Yoshinao Mizugaki

List of Publications by Year
in descending order

110	338	1163117 8	1281871 11
papers	citations	h-index	g-index

110	110	110	140
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Superconducting neural circuits using fluxon pulses. Applied Physics Letters, 1993, 62, 762-764.	3.3	20
2	Inputâ€“output characteristics of a 999-stage double-flux-quantum amplifier designed for 1000-fold voltage multiplication. Japanese Journal of Applied Physics, 2014, 53, 053101.	1.5	12
3	5-Bit Quasi-Sinusoidal Voltage Waveform Synthesized Using Single-Flux-Quantum Pulse-Frequency Modulation. IEEE Transactions on Applied Superconductivity, 2013, 23, 1300804-1300804.	1.7	11
4	Coulomb Blockade Conditions for Detailed Model of Single-Electron Turnstile Device Including Finite Self-Capacitances of Island Electrodes. Japanese Journal of Applied Physics, 2007, 46, 3144-3148.	1.5	10
5	Design and Operation of 6-bit, 0.25-mVpp Quasi-sine Voltage Waveform Generator based on SFQ Pulse-frequency Modulation. Physics Procedia, 2014, 58, 220-223.	1.2	10
6	Grounding positions of superconducting layer for effective magnetic isolation in Josephson integrated circuits. Journal of Applied Physics, 2007, 101, 114509.	2.5	9
7	Magnetic Isolation on a Superconducting Ground Plane. Japanese Journal of Applied Physics, 1999, 38, 5869-5870.	1.5	8
8	Monte Carlo study of charge transport in slantingly coupled arrays of small tunnel junctions. Physical Review B, 2005, 71, .	3.2	8
9	Design and operation of a series array of voltage doubler cells for rapid-single-flux-quantum digital-to-analog converters. Superconductor Science and Technology, 2007, 20, S315-S317.	3.5	8
10	Design and Operation of 64-Fold Variable Single-Flux-Quantum Pulse-Number Multiplier. IEEE Transactions on Applied Superconductivity, 2011, 21, 3604-3607.	1.7	8
11	4-bit Bipolar Triangle Voltage Waveform Generator Using Single-Flux-Quantum Circuit. Physics Procedia, 2015, 65, 213-216.	1.2	8
12	One-dimensional array of small tunnel junctions fabricated using 30-nm-diameter gold nanoparticles placed in a 140-nm-wide resist groove. Japanese Journal of Applied Physics, 2018, 57, 098006.	1.5	8
13	Single-Electron Signal Modulator Designed for a Flash Analog-to-Digital Converter. Japanese Journal of Applied Physics, 2001, 40, 6157-6162.	1.5	7
14	Numerical investigation on the current mirror effect in a single-electron turnstile capacitively coupled to a one-dimensional array of small junctions. Journal of Applied Physics, 2003, 94, 4480-4484.	2.5	7
15	Numerical Demonstration of Relaxation Oscillation in a Resistive Superconducting Quantum Interference Device With Two Nonhysteretic Josephson Junctions. IEEE Transactions on Applied Superconductivity, 2010, 20, 2322-2326.	1.7	7
16	Drag Current Reversal in Capacitively Coupled Arrays of Small Josephson Junctions. Physical Review Letters, 2012, 109, 196801.	7.8	7
17	Gate-tuned negative differential resistance observed at room temperature in an array of gold nanoparticles. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	7
18	Hardware Random Number Generator Using Josephson Oscillation and SFQ Logic Circuits. IEEE Transactions on Applied Superconductivity, 2020, 30, 1-5.	1.7	7

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19	Implementation of superconducting synapses into a neuronâ€based analogâ€toâ€digital converter. Applied Physics Letters, 1994, 65, 1712-1713.	3.3	6
20	Numerical Evaluation for the High-Frequency Response of Josephson Junctions Having Finite Capacitance. Japanese Journal of Applied Physics, 1998, 37, 5971-5972.	1.5	6
21	Single-flux-quantum pump based on a three-junction superconducting quantum interference device. Applied Physics Letters, 2002, 80, 4585-4587.	3.3	6
22	Mutual Inductance Coupled through Superconducting Thin Film in Niobium Josephson Integrated Circuits. Japanese Journal of Applied Physics, 2005, 44, L763-L765.	1.5	6
23	Zero-crossing Shapiro step generated in an asymmetric and nonhysteretic rf-current-driven two-junction superconducting quantum interference device. Journal of Applied Physics, 2006, 100, 064503.	2.5	6
24	Design and Operation of a 9-bit Single-flux-quantum Pulse-frequency Modulation Digital-to-analog Converter. Physics Procedia, 2015, 65, 209-212.	1.2	6
25	Current Doublers Based on the Quantum Current-Mirror Effect. Japanese Journal of Applied Physics, 2008, 47, 8131.	1.5	5
26	Superconducting bipolar digital-to-analog converter equipped with dual double-flux-quantum amplifier. IEICE Electronics Express, 2016, 13, 20160242-20160242.	0.8	5
27	Fabrication of resistively-coupled single-electron device using an array of gold nanoparticles. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	5
28	Demonstration of 6-bit, 0.20-mV_{pp} Quasi-Triangle Voltage Waveform Generator Based on Pulse-Frequency Modulation. IEICE Transactions on Electronics, 2014, E97.C, 194-197.	0.6	5
29	Numerical Investigation and Model Approximation for the Hysteretic Current-Voltage Characteristics of Josephson Junctions with Nonlinear Quasiparticle Resistance. Japanese Journal of Applied Physics, 1997, 36, 110-113.	1.5	4
30	Josephson Switching Device Utilizing the Quantum Transitions in a Superconducting Quantum Interference Device Loop. Japanese Journal of Applied Physics, 2000, 39, 55-60.	1.5	4
31	Numerical and experimental evaluation of mutual inductances between two superconducting striplines coupled through a superconducting intermediate layer. IEICE Electronics Express, 2006, 3, 64-69.	0.8	4
32	Current Multiplication Based on the Quantum Current-Mirror Effect. IEEE Transactions on Applied Superconductivity, 2007, 17, 602-604.	1.7	4
33	Characterization of superconducting single-electron transistors with small Al/AlO$_{x}$/Al Josephson junctions. Superconductor Science and Technology, 2014, 27, 115015.	3.5	4
34	Bloch Oscillation in a One-Dimensional Array of Small Josephson Junctions. Journal of the Physical Society of Japan, 2016, 85, 074706.	1.6	4
35	Fabrication of single-electron devices using dispersed nanoparticles and fitting experimental results to values calculated based on percolation model. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	4
36	1000-Fold Double-Flux-Quantum Voltage Multiplier Employing Directional Propagation of Flux Quanta Through Asymmetrically Damped Junction Branches. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-5.	1.7	4

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37	Planarized Nb 4-Layer Fabrication Process for Superconducting Integrated Circuits and Its Fabricated Device Evaluation. IEICE Transactions on Electronics, 2021, E104.C, 435-445.	0.6	4
38	Evaluation of Two Methods for Suppressing Ground Current in the Superconducting Integrated Circuits. IEICE Transactions on Electronics, 2011, E94-C, 296-300.	0.6	4
39	Zero-Crossing Shapiro Step in Asymmetric Two-Junction Superconducting Quantum Interference Device. Japanese Journal of Applied Physics, 2006, 45, L621-L622.	1.5	3
40	Tunnel Magnetoresistance in Ferromagnetâ€“Superconductorâ€“Ferromagnet Single-Electron Transistors with Different Lead Spacings up to 50 Âµm. Japanese Journal of Applied Physics, 2007, 46, L901-L903.	1.5	3
41	Voltage Doubler Cell for Rapid Single Flux Quantum Digital-to-Analog Converter. Japanese Journal of Applied Physics, 2007, 46, L430-L432.	1.5	3
42	Bias-voltage dependence of magnetoresistance enhancement in a single-electron transistor comprising two cobalt leads and an aluminum island. Journal of Applied Physics, 2013, 113, 156101.	2.5	3
43	Correlation between polarity of magnetoresistance ratio and tunnel resistance in ferromagnetic single-electron transistor with superconductive island. Japanese Journal of Applied Physics, 2014, 53, 043101.	1.5	3
44	Modified Double-Flux-Quantum Amplifier for Bipolar Voltage Multiplication. , 2015, , .		3
45	Thermally-fluctuated single-flux-quantum pulse intervals reflected in input-output characteristics of a double-flux-quantum amplifier. Journal of Physics: Conference Series, 2017, 871, 012066.	0.4	3
46	Equivalent circuit model modified for free-standing bilayer lipid membranes beyond 1 TÎ©. Japanese Journal of Applied Physics, 2019, 58, SDDK02.	1.5	3
47	Single-electron charging effects observed in arrays of gold nanoparticles formed by dielectrophoresis between SAM-coated electrodes. AIP Conference Proceedings, 2019, , .	0.4	3
48	Enhanced operation frequencies of bipolar double-flux-quantum amplifiers fabricated using 10-kA/cm² Nb/AlO_x/Nb integration process. Japanese Journal of Applied Physics, 0, , .	1.5	3
49	Evaluation of a True Random Number Generator Utilizing Timing Jitters in RSFQ Logic Circuits. IEICE Transactions on Electronics, 2022, , .	0.6	3
50	Single-Electron Turnstile Locked to Charge Solitons in a One-Dimensional Array of Small Junctions. Japanese Journal of Applied Physics, 2002, 41, 5630-5634.	1.5	2
51	Numerical investigation for the frequency dependence of Shapiro steps in an RF-field-driven SQUID. Superconductor Science and Technology, 2003, 16, 1380-1382.	3.5	2
52	Model analysis for a current-step-like structure in a high Tc Josephson device coupled to a microwave signal. Journal of Applied Physics, 2005, 97, 063906.	2.5	2
53	Single-Electron Devices With Input Discretizer. IEEE Nanotechnology Magazine, 2008, 7, 601-606.	2.0	2
54	Magnetic Isolation Enhanced by a Superconducting Loop in Josephson Integrated Circuits. Japanese Journal of Applied Physics, 2009, 48, 073001.	1.5	2

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55	Mutual coupling between two superconducting strip lines horizontally-placed in niobium integrated chips. Journal of Physics: Conference Series, 2010, 234, 042021.	0.4	2
56	Blocking Charge Oscillation in a Series Array of Two Tiny Tunnel Junctions with a Resistive Ground Path from Its Island Electrode. IEEE Nanotechnology Magazine, 2012, 11, 194-199.	2.0	2
57	Design and Operation of a Double-Flux-Quantum Amplifier Excluding Flux Bias Lines. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-4.	1.7	2
58	Single-Flux-Quantum Bipolar Digital-to-Analog Converter Comprising Polarity-Switchable Double-Flux-Quantum Amplifier. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-4.	1.7	2
59	A double-flux-quantum amplifier with a single flux-biasing line. Journal of Physics: Conference Series, 2018, 1054, 012062.	0.4	2
60	Design and operation of distributed double-SQUID amplifier for RSFQ circuits. Journal of Physics: Conference Series, 2019, 1293, 012060.	0.4	2
61	Nanoscale Tunnel Junctions and Metallic Single-Electron Transistors via Shadow Evaporation and In Situ Atomic Layer Deposition of Tunnel Barriers. ACS Applied Nano Materials, 2021, 4, 1401-1410.	5.0	2
62	Improvement of Single-Electron Digital Logic Gates by Utilizing Input Discretizers. IEICE Transactions on Electronics, 2016, E99.C, 285-292.	0.6	2
63	Balanced Ternary Quantum Voltage Generator Based on Zero Crossing Shapiro Steps in Asymmetric Two-Junction SQUIDs. IEICE Transactions on Electronics, 2013, E96.C, 334-337.	0.6	2
64	Quantum transitions and zero-crossing current steps in a SQUID controlled by multi-phase RF fields. Physica C: Superconductivity and Its Applications, 2002, 372-376, 274-277.	1.2	1
65	Differential Conductance Properties of La2-xSrxCuO4Intrinsic Josephson Junctions under Magnetic Field. Japanese Journal of Applied Physics, 2004, 43, 124-125.	1.5	1
66	Current Correlation in Single-Electron Current Mirror Electromagnetically Dual to Josephson Voltage Mirror. Japanese Journal of Applied Physics, 2007, 46, 6237-6242.	1.5	1
67	Optimization of asymmetric single-electron transistor generating ac-induced dc current. IEICE Electronics Express, 2007, 4, 345-350.	0.8	1
68	Average Voltage Measurements of Periodic Blocking Oscillation in Resistive Superconducting Quantum Interference Device Connected to Josephson Transmission Line. Japanese Journal of Applied Physics, 2012, 51, 038001.	1.5	1
69	Current Multiplication Using Arrays of Small Josephson Junctions. Japanese Journal of Applied Physics, 2012, 51, 123101.	1.5	1
70	Zero-crossing Shapiro step generated in a niobium in-line Josephson gate. IEICE Electronics Express, 2014, 11, 20140054-20140054.	0.8	1
71	A single-electron hysteretic inverter designed for enhancement of stochastic resonance. IEICE Electronics Express, 2015, 12, 20150527-20150527.	0.8	1
72	Three Parallel Generation of a 4-Bit M-Sequence Using Single-Flux-Quantum Digital Circuits. , 2015, , .		1

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73	Design and Operation of ROM-Dedicated Single-Flux-Quantum Cell Comprising Splitters and Confluence Buffers. , 2015, , .		1
74	Sharp Switching Characteristics of Single Electron Transistor with Discretized Charge Input. Applied Sciences (Switzerland), 2016, 6, 214.	2.5	1
75	Three Parallel Generation of a 4-bit M-Sequence Using Single-Flux-Quantum Digital Circuits. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-4.	1.7	1
76	Magnetoresistance in single-electron transistors comprising a superconducting island with ferromagnetic leads. Journal of Physics: Conference Series, 2018, 969, 012154.	0.4	1
77	Design and error-rate evaluation of RSFQ logic gates comprising a toggle storage loop. Journal of Physics: Conference Series, 2020, 1590, 012042.	0.4	1
78	Average Voltage Measurements of Periodic Blocking Oscillation in Resistive Superconducting Quantum Interference Device Connected to Josephson Transmission Line. Japanese Journal of Applied Physics, 2012, 51, 038001.	1.5	1
79	Current Multiplication Using Arrays of Small Josephson Junctions. Japanese Journal of Applied Physics, 2012, 51, 123101.	1.5	1
80	Analytical Inductance Calculation of Superconducting Stripline by Use of Transformation into Perfect Conductor Model. IEICE Transactions on Electronics, 2010, E93-C, 486-488.	0.6	1
81	Dielectrophoretic Assembly of Gold Nanoparticle Arrays Evaluated in Terms of Room-Temperature Resistance. IEICE Transactions on Electronics, 2020, E103.C, 62-65.	0.6	1
82	Sensitive phonon detection using a single Cooper-pair transistor. Applied Physics Express, 2022, 15, 064001.	2.4	1
83	Numerical simulation for digital applications of a coupled-SQUID gate with d.c.-biasing. Applied Superconductivity, 1998, 6, 405-408.	0.5	0
84	Static characteristics of superconducting quantum interference devices utilizing the equivalent inductance of Josephson junctions. Electronics and Communications in Japan, 1998, 81, 1-7.	0.2	0
85	Current-step-like structure in a YBCO grain boundary Josephson junction coupled to a gigahertz signal. Journal of Physics: Conference Series, 2006, 43, 1282-1285.	0.4	0
86	Two-Dimensional Array of Nanotubes Grown in Porous Anodic Alumina by Ethanol Electrolysis. Japanese Journal of Applied Physics, 2006, 45, L657-L658.	1.5	0
87	Self-Organized Microcones Grown on Si Substrate by Microwave Plasma Chemical Vapor Deposition. Japanese Journal of Applied Physics, 2008, 47, 3050-3052.	1.5	0
88	Bipolar Quantum Voltage Generator Based on Zero Crossing Shapiro Steps in Asymmetric 2J-SQUIDs. Physics Procedia, 2012, 36, 235-238.	1.2	0
89	Precision improvement of the current multiplier based on the quantum current-mirror effect. Japanese Journal of Applied Physics, 2014, 53, 023101.	1.5	0
90	Quantum Interference in DC-SQUIDs Comprising Two Sub-Micron Aluminum Josephson Junctions: Deviation from Classical Model. Physics Procedia, 2015, 65, 177-180.	1.2	0

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91	Electric Field Effect Observed on Current-Voltage Curve of YBa2Cu3O7-delta Nano-Channel with Laterally Placed Gate Electrode. , 2015, , .		0
92	Observation of Zero Crossing Shapiro Step on Current-Voltage Curve of Long YBa2Cu3O7-delta Bicrystal Josephson Junction Having Tilted Field Dependence. , 2015, , .		0
93	Experimental demonstration of single-flux-quantum sequential-access mask ROM. IEICE Electronics Express, 2016, 13, 20160342-20160342.	0.8	0
94	Nanostructure fabrication through a microwire of local anodization. , 2017, , .		0
95	Evaluation of the inter-particle distance of gold nanoparticles dispersed on silane-treated substrates to fabricate dithiol-connected arrays. Japanese Journal of Applied Physics, 2019, 58, SDDF09.	1.5	0
96	Temporal change of AC impedance measured across a free-standing bilayer lipid membrane. AIP Conference Proceedings, 2019, , .	0.4	0
97	Cooper-Pair Tunneling in Small Josephson Junction Arrays Under Radio-Frequency Irradiation. Journal of Low Temperature Physics, 2020, 201, 269-284.	1.4	0
98	Scalability of supercurrent modulable with single Cooper-pair transistors connected in parallel. Japanese Journal of Applied Physics, 2021, 60, 074003.	1.5	0
99	Two-Junction SQUID Controlled by Both DC and RF Magnetic Flux. , 2000, , 1114-1116.		0
100	Self organized Micro Cones on Si substrate by Microwave Plasma Chemical Vapor Deposition. , 2007, , .		0
101	Estimation of Nb Junction Temperature Raised Due to Thermal Heat from Bias Resistor. IEICE Transactions on Electronics, 2012, E95-C, 355-359.	0.6	0
102	Polarity Reversal of Tunnel Magnetoresistance Observed in Lateral Co-Al-Co Single-Electron Transistor. , 2014, , .		0
103	New Approach to Hardware Implementation of Neural Circuits Using Superconductive Devices. , 1994, , .		0
104	Novel Superconducting Neuron and Synapse. , 1994, , 1203-1206.		0
105	Pulse Response of Mutually-Coupled dc-to-SFQ Converter Investigated using an On-Chip Pulse Generator. IEICE Transactions on Electronics, 2015, E98.C, 238-241.	0.6	0
106	Numerical Simulation of Single-Electron Tunneling in Random Arrays of Small Tunnel Junctions Formed by Percolation of Conductive Nanoparticles. IEICE Transactions on Electronics, 2018, E101.C, 836-839.	0.6	0
107	Enhanced voltage swing of rapid-single-flux-quantum distributed output amplifier equipped with double-stack superconducting quantum interference devices. IEICE Electronics Express, 2019, 16, 20190331-20190331.	0.8	0
108	Capacitance extraction method for a free-standing bilayer lipid membrane formed over an aperture in a nanofabricated silicon chip. Japanese Journal of Applied Physics, 2020, 59, SIIK02.	1.5	0

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109	Rapid Single-Flux-Quantum NOR Logic Gate Realized through the Use of Toggle Storage Loop. IEICE Transactions on Electronics, 2020, E103.C, 547-549.	0.6	0
110	100GHz operation of a 4-bit single-flux-quantum pulse-frequency modulator designed for bipolar D/A conversion. IEICE Electronics Express, 2022, , .	0.8	0