

Masahiro Horibe

List of Publications by Year in descending order

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150
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1,367
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471509

17
h-index

454955

30
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150
all docs

150
docs citations

150
times ranked

906
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrical Properties of Carbon Nanotube Bundles for Future Via Interconnects. Japanese Journal of Applied Physics, 2005, 44, 1626-1628.	1.5	160
2	Simultaneous Formation of Multiwall Carbon Nanotubes and their End-Bonded Ohmic Contacts to Ti Electrodes for Future ULSI Interconnects. Japanese Journal of Applied Physics, 2004, 43, 1856-1859.	1.5	124
3	Stretchable electromagnetic-interference shielding materials made of a long single-walled carbon-nanotube“elastomer composite. RSC Advances, 2017, 7, 10841-10847.	3.6	66
4	Carbon Nanotube Growth Technologies Using Tantalum Barrier Layer for Future ULSIs with Cu/Low-kInterconnect Processes. Japanese Journal of Applied Physics, 2005, 44, 5309-5312.	1.5	49
5	Preparation of ramp-edge Josephson junctions with natural barriers. IEEE Transactions on Applied Superconductivity, 1999, 9, 3436-3439.	1.7	44
6	Influence of Counter-Layer Deposition Condition on Critical Current Spread in Interface-Modified Ramp-Edge Junction Arrays. Japanese Journal of Applied Physics, 2002, 41, L239-L242.	1.5	37
7	Broadband Permittivity Measurements up to 170-GHz Using Balanced-Type Circular-Disk Resonator Excited by 0.8-mm Coaxial Line. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 1796-1805.	4.7	32
8	Ramp-edge junctions with interface-modified barriers fabricated on YBCO thick films. IEEE Transactions on Applied Superconductivity, 2003, 13, 595-598.	1.7	30
9	Preparation of La-doped Yb-123 thin films for high-Tc devices. Physica C: Superconductivity and Its Applications, 2002, 378-381, 1213-1215.	1.2	29
10	Realization of Accurate On-Wafer Measurement Using Precision Probing Technique at Millimeter-Wave Frequency. IEEE Transactions on Instrumentation and Measurement, 2018, 67, 1940-1945.	4.7	29
11	Interface-Treated Josephson Junctions in Trilayer Structures. Japanese Journal of Applied Physics, 2000, 39, L205-L207.	1.5	26
12	Metrological Traceability in Waveguide S-parameter Measurements at 1.0 THz Band. IEEE Transactions on Instrumentation and Measurement, 2013, 62, 1814-1820.	4.7	26
13	Uncertainty Analysis Method Including Influence of Probe Alignment on On-Wafer Calibration Process. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 1748-1755.	4.7	22
14	Characteristics of Interface-Modified Josephson Junctions Fabricated under Various Etching Conditions. Japanese Journal of Applied Physics, 2000, 39, L284-L287.	1.5	19
15	Mechanical Polishing Technique for Carbon Nanotube Interconnects in ULSIs. Japanese Journal of Applied Physics, 2004, 43, 6499-6502.	1.5	19
16	\$\$\$-Parameters of Standard Airlines Whose Connector Is Tightened With Specified Torque. IEEE Transactions on Instrumentation and Measurement, 2007, 56, 401-405.	4.7	19
17	Modification of waveguide flange design for millimeter and submillimeter-wave measurements. , 2011, , .		19
18	New Permittivity Measurement Methods Using Resonant Phenomena For High-Permittivity Materials. IEEE Transactions on Instrumentation and Measurement, 2017, 66, 1191-1200.	4.7	19

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19	New Uncertainty Analysis for Permittivity Measurements Using the Transmission/Reflection Method. IEEE Transactions on Instrumentation and Measurement, 2015, 64, 1748-1753.	4.7	18
20	Permittivity measurements and associated uncertainties up to 110 GHz in circular-disk resonator method. , 2016, , .		18
21	Development of Evaluation Techniques for Air Lines in 3.5- and 1.0-mm Line Sizes. IEEE Transactions on Instrumentation and Measurement, 2009, 58, 1078-1083.	4.7	17
22	Complete characterization of rectangular waveguide measurement standards for vector network analyzer in the range of millimeter and sub-millimeter wave frequencies. , 2010, , .		15
23	Performance of new design of waveguide flange for measurements at frequencies from 800 GHz to 1.05 THz. , 2012, , .		14
24	Precision Adjustment of Probe Tilt Angle with RF Signal Detection Technique. IEEE Transactions on Instrumentation and Measurement, 2020, , 1-1.	4.7	14
25	Preparation of ramp-edge interface modified junctions for HTS SFQ circuits. IEEE Transactions on Applied Superconductivity, 2001, 11, 159-162.	1.7	13
26	Using time-domain measurements to improve assessments of precision coaxial air lines as standards of impedance at microwave frequencies. , 2007, , .		13
27	Influence of Growth Mode of Carbon Nanotubes on Physical Properties for Multiwalled Carbon Nanotube Films Grown by Catalytic Chemical Vapor Deposition. Japanese Journal of Applied Physics, 2004, 43, 7337-7341.	1.5	12
28	Improvement of onâ€wafer measurement accuracy with RF signal detection technique at millimetreâ€wave frequencies. IET Microwaves, Antennas and Propagation, 2017, 11, 1892-1897.	1.4	12
29	Development of Two-Step Deposition Process for Interface-Modified Ramp-Edge Josephson Junction with Low Sheet Inductance and Small Spread. Japanese Journal of Applied Physics, 2002, 41, L1366-L1369.	1.5	11
30	Evaluation of fabrication process for interface-modified ramp-edge junctions. Physica C: Superconductivity and Its Applications, 2003, 392-396, 1378-1381.	1.2	11
31	C band GaN diode rectifier with 3W DC output for high power microwave power transmission applications. , 2016, , .		11
32	Performance comparisons between impedance analyzers and vector network analyzers for impedance measurement below 100 MHz frequency. , 2017, , .		11
33	Annealing-induced enhancement of electrical conductivity and electromagnetic interference shielding in injection-molded CNT polymer composites. Polymer, 2022, 245, 124680.	3.8	11
34	Influence of deposition conditions of La-doped YbBa ₂ Cu ₃ O _y upper layers on electrical properties of interface-modified ramp-edge junction. Physica C: Superconductivity and Its Applications, 2002, 378-381, 1353-1356.	1.2	10
35	Fabrication of interface-modified ramp-edge junction on YBCO ground plane with multilayer structure. Physica C: Superconductivity and Its Applications, 2003, 392-396, 1322-1327.	1.2	10
36	Comparison Between Two National Metrology Institutes of Diameters and Characteristic Impedance of Coaxial Air Lines. IEEE Transactions on Instrumentation and Measurement, 2009, 58, 1084-1089.	4.7	10

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37	Demonstration of dielectric measurement using a probe-backside reflection method up to 300 GHz. Japanese Journal of Applied Physics, 2019, 58, SLLE02.	1.5	10
38	Optimization of fabrication conditions for multilayer structures with la-doped YBCO groundplane. IEEE Transactions on Applied Superconductivity, 2003, 13, 787-790.	1.7	9
39	Comparison Between NPL and NMJ of Diameter and Scattering Parameter Measurements of Precision 1.85 mm Coaxial Air Lines. IEEE Transactions on Instrumentation and Measurement, 2011, 60, 2327-2334.	4.7	9
40	Comparing accuracy of waveguide VNA measurement calibrated by TRL calibration using different length of line standard in terahertz band. , 2013, , .		9
41	Comparison of Calculation Techniques for Q-Factor Determination of Resonant Structures Based on Influence of VNA Measurement Uncertainty. IEICE Transactions on Electronics, 2014, E97.C, 575-582.	0.6	9
42	Broadband Conductivity Measurement Technique at Millimeter-Wave Bands Using a Balanced-Type Circular Disk Resonator. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 861-873.	4.6	9
43	A New Method for Calibrating Impedance of an Artificial Mains Network With a Vector Network Analyzer. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 822-828.	2.2	8
44	Measurement Capability of Scanning Microwave Microscopy: Measurement Sensitivity Versus Accuracy. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 1774-1780.	4.7	8
45	Study on fabrication conditions of the interface-treated trilayer junctions. IEEE Transactions on Applied Superconductivity, 2001, 11, 788-790.	1.7	7
46	Evaluation of fabrication process and barrier structure for interface-modified ramp-edge junctions. Physica C: Superconductivity and Its Applications, 2002, 378-381, 1327-1333.	1.2	7
47	Fabrication of interface-modified ramp-edge junction with counter-electrode layer with lower inductance. Physica C: Superconductivity and Its Applications, 2003, 392-396, 1362-1366.	1.2	7
48	SFQ-to-level logic conversion by HTS Josephson drivers for output interface. IEEE Transactions on Applied Superconductivity, 2003, 13, 397-400.	1.7	7
49	National metrology standards for scattering parameter calibration at radio frequency. , 2010, , .		7
50	Reliability of transmission lines fabricated by screen printing for on-wafer measurements at millimeter-wave. , 2015, , .		7
51	Dynamic measurements of moisture content using microwave signal and its verification. , 2016, , .		7
52	Measurement Uncertainty Model for Vector Network Analyzers With Frequency Extension Modules at Terahertz Frequencies. IEEE Transactions on Instrumentation and Measurement, 2017, 66, 1605-1612.	4.7	7
53	Demonstration of in-situ dielectric permittivity measurement using precision probing technique. Japanese Journal of Applied Physics, 2018, 57, 11UE01.	1.5	7
54	Transmission loss of screen-printed metallization at millimeter-wave frequency. IEICE Electronics Express, 2019, 16, 20181081-20181081.	0.8	7

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55	Fabrication of natural-barrier ramp-edge Josephson junctions. Superconductor Science and Technology, 1999, 12, 726-728.	3.5	6
56	Improvement of the sandwich junction properties by planarization of YBCO films. IEEE Transactions on Applied Superconductivity, 1999, 9, 3456-3459.	1.7	6
57	Fabrication of interface elements for oxide RSFQ circuits. IEEE Transactions on Applied Superconductivity, 2003, 13, 413-416.	1.7	6
58	Standards Research in Japan: Latest Development of Millimeter-Wave and Submillimeter-Wave Measurements. IEEE Microwave Magazine, 2013, 14, 59-66.	0.8	6
59	Improvement of Transmission/Reflection Method for Permittivity Measurement Using Long Fixtures With Time-Domain Analysis Approach. IEEE Transactions on Instrumentation and Measurement, 2017, 66, 1201-1207.	4.7	6
60	Proposal of a Precision Probe-Tilt Adjustment with the RF Signal Detection Technique. , 2018, , .		6
61	Reproducibility and controllability of critical current for ramp-edge interface-modified junctions. Physica C: Superconductivity and Its Applications, 2001, 357-360, 1424-1427.	1.2	5
62	Effects of etching conditions on interface-treated trilayer junctions. Physica C: Superconductivity and Its Applications, 2001, 357-360, 1436-1439.	1.2	5
63	Accuracy Improvement of On-wafer Measurement at Millimeter-wave Frequency by a Full-automatic RF probe-tip Alignment Technique. , 2018, , .		5
64	Probe Positioner and Probe Tip Calibration for Traceable On-Wafer Measurement. , 2019, , .		5
65	Dynamic measurement of moisture content using microwaves for moisture evaluation of agricultural products. IEJ Transactions on Electrical and Electronic Engineering, 2020, 15, 166-171.	1.4	5
66	Systematic investigation of ramp edge junction using Ca-doped and Ga-doped PBCO barrier. IEEE Transactions on Applied Superconductivity, 1999, 9, 3378-3381.	1.7	4
67	Vertically aligned peapod formation of position-controlled multi-walled carbon nanotubes (MWNTs). Superlattices and Microstructures, 2003, 34, 389-394.	3.1	4
68	Output Interface With Latching Driver for LTS-SFQ Circuits. IEEE Transactions on Applied Superconductivity, 2005, 15, 1-5.	1.7	4
69	VNA Traceability Tool. , 2009, , .		4
70	Traceability to national standards for S-parameter measurements in waveguide at 1.1 THz. , 2012, , .		4
71	Traceability via precision dimensional measurements of WM-864 (WR-03) waveguide standard shims including comparison between NPL and NMJ. , 2012, , .		4
72	Development of verification process for on-wafer measurement at millimeter-wave frequency. , 2016, , .		4

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73	Demonstrations of RF impedance matching techniques for near-field scanning microwave microscopy based on atomic force microscopy. , 2017, , .		4
74	Evaluation of the temperature dependence of dielectric properties using probe-backside reflection method at millimeter-wave frequencies. Japanese Journal of Applied Physics, 2021, 60, SFFC01.	1.5	4
75	Long-Term Stability Test on On-Wafer Measurement System in Frequency Ranges up to 325 GHz. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-9.	4.7	4
76	Temperature Dependence of Resonance Frequency of Shape-Memory Alloy Vibrated Photothermally. Japanese Journal of Applied Physics, 1994, 33, 5064-5066.	1.5	3
77	Improvement of interface-treated junctions using vicinal SrTiO ₃ substrates. Superconductor Science and Technology, 2001, 14, 1001-1004.	3.5	3
78	Uniformity evaluation method of the YBa ₂ Cu ₃ O _{7-x} ramp edge-junction characteristics for SFQ circuit application. Physica C: Superconductivity and Its Applications, 2002, 372-376, 59-62.	1.2	3
79	Improvement of ramp-surface morphology for interface-engineered junction. Physica C: Superconductivity and Its Applications, 2002, 378-381, 1362-1367.	1.2	3
80	Improvement of a bit error rate measuring system for high-temperature superconducting circuits. IEEE Transactions on Applied Superconductivity, 2003, 13, 425-428.	1.7	3
81	High-speed operation of SQUID array-type interface circuits using a cryocooler. Physica C: Superconductivity and Its Applications, 2004, 412-414, 1533-1538.	1.2	3
82	A bilateral comparison of measurement of diameters and characteristic impedance of precision 3.5 mm coaxial air lines. , 2008, , .		3
83	Quantitative understanding of the mated interface characteristics of precision coaxial connectors at microwave and millimeter-wave frequencies. , 2008, , .		3
84	Evaluation of complex residual error in vector network analyzer measurement system in the range of millimeter-wave and submillimeter-wave frequencies. , 2011, , .		3
85	Establishment of S-parameter Traceability for 3.5 mm Coaxial Lines from 10 MHz to 100 MHz. IEEE Transactions on Instrumentation and Measurement, 2013, 62, 1847-1852.	4.7	3
86	Study of reflection effect at fixture interfaces on permittivity measurements using the transmission/reflection method. , 2014, , .		3
87	Improvement of offset short calibration technique in waveguide VNA measurement at millimeter and sub-millimeter wave frequency. , 2014, , .		3
88	New uncertainty analysis and simplified verification method for permittivity measurements using the Transmission/Reflection method by utilizing a weighted factor. , 2014, , .		3
89	A study of uncertainty estimation for time-domain analysis by considering incompleteness of TRL calibration kit. , 2015, , .		3
90	Consideration of error model with cable flexure influences on waveguide vector network analyzers at submillimeter-wave frequency. , 2015, , .		3

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91	Hybrid semiconductor integrated rectifier for wireless power transmission into spacecraft. , 2017, , .		3
92	Development of permittivity measurement system at microwave and millimeter wave frequencies for low-loss substrate characterization. , 2017, , .		3
93	Broadband Permittivity Measurements Using a Frequency-Variable Balanced-Type Circular-Disk Resonator. , 2018, , .		3
94	Measurement Uncertainty Analysis for On-Wafer TRL Calibration Using Precision RF Probing Technique. , 2018, , .		3
95	Impact of circuit metallization on dielectric permittivity measurement by scanning microwave microscopy. Japanese Journal of Applied Physics, 2020, 59, SPPE01.	1.5	3
96	Broadband complex permittivity and conductivity measurements in the millimeter-wave bands over variable temperatures using a balanced-type circular disk resonator. Applied Physics Letters, 2021, 119, 092902.	3.3	3
97	The improvement of the characteristics of ramp-edge junctions with interface modified barriers. Superconductor Science and Technology, 2001, 14, 1052-1055.	3.5	2
98	Relation between barrier structure and electrical properties of interface-modified ramp-edge junctions. Physica C: Superconductivity and Its Applications, 2003, 392-396, 1373-1377.	1.2	2
99	High-speed bit-error-rate measurement system for high-temperature superconducting digital circuits. IEEE Transactions on Applied Superconductivity, 2003, 13, 3833-3838.	1.7	2
100	Error correction circuits of comparators based on quasi-one junction SQUID(s) for high temperature superconductor. IEEE Transactions on Applied Superconductivity, 2003, 13, 405-408.	1.7	2
101	A high-temperature superconductor latching driver operated at 30 K for a single-flux-quantum/semiconductor interface. Superconductor Science and Technology, 2003, 16, 1508-1512.	3.5	2
102	Time-domain and mechanical assessments of 1.0 mm coaxial air lines. , 2008, , .		2
103	Calibration for precision coaxial air lines in the frequency range up to 110 GHz. , 2008, , .		2
104	Characterization and verification of coaxial open-circuit primary standards for millimeter-wave vector network analyzer calibration. , 2010, , .		2
105	Characterization of quarter wavelength line as measurement standard for scattering parameter in the frequency range of W-band and D-band. , 2012, , .		2
106	Confidence of waveguide VNA Measurement in the frequency range of W-band and D-band. , 2012, , .		2
107	Design of two-port verification devices for reflection measurement in waveguide vector network analyzers at millimeter and sub-millimeter wave frequencies. , 2014, , .		2
108	Measurement uncertainty in waveguide VNA calibrated by offset short calibration with oversized waveguide aperture at sub-millimeter wave frequency. , 2014, , .		2

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109	Impedance standard substrate fabricated by screen printing technology. , 2015, , .		2
110	Q-factor change of cavity by sample installation in resonance perturbation method. , 2015, , .		2
111	Performance evaluations of dielectric waveguide for millimeter-wave on-wafer measurements. , 2016, , .		2
112	Improvement of uncertainty analysis for waveguide VNA measurement at terahertz frequency. , 2016, , .		2
113	Permittivity measurement using a long fixture to eliminate reflection effect at fixture ends. , 2016, , .		2
114	Characteristics of a double-sided dirac cone metamaterial. , 2017, , .		2
115	Broadband Conductivity Measurement Method up to 110 GHz Using a Balanced-Type Circular Disk Resonator. , 2020, , .		2
116	Electromagnetic Measurement Techniques for Materials and Device Used in 6G Wireless Communications. , 2020, , .		2
117	Automatic probing system with machine learning algorithm. , 2021, , .		2
118	Investigation on practical problems in on-wafer measurement for actual devices. , 2021, , .		2
119	Fabrication technique of ground-plane embedded in a PrBa ₂ Cu ₃ O _x film. Physica C: Superconductivity and Its Applications, 2003, 392-396, 1332-1336.	1.2	1
120	Fabrication and characteristics of elementary oxide RSFQ circuits. Physica C: Superconductivity and Its Applications, 2003, 392-396, 1426-1432.	1.2	1
121	Hysteresis Control of Interface-Engineered Ramp-Edge Junctions for Single-Flux-Quantum Circuits. Japanese Journal of Applied Physics, 2004, 43, 3381-3385.	1.5	1
122	High-Speed Operation of HTS SQUID-Array Interface Circuits With a Cryocooler. IEEE Transactions on Applied Superconductivity, 2004, 14, 63-68.	1.7	1
123	Bilateral comparison of 1.85 mm coaxial air line dimensional and characteristic impedance measurements between NPL and NMIJ. , 2010, , .		1
124	Development of S-parameter standard for coaxial 3.5 mm connectors in the frequency range from 10 MHz to 100 MHz. , 2012, , .		1
125	Characterizing artefact standards for use with coaxial vector network analyzers at millimeter-wave frequencies. , 2012, , .		1
126	Continuing challenge of improving measurement accuracy in terahertz vector network analyzers (INVITED) â€” The Taming of "Terahertz vector network analyzers". , 2015, , .		1

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127	Metrological connector conversion technique for scattering parameter calibration. , 2016, , .		1
128	Connection torque consideration for waveguide flange at millimeter-wave and terahertz frequencies. , 2016, , .		1
129	Uncertainty estimation for gallium nitride diode model based on VNA measurement at 5.8 GHz. , 2016, , .		1
130	Permittivity measurements for high-permittivity materials at NMIJ using resonator methods. , 2016, , .		1
131	Low Cost, High Performance of Coplanar Waveguide Fabricated by Screen Printing Technology. IEICE Transactions on Electronics, 2016, E99.C, 1094-1099.	0.6	1
132	Primary standard and calibration of scattering parameter up to 12 GHz for Type N, 75 ohms connector. , 2016, , .		1
133	Development of S-Parameter Calibration System for Type-N, \$75-Omega\$ Connector Below 12 GHz. IEEE Transactions on Instrumentation and Measurement, 2017, 66, 1621-1627.	4.7	1
134	Measurement Uncertainty in Terahertz VNAs: Using Terahertz Vector Network Analyzers for Stable, Accurate Measurement and to Evaluate Uncertainty. IEEE Microwave Magazine, 2018, 19, 24-34.	0.8	1
135	Development of inductance reference standard using coaxial transmission lines. IEEJ Transactions on Electrical and Electronic Engineering, 2020, 15, 496-500.	1.4	1
136	Improvement of Measurement Uncertainty of THz Waveguide Vector Network Analyzers. , 2021, , .		1
137	New calibration technique for coaxial network analyzer reflection measurements at millimeter-wave frequencies. , 2011, , .		0
138	Metrological traceability of dimensional and electrical measurements of multi-line precision 1.85 mm air lines via comparison between NMIJ and Anritsu. , 2011, , .		0
139	Investigations of connection repeatability for waveguides with different size apertures. , 2013, , .		0
140	Uncertainty of parameter estimation in equivalent circuit model of gallium nitride diode for rectifier design at 5.8 GHz. , 2016, , .		0
141	Evaluation of verification devices with precise probe measurement system in NMIJ. , 2016, , .		0
142	Connector conversion technique for general-purpose connectors in S-parameter calibration. , 2016, , .		0
143	Coaxial Connector Conversion Method for Traceable Scattering Parameter Measurement. IEEE Transactions on Instrumentation and Measurement, 2017, 66, 1566-1571.	4.7	0
144	Quantitative Measurement in Scanning Microwave Microscopy. , 2018, , .		0

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145	Novel Method for Measuring Complex Permittivity of Thin Films at Millimeter Frequencies. , 2021, , .		0
146	The Effect of Process Parameters on the Electrical Properties of Ramp-Edge Josephson Junctions with Modified Interfaces. , 2000, , 996-998.		0
147	Fabrication and Evaluation of Sandwich-Type Interface-Treated Josephson Junctions. , 2000, , 1005-1007.		0
148	Carbon Nanotube Via Technologies for Future LSI Interconnects. Engineering Materials and Processes, 2005, , 315-326.	0.4	0
149	A 2-D Via-Free Indefinite Anisotropic Medium with LH and RH modes Degenerated at the $\hat{\Gamma}^c$ - Point. , 2018, , .		0
150	In-situ automatic adjustment of probe positions and tilt angles for GSGSG probe. , 2022, , .		0