Masayuki Fujita

List of Publications by Year
in descending order

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167 papers	5,421 citations	109321 35 h-index	88630 70 g-index
170 all docs	170 docs citations	170 times ranked	4307 citing authors

#	Article	IF	Citations
1	Spontaneous-emission control by photonic crystals and nanocavities. Nature Photonics, 2007, 1, 449-458.	31.4	842
2	Simultaneous Inhibition and Redistribution of Spontaneous Light Emission in Photonic Crystals. Science, 2005, 308, 1296-1298.	12.6	451
3	Terahertz topological photonics for on-chip communication. Nature Photonics, 2020, 14, 446-451.	31.4	449
4	Theoretical analysis on light-extraction efficiency of organic light-emitting diodes using FDTD and mode-expansion methods. Organic Electronics, 2005, 6, 3-9.	2.6	183
5	Continuous wave lasing in GaInAsP microdisk injection laser with threshold current of 40 [micro sign]A. Electronics Letters, 2000, 36, 790.	1.0	163
6	Ultrasmall and ultralow threshold GaInAsP-InP microdisk injection lasers: design, fabrication, lasing characteristics, and spontaneous emission factor. IEEE Journal of Selected Topics in Quantum Electronics, 1999, 5, 673-681.	2.9	153
7	Organic light-emitting diodes with photonic crystals on glass substrate fabricated by nanoimprint lithography. Applied Physics Letters, 2007, 90, 111114.	3.3	149
8	Extremely low-loss terahertz waveguide based on silicon photonic-crystal slab. Optics Express, 2015, 23, 31977.	3.4	143
9	Capture of a terahertz wave in a photonic-crystal slab. Nature Photonics, 2014, 8, 657-663.	31.4	135
10	Lasing characteristics of GaInAsP-InP strained quantum-well microdisk injection lasers with diameter of 2-10 Î¼m. IEEE Photonics Technology Letters, 1997, 9, 878-880.	2.5	130
11	Microgear laser. Applied Physics Letters, 2002, 80, 2051-2053.	3.3	101
12	Optical and Electrical Characteristics of Organic Light-Emitting Diodes with Two-Dimensional Photonic Crystals in Organic/Electrode Layers. Japanese Journal of Applied Physics, 2005, 44, 3669-3677.	1.5	88
13	Photonic crystal efficiency boost. Nature Photonics, 2009, 3, 129-130.	31.4	84
14	Terahertz Sensor Using Photonic Crystal Cavity and Resonant Tunneling Diodes. Journal of Infrared, Millimeter, and Terahertz Waves, 2017, 38, 1085-1097.	2.2	79
15	All-dielectric rod antenna array for terahertz communications. APL Photonics, 2018, 3, .	5.7	75
16	Reduction of operating voltage in organic light-emitting diode by corrugated photonic crystal structure. Applied Physics Letters, 2004, 85, 5769-5771.	3.3	71
17	Integrated Silicon Photonic Crystals Toward Terahertz Communications. Advanced Optical Materials, 2018, 6, 1800401.	7.3	71
18	Effective-medium-cladded dielectric waveguides for terahertz waves. Optics Express, 2019, 27, 38721.	3.4	71

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19	Terahertz multi-beam antenna using photonic crystal waveguide and Luneburg lens. APL Photonics, 2018, 3, 126105.	5.7	69
20	Highâ€speed errorâ€free wireless data transmission using a terahertz resonant tunnelling diode transmitter and receiver. Electronics Letters, 2016, 52, 1999-2001.	1.0	66
21	Photonic-crystal diplexers for terahertz-wave applications. Optics Express, 2016, 24, 7835.	3.4	63
22	Millimeter-Wave and Terahertz-Wave Applications Enabled by Photonics. IEEE Journal of Quantum Electronics, 2016, 52, 1-12.	1.9	60
23	Light Emission From Silicon in Photonic Crystal Nanocavity. IEEE Journal of Selected Topics in Quantum Electronics, 2008, 14, 1090-1097.	2.9	51
24	Nutrient removal and starch production through cultivation of Wolffia arrhiza. Journal of Bioscience and Bioengineering, 1999, 87, 194-198.	2.2	50
25	Terahertz coherent receiver using a single resonant tunnelling diode. Scientific Reports, 2019, 9, 18125.	3.3	50
26	Unclad Microphotonics for Terahertz Waveguides and Systems. Journal of Lightwave Technology, 2020, , 1-1.	4.6	49
27	Proposal and finite-difference time-domain simulation of whispering gallery mode microgear cavity. IEEE Journal of Quantum Electronics, 2001, 37, 1253-1258.	1.9	48
28	Large spontaneous emission factor of 0.1 in a microdisk injection laser. IEEE Photonics Technology Letters, 2001, 13, 403-405.	2.5	47
29	Degradation of biotansformation products of nonylphenol ethoxylates by ozonation and UV/TiO2 treatment. Water Science and Technology, 2002, 46, 127-132.	2.5	47
30	All-dielectric integration of dielectric resonator antenna and photonic crystal waveguide. Optics Express, 2017, 25, 14706.	3.4	46
31	Characteristics of Effective-Medium-Clad Dielectric Waveguides. IEEE Transactions on Terahertz Science and Technology, 2021, 11, 28-41.	3.1	45
32	Efficient mode converter to deep-subwavelength region with photonic-crystal waveguide platform for terahertz applications. Optics Express, 2019, 27, 28707.	3.4	44
33	Room temperature continuous wave lasing characteristics of GaInAsP/InP microdisk injection laser. Electronics Letters, 1998, 34, 278.	1.0	41
34	Organic light-emitting diode with ITOâˆ•organic photonic crystal. Electronics Letters, 2003, 39, 1750.	1.0	40
35	Investigation of spontaneous emission from quantum dots embedded in two-dimensional photonic-crystal slab. Electronics Letters, 2005, 41, 1402.	1.0	39
36	Simultaneous low-loss and low-dispersion in a photonic-crystal waveguide for terahertz communications. Applied Physics Express, 2019, 12, 012005.	2.4	36

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37	Enhancement of broadband optical absorption in photovoltaic devices by band-edge effect of photonic crystals. Optics Express, 2013, 21, 20111.	3.4	35
38	Modeling and Simulation of Terahertz Resonant Tunneling Diode-Based Circuits. IEEE Transactions on Terahertz Science and Technology, 2016, , 1-8.	3.1	33
39	Nanophotonics-inspired all-silicon waveguide platforms for terahertz integrated systems. Nanophotonics, 2022, 11, 1741-1759.	6.0	33
40	Terahertz Band Communications With Topological Valley Photonic Crystal Waveguide. Journal of Lightwave Technology, 2021, 39, 7609-7620.	4.6	32
41	Half-Maxwell fisheye lens with photonic crystal waveguide for the integration of terahertz optics. Optics Express, 2020, 28, 2366.	3.4	31
42	GaInAsP Microdisk Injection Laser with Benzocyclobutene Polymer Cladding and Its Athermal Effect. Japanese Journal of Applied Physics, 2002, 41, 6364-6369.	1.5	30
43	Green Photoluminescence from GaInN Photonic Crystals. Applied Physics Express, 0, 1, 032004.	2.4	30
44	Light-emission properties of quantum dots embedded in a photonic double-heterostructure nanocavity. Applied Physics Letters, 2007, 90, 231101.	3.3	29
45	Gratingless integrated tunneling multiplexer for terahertz waves. Optica, 2021, 8, 621.	9.3	29
46	Bioflocculation production from lower-molecular fatty acids as a novel strategy for utilization of sludge digestion liquor. Water Science and Technology, 2001, 44, 237-243.	2.5	27
47	Ultrathin amorphization of single-crystal silicon by ultraviolet femtosecond laser pulse irradiation. Journal of Applied Physics, 2009, 105, .	2.5	27
48	Bragg-Mirror Suppression for Enhanced Bandwidth in Terahertz Photonic Crystal Waveguides. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-9.	2.9	27
49	Improvement of signal-to-noise ratio of a subterahertz spectrometer using a continuous-wave multimode laser diode by single-mode fiber optics. Applied Physics Letters, 2004, 85, 881-883.	3.3	26
50	Characterizing kinetics of transport and transformation of selenium in waterâ€“sediment microcosm free from selenium contamination using a simple mathematical model. Chemosphere, 2005, 58, 705-714.	8.2	26
51	Direct Fabrication of Photonic Crystal on Glass Substrate by Nanoimprint Lithography. Japanese Journal of Applied Physics, 2006, 45, L210-L212.	1.5	24
52	Terahertz coherent oscillator integrated with slot-ring antenna using two resonant tunneling diodes. Applied Physics Express, 2021, 14, 034001.	2.4	22
53	Title is missing!. World Journal of Microbiology and Biotechnology, 1997, 13, 273-277.	3.6	21
54	Terahertz fibre transmission link using resonant tunnelling diodes integrated with photonicâ€crystal waveguides. Electronics Letters, 2019, 55, 398-400.	1.0	21

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55	Enhancement of photocurrent in ultrathin active-layer photodetecting devices with photonic crystals. Applied Physics Letters, 2012, 101, .	3.3	20
56	Terahertz Tag Using Photonic-Crystal Slabs. Journal of Lightwave Technology, 2018, 36, 4386-4392.	4.6	20
57	Controlled spontaneous-emission phenomena in semiconductor slabs with a two-dimensional photonic bandgap. Journal of Optics, 2006, 8, S131-S138.	1.5	19
58	Green GaInN photonic-crystal light-emitting diodes with small surface recombination effect. Applied Physics Letters, 2011, 98, .	3.3	19
59	Nanocavity brightens silicon. Nature Photonics, 2013, 7, 264-265.	31.4	19
60	Waveguideâ€input resonant tunnelling diode mixer for THz communications. Electronics Letters, 2020, 56, 342-344.	1.0	19
61	Dielectric slot-coupled half-Maxwell fisheye lens as octave-bandwidth beam expander for terahertz-range applications. APL Photonics, 2021, 6, .	5.7	19
62	Ozone-Based Decomposition of Main Endocrine Disruption Chemicals in Sewage Effluent. Ozone: Science and Engineering, 2005, 27, 389-395.	2.5	17
63	Near-field out-of-plane coupling between terahertz photonic crystal waveguides. Optica, 2019, 6, 1002.	9.3	17
64	Reduction in surface recombination and enhancement of light emission in silicon photonic crystals treated by high-pressure water-vapor annealing. Applied Physics Letters, 2010, 97, 121111.	3.3	16
65	Integrated Circuits Using Photonic-Crystal Slab Waveguides and Resonant Tunneling Diodes for Terahertz Communication. , 2018, , .		16
66	48â€Gbit/s 8K videoâ€transmission using resonant tunnelling diodes inÂ300â€GHz band. Electronics Letters, 2021, 57, 668-669.	1.0	15
67	Photonic crystal technology for terahertz system integration. Proceedings of SPIE, 2016, , .	0.8	14
68	Towards Practical Terahertz Imaging System With Compact Continuous Wave Transceiver. Journal of Lightwave Technology, 2021, 39, 7850-7861.	4.6	14
69	Low-Threshold Continuous-Wave Lasing in Photopumped GaInAsP Microdisk Lasers. Japanese Journal of Applied Physics, 2001, 40, L875-L877.	1.5	13
70	Highly Efficient Resonant Tunneling Diode Terahertz Oscillator With a Split Ring Resonator. IEEE Electron Device Letters, 2021, 42, 982-985.	3.9	13
71	Lateral transport of hot electrons on a spherical target by 10.6â€Î¼m CO2laser irradiation. Applied Physics Letters, 1985, 46, 355-357.	3.3	12
72	Reflectance measurement of two-dimensional photonic crystal nanocavities with embedded quantum dots. Physical Review B, 2010, 82, .	3.2	12

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73	External Feedback Effect in Terahertz Resonant Tunneling Diode Oscillators. IEEE Transactions on Terahertz Science and Technology, 2018, 8, 455-464.	3.1	12
74	GaInAsP Microcylinder (Microdisk) Injection Laser with AlInAs(Ox) Claddings. Japanese Journal of Applied Physics, 2001, 40, 5338-5339.	1.5	11
75	Integration of resonant tunneling diode with Terahertz photonic-crystal waveguide and its application to gigabit terahertz-wave communications. , 2014, , .		11
76	IEEE 802.15.3d-Compliant Waveforms for Terahertz Wireless Communications. Journal of Lightwave Technology, 2021, 39, 7748-7760.	4.6	11
77	Fabrication of Indium Phosphide Compound Photonic Crystal by Hydrogen Iodide/Xenon Inductively Coupled Plasma Etching. Japanese Journal of Applied Physics, 2004, 43, L1400-L1402.	1.5	10
78	Terahertz wireless communications using resonant tunnelling diodes with radioâ€overâ€fibre. Electronics Letters, 2019, 55, 949-951.	1.0	10
79	Proposal of Optical Near-Field Probe Using Evanescent Field of Microdisk Laser. Japanese Journal of Applied Physics, 1998, 37, 517-521.	1.5	9
80	Strain relaxation effect in microdisk lasers with compressively strained quantum wells. Applied Physics Letters, 2002, 80, 1511-1513.	3.3	9
81	Theoretical analysis of light emission from a coupled system of a photonic nanocavity and a quantum dot. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 2828-2830.	0.8	9
82	PAM4 48-Gbit/s wireless communication using a resonant tunneling diode in the 300-GHz band. IEICE Electronics Express, 2022, 19, 20210494-20210494.	0.8	9
83	Ultra-Broadband Terahertz Receivers Using Polymer Substrate. IEEE Transactions on Terahertz Science and Technology, 2014, 4, 225-231.	3.1	8
84	Hybrid Integration Between Resonant Tunneling Diodes and Unclad Microphotonic Diplexer for Dual-Channel Coherent Terahertz Receiver. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-10.	2.9	8
85	Integrated Terahertz Optics with Effective Medium for 600-GHz-band Imaging. , 2020, , .		8
86	Silicon Dielectric Diplexer Module for 600-GHz-Band Frequency-Division Multiplexing Wireless Communication. IEEE Transactions on Terahertz Science and Technology, 2022, 12, 334-344.	3.1	8
87	Observation of long life plasma generated in a cavity by CO₂ lasers. Laser and Particle Beams, 1986, 4, 17-25.	1.0	7
88	Production and recovery of an enzyme fromPseudomonas vesicularis var.povalolyticus PH that degrades polyvinyl alcohol. World Journal of Microbiology and Biotechnology, 1997, 13, 63-67.	3.6	7
89	Design of PCR primers and a gene probe for extensive detection of poly(3-hydroxybutyrate) (PHB)-degrading bacteria possessing fibronectin type III linker type-PHB depolymerases. Applied Microbiology and Biotechnology, 2001, 55, 801-806.	3.6	7
90	Photonic-crystal slab for terahertz-wave integrated circuits. , 2012, , .		7

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91	A terahertz monolithic integrated resonant tunneling diode oscillator and mixer circuit. Proceedings of SPIE, 2016, , .	0.8	7
92	Optical near-field probe action in microdisk laser with 0.12 resolution. Electronics Letters, 1999, 35, 222.	1.0	7
93	Suppression of preheating in a double foil target irradiated by a 10.6â€¼m laser. Applied Physics Letters, 1984, 45, 370-372.	3.3	6
94	Resonant Tunneling Diode Receiver for Coherent Terahertz Wireless Communication. , 2018, , .		6
95	Remote detection of oils in water using laser Raman spectroscopy. Optics Communications, 2021, 480, 126508.	2.1	6
96	600-GHz-band Silicon Dielectric Waveguide Module. , 2021, , .		6
97	Integrated Resonant Tunneling Diode with Rectangular Waveguide I/O using Photonic Crystal Interface. , 2021, , .		6
98	Bioflocculation production from lower-molecular fatty acids as a novel strategy for utilization of sludge digestion liquor. Water Science and Technology, 2001, 44, 237-43.	2.5	6
99	Ultralow-loss photonic-crystal waveguides for gigabit terahertz-wave communications. , 2013, , .		5
100	Diplexer for terahertz-wave integrated circuit using a photonic-crystal slab. , 2014, , .		5
101	Terahertz sensing based on photonic crystal cavity and resonant tunneling diode. , 2016, , .		4
102	Asymmetrical conductance model to analyze resonant tunneling diode terahertz oscillators. , 2017, , .		4
103	Highly Stable Terahertz Resonant Tunneling Diode Oscillator Coupled to Photonic-Crystal Cavity. , 2018, , .		4
104	Direct Terahertz Communications with Wireless and Fiber Links. , 2019, , .		4
105	Timing-Jitter Tolerant Nyquist Pulse for Terahertz Communications. Journal of Lightwave Technology, 2022, 40, 557-564.	4.6	4
106	Imaging Applications with a Single Resonant Tunneling Diode Transceiver in 300-GHz Band. , 2020, , .		4
107	Terahertz resonant tunneling diode systems for next generation wireless communication. , 2015, , .		3
108	Evolution from Air-Cladded to Effective-Medium-Cladded Dielectric Waveguides. , 2019, , .		3

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109	Integrated Luneburg and Maxwell Fisheye Lenses for the Terahertz Range. , 2019, , .		3
110	Near-field vertical coupling between terahertz photonic crystal waveguides. , 2019, , .		3
111	Broadband terahertz resonant tunnelling diode transmitter integrated with coplanarâ€waveguideâ€fed slotâ€ring antenna. Electronics Letters, 2021, 57, 1001-1003.	1.0	3
112	Structure dependence of oscillation characteristics of structure-simplified resonant-tunneling-diode terahertz oscillator. Applied Physics Express, 2022, 15, 042003.	2.4	3
113	Packaging of THz circuits using a HDPE lens and an impedance-matched carrier substrate. , 2015, , .		2
114	Photonic-crystal slab for terahertz-wave technology platform. Proceedings of SPIE, 2016, , .	0.8	2
115	Large capacity terahertz tag using photonic crystal slabs. , 2017, , .		2
116	Terahertz Wireless Communication using Resonant Tunneling Diodes and Practical Radio-over-Fiber Technology. , 2019, , .		2
117	Debris-free Low-stress High-speed Laser-assisted Dicing for Multi-layered MEMS. IEEJ Transactions on Sensors and Micromachines, 2010, 130, 118-123.	0.1	2
118	Terahertz RTD Chip Backside-coupled to Photonic-crystal Waveguide. , 2021, , .		2
119	Quantitative evaluation of enhanced Er luminescence in GaAs-based two-dimensional photonic crystal nanocavities. Applied Physics Letters, 2020, 116, 181102.	3.3	2
120	Experimental Verification of Output Power Enhancement in Photonic-based 300-GHz Generation by Optical Pulse Compression. , 2021, , .		2
121	Lasing charactertstics of two-dimensional photonic crystal slab lasers with a modified linear shaped donor-type point defect. , 0, , .		1
122	Trapping a terahertz wave in a photonic-crystal slab. , 2012, , .		1
123	Modulation schemes for resonant tunneling diodes to enhance the data-rate of wireless communications. , 2016, , .		1
124	Evolution of Rod Antennas for Integrated Terahertz Photonics. , 2018, , .		1
125	Terahertz Wireless CDMA Communication Using Resonant Tunneling Diodes. , 2019, , .		1
126	Polarization Responses of Terahertz Dielectric Rod Antenna Arrays. , 2019, , .		1

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127	Injection Locking of Resonant Tunneling Diode Oscillator Using Coherent Terahertz Pulses. , 2019, , .		1
128	Terahertz Information Tag System with Over-100-bit/s Reading Speed. , 2019, , .		1
129	Dispersion in broadband terahertz photonic crystal waveguides employing Bragg-mirror suppression. , 2020, , .		1
130	Terahertz Photonic Crystals and Their Device Applications. The Review of Laser Engineering, 2017, 45, 752.	0.0	1
131	Integrated Terahertz Tunneling Filter. , 2021, , .		1
132	50-Gbit/s Terahertz Communication using a Valley Photonic Crystal Waveguide. , 2020, , .		1
133	Resonant Tunneling Diode Array Oscillator Integrated with Slot-ring Antenna for Terahertz Wireless Communications. , 2020, , .		1
134	Advanced Terahertz Devices and Systems Toward 6G and Beyond. , 2021, , .		1
135	Compact high brightness radiation sources. AIP Conference Proceedings, 1996, , .	0.4	0
136	Performance analysis of QoS guarantees scheduling disciplines over scalable number of flows. , 0, , .		0
137	Ultimate low threshold and high efficiency calculated for GaInAsP microdisk injection lasers with optimum posts. , 0, , .		0
138	Fine fabrication of gainasp-inp photonic crystal by Hi/Xe ICP etching using electron beam resist mask. , 2004, , .		0
139	Introduction of photonic crystal structure into organic light-emitting diode. , 2005, 5624, 142.		0
140	Direct Fabrication of 2D Glass Photonic Crystals by Nanoimprint Lithography. , 0, , .		0
141	Demonstration of organic light-emitting diodes with photonic crystal on glass substrate fabricated by nanoimprint lithography. , 2005, , .		0
142	Spontaneous emission control by defect-free 2D photonic crystal slabs. , 2005, , .		0
143	Simultaneous inhibition and redistribution of spontaneous emission in 2D photonic crystal slabs. , 2006, 6127, 300.		0
144	Controlling spontaneous emission phenomena in defect-free 2D photonic crystals with quantum dots. , 2006, , .		0

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145	Light Emission from Quantum Dots embedded in a Photonic Double-Heterostructure Nanocavity. , 2007, , .		0
146	Cavity-Mode Light Emission in Silicon Photonic Nanocavities at Room Temperature. , 2007, , .		0
147	Spectral reflectance measurement of two-dimensional photonic nanocavities with embedded quantum dots. , 2008, , .		0
148	Enhanced light emission from silicon photonic crystal nanocavity. , 2008, , .		0
149	Temperature Dependence of Damage Thresholds in Silica Glasses with UV Laser. The Review of Laser Engineering, 2010, 38, 620-623.	0.0	0
150	Enhancement of light emission from silicon by a photonic crystal nanocavity and high-pressure water vapor annealing. , 2010, , .		0
151	Photocurrent enhancement in ultrathin silicon by the photonic band-edge effect. , 2012, , .		0
152	Enhancement of optical absorption in solar cells by band-edge effect of photonic crystals. I — Formation of multiple bandedges. , 2013, , .		0
153	Terahertz-wave absorbers using a photonic crystal slab. , 2013, , .		0
154	Terahertz systems based on resonant tunneling diodes and photonic crystals. , 2017, , .		0
155	Packaged Dish Antenna for Wireless Terahertz Photonic Crystal Waveguide Devices. , 2021, , .		0
156	Waveforms with High Spectral Efficiency for Terahertz Communications. , 2021, , .		0
157	Effective Carrier Confinement in Microdisk Lasers by Strain Relaxation in Quantum Wells. , 2002, , .		0
158	Light Emission Control by Photonic Bandgap. The Review of Laser Engineering, 2006, 34, 761-766.	0.0	0
159	Current Status and Prospects of the Femtosecond Laser Processing. The Review of Laser Engineering, 2008, 36, 257-262.	0.0	0
160	Femtosecond-Laser-Induced Surface Texturing of Al-Si Alloy for Lower Friction Surface. The Review of Laser Engineering, 2014, 42, 341.	0.0	0
161	Effective-Medium-Cladded Dielectric Waveguides Towards Terahertz Integrated Platform. , 2020, , .		0
162	Terahertz Slab-Mode Beam Launchers using Photonic Crystal Waveguides and Integrated Optics. , 2020, , .		0

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163	Unclad Microphotonic Waveguide Bend. , 2020, , .		0
164	Communications with Terahertz Slab-Mode Beam. , 2020, , .		0
165	600-GHz-Band Frequency-Division Multiplexing Communication with Silicon Unclad Diplexer. , 2021, , .		0
166	Advanced Terahertz Devices Based on Photonic Crystal and Resonant Tunneling Diode. , 2021, , .		0
167	Enabling Device Technologies for Photonics-assisted Millimeter and Terahertz Wave Applications. , 2021, , .		0