

# Safumi Suzuki

## List of Publications by Year in descending order

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111  
papers

2,480  
citations

279798

23  
h-index

223800

46  
g-index

112  
all docs

112  
docs citations

112  
times ranked

953  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fabrication of sub-micrometer 3D structures for terahertz oscillators by electron beam gray-tone lithography. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2022, 40, .	1.2	1
2	Structure dependence of oscillation characteristics of structure-simplified resonant-tunneling-diode terahertz oscillator. <i>Applied Physics Express</i> , 2022, 15, 042003.	2.4	3
3	Resonant Tunneling Diode. <i>Springer Series in Optical Sciences</i> , 2022, , 285-290.	0.7	0
4	Resonant-Tunneling-Diode Terahertz Oscillator and Its Wireless Communication Application. <i>Vacuum and Surface Science</i> , 2022, 65, 270-275.	0.1	0
5	Terahertz-wave three-dimensional imaging using a resonant-tunneling-diode oscillator. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2022, 43, 464-478.	2.2	1
6	Terahertz Emitter Using Resonant-Tunneling Diode and Applications. <i>Sensors</i> , 2021, 21, 1384.	3.8	70
7	Hybrid optical imaging with near-infrared, mid-infrared, and terahertz wavelengths for nondestructive inspection [Invited]. <i>Applied Optics</i> , 2021, 60, B100.	1.8	1
8	Discrete Fourier Transform Radar in the Terahertz-Wave Range Based on a Resonant-Tunneling-Diode Oscillator. <i>Sensors</i> , 2021, 21, 4367.	3.8	11
9	Impedance Matching in High-Power Resonant-Tunneling-Diode Terahertz Oscillators Integrated with Rectangular-Cavity Resonator. <i>IEICE Transactions on Electronics</i> , 2021, E104.C, 398-402.	0.6	14
10	Highly Efficient Resonant Tunneling Diode Terahertz Oscillator With a Split Ring Resonator. <i>IEEE Electron Device Letters</i> , 2021, 42, 982-985.	3.9	13
11	Perimeter Dependence of Oscillation Frequency Property of Resonant Tunneling Diode Terahertz Oscillator Using Split Ring Resonator. , 2021, , .		0
12	Three-dimensional terahertz imaging using an amplitude-modulated resonant-tunneling-diode oscillator. , 2021, , .		2
13	Oscillations at 300-400 GHz in Structure-Simplified Resonant-Tunneling-Diode Oscillators with Rectangular-Cavity Resonators. , 2021, , .		3
14	Phase Control of Injection-Locked RTD Terahertz Oscillator. , 2021, , .		1
15	Structure Dependence of Resonant Tunneling Diode Oscillator without Metal-Insulator-Metal Capacitors. , 2021, , .		0
16	Analysis of output power characteristics for resonant-tunneling diode terahertz oscillator with cylindrical cavity resonator. <i>Japanese Journal of Applied Physics</i> , 2021, 60, 121002.	1.5	3
17	Sensitive terahertz-wave detector responses originated by negative differential conductance of resonant-tunneling-diode oscillator. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	23
18	Structure-Simplified Resonant-Tunneling-Diode Terahertz Oscillator Without Metal-Insulator-Metal Capacitors. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2020, 41, 1498-1507.	2.2	16

#	ARTICLE	IF	CITATIONS
19	Subcarrier Frequency-Modulated Continuous-Wave Radar in the Terahertz Range Based on a Resonant-Tunneling-Diode Oscillator. <i>Sensors</i> , 2020, 20, 6848.	3.8	12
20	Subharmonic Injection Locking for Phase and Frequency Control of RTD-Based THz Oscillator. <i>IEEE Transactions on Terahertz Science and Technology</i> , 2020, 10, 221-224.	3.1	14
21	Frequency increase in resonant-tunneling diode cavity-type terahertz oscillator by simulation-based structure optimization. <i>Japanese Journal of Applied Physics</i> , 2020, 59, 032004.	1.5	13
22	Amplitude-modulated continuous-wave radar in the terahertz range using lock-in phase measurement. <i>Measurement Science and Technology</i> , 2020, 31, 105001.	2.6	11
23	Analysis of a high-power resonant-tunneling-diode terahertz oscillator integrated with a rectangular cavity resonator. <i>Japanese Journal of Applied Physics</i> , 2020, 59, 050907.	1.5	20
24	Impedance matching method in high-power RTD THz oscillator integrated with rectangular-cavity resonator. , 2020, , .		0
25	Analysis of Oscillation Characteristics for Resonant-Tunneling Diode Cavity-type Terahertz Oscillator. , 2020, , .		0
26	Novel RTD Oscillator with Simplified Structure and Fabrication Process. , 2020, , .		0
27	OCT technique for distance measurement using an RTD terahertz oscillator. , 2020, , .		0
28	Principle of a Subcarrier Frequency-modulated Continuous-wave Radar in the Terahertz Band Using a Resonant-tunneling-diode Oscillator. , 2019, , .		2
29	Resonant-tunneling-diode terahertz oscillator with a cylindrical cavity for high-frequency oscillation. <i>AIP Advances</i> , 2019, 9, .	1.3	25
30	Toward a solid-state, compact, terahertz-wave radar. <i>AIP Conference Proceedings</i> , 2019, , .	0.4	1
31	Large-scale array of resonant-tunneling-diode terahertz oscillators for high output power at 1 THz. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	85
32	Sensitivity Measurement of Resonant-Tunneling-Diode Terahertz Detectors. , 2019, , .		1
33	Amplitude-modulated continuous-wave radar in the terahertz band using a resonant-tunneling-diode oscillator. , 2019, , .		1
34	Terahertz-wave radars based on resonant-tunneling-diode oscillators. , 2019, , .		0
35	Terahertz Oscillators Using Resonant Tunneling Diodes. , 2018, , .		2
36	Absolute and Precise Terahertz-Wave Radar Based on an Amplitude-Modulated Resonant-Tunneling-Diode Oscillator. <i>Photonics</i> , 2018, 5, 52.	2.0	28

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37	Development of Terahertz Technology by Compact Semiconductor Devices. IEICE Communications Society Magazine, 2018, 12, 183-189.	0.0	0
38	Amplitude-Modulated Continuous-Wave Ranging System with Resonant-Tunneling-Diode Terahertz Oscillator. , 2018, , .		1
39	Resonant-tunneling-diode terahertz oscillator integrated with a radial line slot antenna for circularly polarized wave radiation. Semiconductor Science and Technology, 2018, 33, 114005.	2.0	13
40	Phase Locking and Frequency Tuning of Resonant-Tunneling-Diode Terahertz Oscillators. IEICE Transactions on Electronics, 2018, E101.C, 183-185.	0.6	4
41	Terahertz-wave differential detection based on simultaneous dual-wavelength up-conversion. AIP Advances, 2017, 7, 035020.	1.3	7
42	Terahertz communications using resonant-tunneling-diode oscillators. , 2017, , .		1
43	Wide frequency tuning in resonant-tunneling-diode terahertz oscillator using forward-biased varactor diode. Japanese Journal of Applied Physics, 2017, 56, 040301.	1.5	10
44	Spectral Narrowing of a Varactor-Integrated Resonant-Tunneling-Diode Terahertz Oscillator by Phase-Locked Loop. Journal of Infrared, Millimeter, and Terahertz Waves, 2017, 38, 1477-1486.	2.2	9
45	Terahertz Wireless Data Transmission With Frequency and Polarization Division Multiplexing Using Resonant-Tunneling-Diode Oscillators. IEEE Transactions on Terahertz Science and Technology, 2017, 7, 593-598.	3.1	76
46	1.98 THz resonant-tunneling-diode oscillator with reduced conduction loss by thick antenna electrode. , 2017, , .		97
47	Design of terahertz leaky-wave antenna driven by resonant-tunneling diode. , 2017, , .		0
48	Nonlinear optical detection of terahertz-wave radiation from resonant tunneling diodes. Optics Express, 2017, 25, 5389.	3.4	23
49	Nonlinear optical detection of terahertz-wave radiation from resonant-tunneling-diode oscillators. , 2017, , .		0
50	Frequency-tunable resonant-tunneling-diode terahertz oscillators applied to absorbance measurement. Japanese Journal of Applied Physics, 2017, 56, 058002.	1.5	27
51	Structures and Physics of Resonant Tunneling Diodes for Terahertz Oscillators. The Review of Laser Engineering, 2017, 45, 741.	0.0	0
52	Simultaneous Nonlinear Up-Conversion of Dual-Frequency Terahertz-Wave Radiation. , 2017, , .		0
53	Low-Profile Terahertz Radar Based on Broadband Leaky-Wave Beam Steering. IEEE Transactions on Terahertz Science and Technology, 2016, , 1-10.	3.1	37
54	Resonant-tunneling-diode terahertz oscillators and applications. , 2016, , .		3

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55	Room-temperature resonant-tunneling-diode terahertz oscillators. , 2016, , .		3
56	Resonant-tunneling-diode terahertz oscillator integrated with radial line slot antenna for circularly polarized wave radiation. , 2016, , .		4
57	Proposal and fabrication of dipole array antenna structure in resonant-tunneling-diode terahertz oscillator array. , 2016, , .		2
58	Room-Temperature Oscillation of Resonant Tunneling Diodes close to 2 THz and Their Functions for Various Applications. Journal of Infrared, Millimeter, and Terahertz Waves, 2016, 37, 1185-1198.	2.2	90
59	Wireless data transmission of 30 Gbps at a 500-GHz range using resonant-tunneling-diode terahertz oscillator. , 2016, , .		16
60	Oscillation up to 1.92 THz in resonant tunneling diode by reduced conduction loss. Applied Physics Express, 2016, 9, 024101.	2.4	260
61	Direct intensity modulation of resonant-tunneling-diode terahertz oscillator up to $\approx 30$ GHz. IEICE Electronics Express, 2015, 12, 20141161-20141161.	0.8	28
62	Power Combination in 1 THz Resonant-Tunneling-Diode Oscillators Integrated with Patch Antennas. IEICE Transactions on Electronics, 2015, E98.C, 1131-1133.	0.6	8
63	Structure dependence of oscillation characteristics of resonant-tunneling-diode terahertz oscillators associated with intrinsic and extrinsic delay times. Japanese Journal of Applied Physics, 2015, 54, 094103.	1.5	49
64	Array configuration using resonant-tunneling-diode terahertz oscillator integrated with patch antenna. , 2015, , .		2
65	Terahertz oscillators and receivers using electron devices for high-capacity wireless communication. Proceedings of SPIE, 2015, , .	0.8	3
66	Resonant-Tunneling-Diode Terahertz Oscillator Using Patch Antenna Integrated on Slot Resonator for Power Radiation. IEEE Transactions on Terahertz Science and Technology, 2015, 5, 613-618.	3.1	23
67	Theoretical analysis of external feedback effect on oscillation characteristics of resonant-tunneling-diode terahertz oscillators. Japanese Journal of Applied Physics, 2015, 54, 070309.	1.5	22
68	650-GHz Resonant-Tunneling-Diode VCO With Wide Tuning Range Using Varactor Diode. IEEE Electron Device Letters, 2014, 35, 1215-1217.	3.9	30
69	Fundamental Oscillation up to 1.42 THz in Resonant Tunneling Diodes by Optimized Collector Spacer Thickness. Journal of Infrared, Millimeter, and Terahertz Waves, 2014, 35, 425-431.	2.2	80
70	Operation of resonant-tunneling diodes with strong back injection from the collector at frequencies up to 1.46 THz. Applied Physics Letters, 2014, 104, .	3.3	77
71	Structural and electrical transport properties of MOVPE-grown pseudomorphic AlAs/InGaAs/InAs resonant tunneling diodes on InP substrates. Japanese Journal of Applied Physics, 2014, 53, 031202.	1.5	10
72	Resonant-tunneling-diodeterahertz oscillator integrated with slot-coupled patch antenna. , 2014, , .		3

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73	Wide-Range Varactor-Tuned Terahertz Oscillator Using Resonant Tunneling Diode. Journal of Infrared, Millimeter, and Terahertz Waves, 2014, 35, 445-450.	2.2	8
74	Compact THz oscillators with resonant tunneling diodes and application to high-capacity wireless communications. , 2013, , .		7
75	Resonant tunneling diodes for room-temperature terahertz oscillators. , 2013, , .		0
76	Terahertz Emission from Resonant Tunneling Diodes without Satisfying Oscillation Condition. Japanese Journal of Applied Physics, 2013, 52, 100210.	1.5	1
77	Terahertz oscillation of resonant tunneling diodes with deep and thin quantum wells. IEICE Electronics Express, 2013, 10, 20130501-20130501.	0.8	10
78	Fundamental oscillation up to 1.08THz in resonant tunneling diodes with high-indium-composition transit layers for reduction of transit delay. IEICE Electronics Express, 2012, 9, 385-390.	0.8	10
79	Fundamental Oscillation up to 1.31 THz in Resonant Tunneling Diodes with Thin Well and Barriers. Applied Physics Express, 2012, 5, 124101.	2.4	93
80	Dependence of Output Power on Slot Antenna Width in Terahertz Oscillating Resonant Tunneling Diodes. Journal of Infrared, Millimeter, and Terahertz Waves, 2012, 33, 475-478.	2.2	7
81	Estimation of Transit Time in Terahertz Oscillating Resonant Tunneling Diodes with Graded Emitter and Thin Barriers. IEICE Transactions on Electronics, 2012, E95-C, 401-407.	0.6	7
82	Terahertz Oscillation of Resonant Tunneling Diode and Modulation of Its Output Power with Laser Irradiation. The Review of Laser Engineering, 2012, 40, 517.	0.0	0
83	High-uniformity InP-based resonant tunneling diode wafers with peak current density of over 6A—105A/cm <sup>2</sup> grown by metal-organic vapor-phase epitaxy. Journal of Crystal Growth, 2011, 336, 24-28.	1.5	4
84	Intensity modulation of sub-terahertz oscillating resonant tunneling diode by irradiation of 1.55-µm laser. , 2011, , .		1
85	High Output Power (≈4400 µW) Oscillators at around 550 GHz Using Resonant Tunneling Diodes with Graded Emitter and Thin Barriers. Applied Physics Express, 2011, 4, 064101.	2.4	33
86	Terahertz oscillators using electron devices - an approach with Resonant tunneling diodes. IEICE Electronics Express, 2011, 8, 1110-1126.	0.8	17
87	Heterodyne Mixing of Sub-Terahertz Output Power from Two Resonant Tunneling Diodes Using InP Schottky Barrier Diode. Japanese Journal of Applied Physics, 2011, 50, 080211.	1.5	6
88	Room-Temperature Terahertz Oscillation of Electron Devices. IEEJ Transactions on Fundamentals and Materials, 2011, 131, 21-24.	0.2	1
89	Heterodyne Mixing of Sub-Terahertz Output Power from Two Resonant Tunneling Diodes Using InP Schottky Barrier Diode. Japanese Journal of Applied Physics, 2011, 50, 080211.	1.5	2
90	Sub-Terahertz Resonant Tunneling Diode Oscillators with High Output Power (≈4200 µW) Using Offset-Fed Slot Antenna and High Current Density. Applied Physics Express, 2010, 3, 014001.	2.4	26

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91	Extremely High Peak Current Densities of over $1\text{--}10 \times 10^6 \text{ A/cm}^2$ in InP-Based InGaAs/AlAs Resonant Tunneling Diodes Grown by Metal-Organic Vapor-Phase Epitaxy. Japanese Journal of Applied Physics, 2010, 49, 051201.	1.5	13
92	Fundamental Oscillation of up to 915 GHz in Small-Area InGaAs/AlAs Resonant Tunneling Diodes with Planar Slot Antennas. Japanese Journal of Applied Physics, 2010, 49, 020211.	1.5	11
93	Measurement of Oscillation Frequency and Spectral Linewidth of Sub-Terahertz InP-Based Resonant Tunneling Diode Oscillators Using InP Schottky Barrier Diode. Japanese Journal of Applied Physics, 2010, 49, 020208.	1.5	29
94	Fundamental oscillation of resonant tunneling diodes above 1 THz at room temperature. Applied Physics Letters, 2010, 97, .	3.3	256
95	Increase of fundamental oscillation frequency in resonant tunneling diode with thin barrier and graded emitter structures. , 2010, , .		2
96	Ultra-thin in InAlP/InGaAs heterojunctins grown by metal-organic vapor-phase epitaxy. , 2009, , .		0
97	Coherent power combination in multi-element sub-THz RTD oscillators coupled with MIM stub structure. , 2008, , .		0
98	Resonant Tunneling Diodes for Sub-Terahertz and Terahertz Oscillators. Japanese Journal of Applied Physics, 2008, 47, 4375.	1.5	288
99	Experimental and Theoretical Investigation of the Dependence of Oscillation Characteristics on Structure of Integrated Slot Antennas in Sub-terahertz and Terahertz Oscillating Resonant Tunneling Diodes. Japanese Journal of Applied Physics, 2008, 47, 64.	1.5	15
100	Coherent power combination in multi-element sub-THz RTD oscillators coupled with MIM stub structure. , 2008, , .		0
101	Coherent power combination in highly integrated resonant tunneling diode oscillators with slot antennas. , 2007, , .		0
102	Proposal of Resonant Tunneling Diode Oscillators with Offset-Fed Slot Antennas in Terahertz and Sub-Terahertz Range. Japanese Journal of Applied Physics, 2007, 46, 119-121.	1.5	12
103	Coherent Power Combination in Highly Integrated Resonant Tunneling Diode Oscillators with Slot Antennas. Japanese Journal of Applied Physics, 2007, 46, L1108-L1110.	1.5	13
104	Voltage-Controlled Harmonic Oscillation at About 1 THz in Resonant Tunneling Diodes Integrated with Slot Antennas. Japanese Journal of Applied Physics, 2007, 46, 2904-2906.	1.5	12
105	Mutual Injection Locking between Sub-THz Oscillating Resonant Tunneling Diodes. Japanese Journal of Applied Physics, 2005, 44, L1439-L1441.	1.5	14
106	Experimental and Theoretical Characteristics of Sub-Terahertz and Terahertz Oscillations of Resonant Tunneling Diodes Integrated with Slot Antennas. Japanese Journal of Applied Physics, 2005, 44, 7809-7815.	1.5	73
107	Frequency Increase of Resonant Tunneling Diode Oscillators in Sub-THz and THz Range Using Thick Spacer Layers. Applied Physics Express, 0, 1, 042003.	2.4	16
108	Coherent Power Combination in Multi-Element Sub-Terahertz Resonant Tunneling Diode Oscillators Coupled with Metal-Insulator-Metal Stub Structure. Applied Physics Express, 0, 1, 093001.	2.4	9

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109	Sub-Terahertz Resonant Tunneling Diode Oscillators Integrated with Tapered Slot Antennas for Horizontal Radiation. Applied Physics Express, 0, 2, 044501.	2.4	24
110	Fundamental Oscillation of up to 831 GHz in GaInAs/AlAs Resonant Tunneling Diode. Applied Physics Express, 0, 2, 054501.	2.4	63
111	Large-scale array of resonant-tunneling-diode terahertz oscillators for high output power at 1 THz. , 0, .		1