions on Terahertz Science and Technology, 2021, 11, 477-485.	3.1	10
7	180-GHz Pulsed CMOS Transmitter for Molecular Sensing. IEEE Transactions on Terahertz Science and Technology, 2021, 11, 469-476.	3.1	9
8	Guest Editorial: Special Cluster on Recent Advances in Antennas for Earth and Planetary Science. IEEE Antennas and Wireless Propagation Letters, 2021, 20, 2083-2084.	4.0	2
9	Loss Studies For Waveguide Based E- and H-plane Bandpass Filters at Terahertz Frequencies. , 2021, , .		0
10	Multilayer Etched Antireflective Structures for Silicon Vacuum Windows. Journal of Low Temperature Physics, 2020, 199, 935-942.	1.4	4
11	Flat Low-Loss Silicon Gradient Index Lens for Millimeter and Submillimeter Wavelengths. Journal of Low Temperature Physics, 2020, 199, 376-383.	1.4	3
12	Micromachining for Advanced Terahertz: Interconnects and Packaging Techniques at Terahertz Frequencies. IEEE Microwave Magazine, 2020, 21, 18-34.	0.8	22
13	Towards a Si/GaAs Based Flat-Panel Quasi-Optical Metasurface Antenna with Switchable Beam Characteristics. , 2020, , .		0
14	Quantum Limited SIS Receiver Technology for the Detection of Water Isotopologue Emission From Comets. IEEE Transactions on Terahertz Science and Technology, 2020, 10, 569-582.	3.1	4
15	Interconnects Over 100 GHz [From the Guest Editors' Desk]. IEEE Microwave Magazine, 2020, 21, 17-124.	0.8	0
16	Metal-only modulated metasurface antenna for Cubesat platforms. , 2019, , .		2
17	Advanced CubeSat Antennas for Deep Space and Earth Science Missions: A review. IEEE Antennas and Propagation Magazine, 2019, 61, 37-46.	1.4	67
18	A 183-GHz InP/CMOS-Hybrid Heterodyne-Spectrometer for Spaceborne Atmospheric Remote Sensing. IEEE Transactions on Terahertz Science and Technology, 2019, 9, 313-334.	3.1	25

#	Article	IF	Citations
19	Some recent developments on modulated metasurface antennas. , 2019, , .		1
20	Fabrication of Devices and Antennas for Millimeter-Wave and Terahertz Systems. , 2019, , .		0
21	Design of a Quasi-Optical Si/GaAs W-Band Beam-Forming Metasurface Antenna. , 2019, , .		0
22	Point-Spread-Function (PSF) Characterization of a 340-GHz Imaging Radar Using Acoustic Levitation. IEEE Transactions on Terahertz Science and Technology, 2019, 9, 20-26.	3.1	8
23	Beam Scanning of Silicon Lens Antennas Using Integrated Piezomotors at Submillimeter Wavelengths. IEEE Transactions on Terahertz Science and Technology, 2019, 9, 47-54.	3.1	41
24	From microwaves to submillimeter waves: modern advances in computational imaging, radar, and future trends. , 2019, , .		2
25	Beam resolution analysis of a 340 GHz radar using acoustic levitation. , 2019, , .		0
26	A <inline-formula> <tex-math notation="LaTeX">$K_{{u}}$ </tex-math> </inline-formula>-Band CMOS FMCW Radar Transceiver for Snowpack Remote Sensing. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 2480-2494.	4.6	17
27	A 177â€“205 GHz 249 mW CMOS-Based Integer-N Frequency Synthesizer Module for Planetary Exploration. IEEE Transactions on Terahertz Science and Technology, 2018, 8, 251-254.	3.1	13
28	Terahertz Antennas and Feeds. Signals and Communication Technology, 2018, , 335-386.	0.5	4
29	A Compact Room-Temperature 510â€“560 GHz Frequency Tripler with 30-mW Output Power. , 2018, , .		4
30	A Compact Room-Temperature 510-560 GHz Frequency Tripler with 30-mW Output Power. , 2018, , .		2
31	A New Generation of Room-Temperature Frequency-Multiplied Sources With up to 10Ã— Higher Outputâ€‰Powerâ€‰inâ€‰theâ€‰160-GHzâ€“1.6-THzâ€‰Range. IEEE Transactions on Terahertz Science and Technology, 2018, 8, 596-604.	3.1	94
32	Additive Manufactured Metal-Only Modulated Metasurface Antennas. IEEE Transactions on Antennas and Propagation, 2018, 66, 6106-6114.	5.1	67
33	A 460 GHz MEMS-Based Single-Pole Double-Throw Waveguide Switch. , 2018, , .		3
34	Retrieval of wind, temperature, water vapor and other trace constituents in the Martian Atmosphere. Planetary and Space Science, 2018, 161, 26-40.	1.7	4
35	A Programmable Cryogenic Waveguide Calibration Load With Exceptional Temporal Response and Linearity. IEEE Transactions on Terahertz Science and Technology, 2018, 8, 434-445.	3.1	2
36	16:1 bandwidth two-layer antireflection structure for silicon matched to the 190â€“310â€‰â€‰GHz atmospheric window. Applied Optics, 2018, 57, 5196.	1.8	22

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37	DDFS and Î£Î" Approaches for Fractional Frequency Synthesis in Terahertz Instruments. IEEE Transactions on Terahertz Science and Technology, 2018, 8, 410-417.	3.1	14
38	Multibeam by Metasurface Antennas. IEEE Transactions on Antennas and Propagation, 2017, 65, 2923-2930.	5.1	155
39	Micromachined Packaging for Terahertz Systems. Proceedings of the IEEE, 2017, 105, 1139-1150.	21.3	52
40	A 500â€"750 GHz RF MEMS Waveguide Switch. IEEE Transactions on Terahertz Science and Technology, 2017, 7, 326-334.	3.1	49
41	Development of Silicon Micromachined Microlens Antennas at 1.9 THz. IEEE Transactions on Terahertz Science and Technology, 2017, 7, 191-198.	3.1	32
42	Submillimeter InP MMIC Low-Noise Amplifier Gain Stability Characterization. IEEE Transactions on Terahertz Science and Technology, 2017, 7, 335-346.	3.1	8
43	Interconnect and packaging technologies for terahertz communication systems. , 2017, , .		1
44	Design, fabrication and testing of a modulated metasurface antenna at 300 GHz. , 2017, , .		23
45	Shared aperture metasurface antennas for multibeam patterns. , 2017, , .		10
46	Antireflective textured silicon optics at millimeter and submillimeter wavelengths. , 2017, , .		0
47	A 340 GHz cryogenic amplifier based spectrometer for space based atmospheric science applications. , 2017, , .		3
48	Corrugated (2 Ã— 2) silicon platelets horn antenna array at 560 GHz. , 2017, , .		2
49	670 GHz FMCW radar for imaging and science applications. , 2017, , .		2
50	Efficiency Optimization of Spherical Reflectors by Feed Position Adjustment. IEEE Antennas and Wireless Propagation Letters, 2017, , 1-1.	4.0	3
51	Terahertz Instruments for CubeSats. , 2017, , .		3
52	A 700-GHz MEMS Waveguide Switch. IEEE Transactions on Terahertz Science and Technology, 2016, 6, 641-643.	3.1	18
53	Development of W-band horn antennas using 3D printing technologies. , 2016, , .		4
54	A 640 GHz MMIC-based sideband-separating receiver for atmospheric science. , 2016, , .		0

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55	Silicon micromachined components at 1THz and beyond. , 2016, , .		1
56	Silicon micromachined terahertz spectrometer instruments. , 2016, , .		2
57	Evaluation of 3D printing technology for corrugated horn antenna manufacturing. , 2016, , .		23
58	Submillimeter-Wave 3.3-bit RF MEMS Phase Shifter Integrated in Micromachined Waveguide. IEEE Transactions on Terahertz Science and Technology, 2016, , 1-10.	3.1	37
59	CMOS system-on-chip techniques in millimeter-wave/THz instruments and communications for planetary exploration. , 2016, 54, 176-182.		13
60	Micro-lens antenna integrated in a silicon micromachined receiver at 1.9 THz. , 2016, , .		5
61	A class of silicon micromachined metasurface for the design of high-gain terahertz antennas. , 2016, , .		15
62	Multiple beam shared aperture modulated metasurface antennas. , 2016, , .		8
63	A Multistep DRIE Process for Complex Terahertz Waveguide Components. IEEE Transactions on Terahertz Science and Technology, 2016, , 1-6.	3.1	41
64	Thermal Characterization of Substrate Options for High-Power THz Multipliers Over a Broad Temperature Range. IEEE Transactions on Terahertz Science and Technology, 2016, 6, 328-335.	3.1	4
65	A 230 GHz MMIC-Based Sideband Separating Receiver. IEEE Transactions on Terahertz Science and Technology, 2016, 6, 141-147.	3.1	11
66	ANTENNA-COUPLED TES BOLOMETERS USED IN BICEP2,Keck Array, AND SPIDER. Astrophysical Journal, 2015, 812, 176.	4.5	53
67	A 2.2 GS/s 188mW spectrometer processor in 65nm CMOS for supporting low-power THz planetary instruments. , 2015, , .		11
68	A 95 GHz centimeter scale precision confined pathway system-on-chip navigation processor for autonomous vehicles in 65nm CMOS. , 2015, , .		4
69	Terahertz antennas and related optical components. , 2015, , .		0
70	A Dual-Output 550 GHz frequency tripler featuring ultra-compact silicon micromachining packaging and enhanced power-handling capabilities. , 2015, , .		11
71	Efficient analysis of metasurfaces in a planar layered medium. , 2015, , .		1
72	1.9-THz Multiflare Angle Horn Optimization for Space Instruments. IEEE Transactions on Terahertz Science and Technology, 2015, 5, 914-921.	3.1	40

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73	Efficient CMOS Systems With Beamâ€“Lead Interconnects for Space Instruments. IEEE Transactions on Terahertz Science and Technology, 2015, 5, 637-644.	3.1	9
74	Cryogenic amplifier based sideband separating receivers. , 2015, , .		0
75	Terahertz antenna arrays with silicon micromachined-based microlens antenna and corrugated horns. , 2015, , .		20
76	A Silicon Micromachined Eight-Pixel Transceiver Array for Submillimeter-Wave Radar. IEEE Transactions on Terahertz Science and Technology, 2015, 5, 197-206.	3.1	77
77	A WR4 Amplifier Module Chain With an 87 K Noise Temperature at 228 GHz. IEEE Microwave and Wireless Components Letters, 2015, 25, 58-60.	3.2	11
78	A High-Power 105â€“120 GHz Broadband On-Chip Power-Combined Frequency Tripler. IEEE Microwave and Wireless Components Letters, 2015, 25, 157-159.	3.2	96
79	Schottky Diode Based 1.2 THz Receivers Operating at Room-Temperature and Below for Planetary Atmospheric Sounding. IEEE Transactions on Terahertz Science and Technology, 2014, 4, 661-669.	3.1	65
80	Capability of broadband solid-state room-temperature coherent sources in the terahertz range. , 2014, , .		5
81	Terahertz circuits, systems, and imaging instruments. , 2014, , .		2
82	A 170–280 GHz InP HEMT low noise amplifier. , 2014, , .		6
83	Terahertz antennas with silicon micromachined front-end. , 2014, , .		5
84	A 65nm CMOS 140 GHz 27.3 dBm EIRP transmit array with membrane antenna for highly scalable multi-chip phase arrays. , 2014, , .		7
85	Silicon micromachined waveguide components at 0.75 to 1.1 THz. , 2014, , .		12
86	Submillimeter-Wave Radar: Solid-State System Design and Applications. IEEE Microwave Magazine, 2014, 15, 51-67.	0.8	77
87	Design and Performance of SuperSpec: An On-Chip, KID-Based, mm-Wavelength Spectrometer. Journal of Low Temperature Physics, 2014, 176, 657-662.	1.4	26
88	Measurement of Silicon Micromachined Waveguide Components at 500â€“750 GHz. IEEE Transactions on Terahertz Science and Technology, 2014, 4, 33-38.	3.1	73
89	A 94 GHz multi-casting data-link based on 3-D printing compatible dielectric ribbon interconnects. , 2014, , .		0
90	Compact Duplexing for a 680-GHz Radar Using a Waveguide Orthomode Transducer. IEEE Transactions on Microwave Theory and Techniques, 2014, 62, 2833-2842.	4.6	18

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91	Development of a Wideband Compact Orthomode Transducer for the 180â€“270 GHz Band. IEEE Transactions on Terahertz Science and Technology, 2014, 4, 634-636.	3.1	33
92	Cryogenic performance of HEMT amplifiers at 340GHz and 670GHz. , 2014, , .		4
93	Optical Measurements of SuperSpec: A Millimeter-Wave On-Chip Spectrometer. Journal of Low Temperature Physics, 2014, 176, 841-847.	1.4	15
94	6.4 mm Diameter silicon micromachined lens for THz dielectric antenna. , 2014, , .		4
95	Silicon Micromachined Lens Antenna for THz Integrated Heterodyne Arrays. IEEE Transactions on Terahertz Science and Technology, 2013, 3, 515-523.	3.1	57
96	Design Guidelines for a Terahertz Silicon Micro-Lens Antenna. IEEE Antennas and Wireless Propagation Letters, 2013, 12, 84-87.	4.0	29
97	Silicon micromachining for terahertz component development. , 2013, , .		9
98	Silicon Micromachined Canonical ${hbox{E}}$-Plane and ${hbox{H}}$-Plane Bandpass Filters at the Terahertz Band. IEEE Microwave and Wireless Components Letters, 2013, 23, 288-290.	3.2	56
99	Transceiver array development for submillimeter-wave imaging radars. , 2013, , .		8
100	A 600 GHz Asymmetrical Orthogonal Mode Transducer. IEEE Microwave and Wireless Components Letters, 2013, 23, 569-571.	3.2	27
101	A tandem coupler for terahertz integrated circuits. , 2013, , .		2
102	Local oscillator sub-systems for array receivers in the 1-3 THz range. , 2012, , .		4
103	SuperSpec: design concept and circuit simulations. Proceedings of SPIE, 2012, , .	0.8	13
104	A Grating-Based Circular Polarization Duplexer for Submillimeter-Wave Transceivers. IEEE Microwave and Wireless Components Letters, 2012, 22, 108-110.	3.2	28
105	Terahertz science, technology, and communication. , 2012, , .		9
106	Cryogenic amplifier based receivers at submillimeter wavelengths. , 2012, , .		3
107	InP HEMT integrated circuits for Submillimeter Wave radiometers in earth remote sensing. , 2012, , .		8
108	Curvature control of silicon microlens for THz dielectric antenna. , 2012, , .		4

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109	Terahertz antenna for arrays of hundreds of pixels. , 2012, , .		1
110	Terahertz array receivers with integrated antennas. , 2012, , .		4
111	Frequency tunable electronic sources working at room temperature in the 1 to 3 THz band. Proceedings of SPIE, 2012, , .	0.8	11
112	Array technology for terahertz imaging. Proceedings of SPIE, 2012, , .	0.8	12
113	Electro-Thermal Model for Multi-Anode Schottky Diode Multipliers. IEEE Transactions on Terahertz Science and Technology, 2012, 2, 290-298.	3.1	41
114	Design and Characterization of a Room Temperature All-Solid-State Electronic Source Tunable From 2.48 to 2.75 THz. IEEE Transactions on Terahertz Science and Technology, 2012, 2, 177-185.	3.1	123
115	Silicon micromachined microlens array for THz antenna. , 2011, , .		2
116	Novel Terahertz Antenna Based on a Silicon Lens Fed by a Leaky Wave Enhanced Waveguide. IEEE Transactions on Antennas and Propagation, 2011, 59, 2160-2168.	5.1	110
117	Technology, Capabilities, and Performance of Low Power Terahertz Sources. IEEE Transactions on Terahertz Science and Technology, 2011, 1, 33-53.	3.1	237
118	Demonstration of a room temperature 2.48â€“2.75 THz coherent spectroscopy source. Review of Scientific Instruments, 2011, 82, 093105.	1.3	75
119	THz Imaging Radar for Standoff Personnel Screening. IEEE Transactions on Terahertz Science and Technology, 2011, 1, 169-182.	3.1	802
120	Imaging at a stand-off distance with terahertz FMCW radar. , 2011, , .		0
121	High power local oscillator sources for 1-2 THz. , 2010, , .		8
122	Schottky diode-based terahertz frequency multipliers and mixers. Comptes Rendus Physique, 2010, 11, 480-495.	0.9	138
123	Time-Delay Multiplexing of Two Beams in a Terahertz Imaging Radar. IEEE Transactions on Microwave Theory and Techniques, 2010, 58, 1999-2007.	4.6	19
124	Radiometer-on-a-chip: a path toward super-compact submillimeter-wave imaging arrays. , 2010, , .		9
125	Micro-lens antenna for integrated THz arrays. , 2010, , .		2
126	A waveguide orthomode transducer for 385-500 GHz. Proceedings of SPIE, 2010, , .	0.8	7

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127	A Frequency-Multiplied Source With More Than 1 mW of Power Across the 840â€“900-GHz Band. IEEE Transactions on Microwave Theory and Techniques, 2010, 58, 1925-1932.	4.6	156
128	Submillimeter-Wave 90<formula formulatype="inline"> <tex Notation="TeX">^{circ}</tex></formula> Polarization Twists for Integrated Waveguide Circuits. IEEE Microwave and Wireless Components Letters, 2010, 20, 592-594.	3.2	19
129	Design of a two-pixel 670 GHz imaging radar using a single Tx/Rx module. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	0
130	Broadband sources in the 1–3 THz range. , 2009, , .		7
131	An Approach for Sub-Second Imaging of Concealed Objects Using Terahertz (THz) Radar. Journal of Infrared, Millimeter, and Terahertz Waves, 2009, 30, 1297.	2.2	46
132	A 600 GHz imaging radar for concealed objects detection. , 2009, , .		19
133	An Optical System for Body Imaging from a Distance Using Near-TeraHertz Frequencies. Journal of Low Temperature Physics, 2008, 151, 777-783.	1.4	7
134	A High-Resolution Imaging Radar at 580 GHz. IEEE Microwave and Wireless Components Letters, 2008, 18, 64-66.	3.2	188
135	Two-Port Vector Network Analyzer Measurements Up to 508 GHz. IEEE Transactions on Instrumentation and Measurement, 2008, 57, 1166-1170.	4.7	6
136	A Submillimeter-Wave HEMT Amplifier Module With Integrated Waveguide Transitions Operating Above 300 GHz. IEEE Transactions on Microwave Theory and Techniques, 2008, 56, 1380-1388.	4.6	169
137	Tunable broadband frequency-multiplied terahertz sources. , 2008, , .		27
138	Sensitive broadband SIS receivers for microwave limb sounding. , 2008, , .		2
139	Deep Reactive Ion Etching based silicon micromachined components at terahertz frequencies for space applications. , 2008, , .		18
140	In-phase power combining of submillimeter-wave multipliers. , 2008, , .		4
141	Penetrating 3-D Imaging at 4- and 25-m Range Using a Submillimeter-Wave Radar. IEEE Transactions on Microwave Theory and Techniques, 2008, 56, 2771-2778.	4.6	294
142	Millimeter-wave wireless power transfer technology for space applications. , 2008, , .		12
143	Terahertz Sources Based on Frequency Multiplication and Their Applications. Frequenz, 2008, 62, 118-122.	0.9	37
144	In-Phase Power-Combined Frequency Triplers at 300 GHz. IEEE Microwave and Wireless Components Letters, 2008, 18, 218-220.	3.2	74

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145	Concealed object contrast enhancement using radar methods in a submillimeter-wave active imager. , 2008, , .		4
146	THZ Heterodyne Imaging Applicatiions, Instruments and Directions. , 2008, , .		0
147	Submillimeter-Wave Coherent and Incoherent Sensors for Space Applications. Lecture Notes in Electrical Engineering, 2008, , 387-414.	0.4	7
148	Planar antenna arrays for CMB polarization detection. , 2007, , .		9
149	A 275â€“425-GHz Tunerless Waveguide Receiver Based on AlN-Barrier SIS Technology. IEEE Transactions on Microwave Theory and Techniques, 2007, 55, 2086-2096.	4.6	29
150	A 540-640-GHz high-efficiency four-anode frequency tripler. IEEE Transactions on Microwave Theory and Techniques, 2005, 53, 2835-2843.	4.6	136
151	Local oscillator chain for 1.55 to 1.75THz with 100-/spl mu/W peak power. IEEE Microwave and Wireless Components Letters, 2005, 15, 871-873.	3.2	32
152	A 1.7-1.9 THz local oscillator source. IEEE Microwave and Wireless Components Letters, 2004, 14, 253-255.	3.2	90
153	Heterodyne instrumentation upgrade at the Caltech Submillimeter Observatory. , 2004, , .		12
154	An All-Solid-State Broad-Band Frequency Multiplier Chain at 1500 GHz. IEEE Transactions on Microwave Theory and Techniques, 2004, 52, 1538-1547.	4.6	155
155	Title is missing!. Journal of Infrared, Millimeter and Terahertz Waves, 2003, 24, 1485-1498.	0.6	4
156	Title is missing!. Journal of Infrared, Millimeter and Terahertz Waves, 2003, 24, 261-284.	0.6	62
157	Feed horn coupled bolometer arrays for spire-design, simulations, and measurements. IEEE Transactions on Microwave Theory and Techniques, 2003, 51, 2139-2146.	4.6	26
158	Terahertz local oscillator sources: performance and capabilities. , 2003, , .		17
159	Frequency multiplier response to spurious signals and its effect on local oscillator systems in millimeter and submillimeter wavelengths. , 2003, , .		5
160	Design and performance of feedhorn-coupled bolometer arrays for SPIRE. , 2003, , .		13
161	Terahertz frequency multiplier chains based on planar Schottky diodes. , 2003, , .		19
162	Numerical optimization of integrating cavities for diffraction-limited millimeter-wave bolometer arrays. Applied Optics, 2002, 41, 136.	2.1	22

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163	A broadband 800 GHz Schottky balanced doubler. IEEE Microwave and Wireless Components Letters, 2002, 12, 117-118.	3.2	40
164	A dual-polarized quasi-optical SIS mixer at 550 GHz. IEEE Transactions on Microwave Theory and Techniques, 2000, 48, 1680-1686.	4.6	21
165	A Low Noise NbTiN-Based 850 GHz SIS Receiver for the Caltech Submillimeter Observatory. Journal of Infrared, Millimeter and Terahertz Waves, 2000, 21, 1357-1373.	0.6	15
166	Noise Stability of SIS Receivers. Journal of Infrared, Millimeter and Terahertz Waves, 2000, 21, 689-716.	0.6	49
167	Low-Loss NbTiN Films for THz SIS Mixer Tuning Circuits. Journal of Infrared, Millimeter and Terahertz Waves, 1998, 19, 373-383.	0.6	27
168	<title>Development of SIS mixers for 1 THz</title>. , 1998, , .		17
169	<title>Bolocam: a millimeter-wave bolometric camera</title>. , 1998, , .		62