

Yoshitada Isono

List of Publications by Year in descending order

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100
papers

1,340
citations

471509

17
h-index

361022

35
g-index

102
all docs

102
docs citations

102
times ranked

1122
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluation of size effect on mechanical properties of single crystal silicon by nanoscale bending test using AFM. Journal of Microelectromechanical Systems, 2000, 9, 450-459.	2.5	348
2	Plastic deformation of nanometric single crystal silicon wire in AFM bending test at intermediate temperatures. Journal of Microelectromechanical Systems, 2002, 11, 125-135.	2.5	97
3	Mechanical property measurements of nanoscale structures using an atomic force microscope. Ultramicroscopy, 2002, 91, 111-118.	1.9	95
4	Fabrication of a micro needle for a trace blood test. Sensors and Actuators A: Physical, 2002, 97-98, 478-485.	4.1	91
5	Mechanical Characteristics of FIB Deposited Carbon Nanowires Using an Electrostatic Actuated Nano Tensile Testing Device. Journal of Microelectromechanical Systems, 2007, 16, 191-201.	2.5	57
6	Development of AFM Tensile Test Technique for Evaluating Mechanical Properties of Sub-Micron Thick DLC Films. Journal of Microelectromechanical Systems, 2006, 15, 169-180.	2.5	55
7	Fatigue Life Prediction Criterion for Micro-“Nanoscale Single-Crystal Silicon Structures. Journal of Microelectromechanical Systems, 2009, 18, 129-137.	2.5	49
8	Quasi-static bending test of nano-scale SiO ₂ wire at intermediate temperatures using AFM-based technique. Sensors and Actuators A: Physical, 2003, 104, 78-85.	4.1	40
9	First-Principles Study on Piezoresistance Effect in Silicon Nanowires. Japanese Journal of Applied Physics, 2008, 47, 5132-5138.	1.5	40
10	Optical Properties of Strained Wurtzite Gallium Phosphide Nanowires. Nano Letters, 2016, 16, 3703-3709.	9.1	40
11	Three-Dimensional Molecular Dynamics Simulation of Atomic Scale Precision Processing Using a Pin Tool.. JSME International Journal Series A-Solid Mechanics and Material Engineering, 1997, 40, 211-218.	0.4	34
12	Simulation of piezoresistivity in $\langle 111 \rangle$ -type single-crystal silicon on the basis of the first-principles band structure. Physical Review B, 2009, 80, .	3.2	33
13	New development of a grinding wheel with resin cured by ultraviolet light. Journal of Materials Processing Technology, 2001, 113, 385-391.	6.3	31
14	The piezoresistance effect of FIB-deposited carbon nanowires under severe strain. Journal of Micromechanics and Microengineering, 2008, 18, 065011.	2.6	24
15	Molecular Dynamics Simulations of Atomic Scale Indentation and Cutting Process with Atomic Force Microscope.. JSME International Journal Series A-Solid Mechanics and Material Engineering, 1999, 42, 158-166.	0.4	20
16	Atomic Force Microscope Cantilever Array for Parallel Lithography of Quantum Devices. Japanese Journal of Applied Physics, 2004, 43, 4041-4044.	1.5	19
17	Detection of diffusion anisotropy due to particle asymmetry from single-particle tracking of Brownian motion by the large-deviation principle. Physical Review E, 2012, 85, 051134.	2.1	19
18	Influences of metal constituents to the characteristics and grinding abilities of metal bonded diamond wheel. Journal of Materials Processing Technology, 1997, 63, 175-180.	6.3	17

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19	First-Principles Simulation on Orientation Dependence of Piezoresistance Properties in Silicon Nanowires. Japanese Journal of Applied Physics, 2009, 48, 06FG09.	1.5	15
20	Single-molecule surface-enhanced Raman spectroscopy of 4,4'-bipyridine on a prefabricated substrate with directionally arrayed gold nanoparticle dimers. Japanese Journal of Applied Physics, 2017, 56, 06GK01.	1.5	13
21	Electrostatic actuated strain engineering in monolithically integrated VLS grown silicon nanowires. Nanotechnology, 2014, 25, 455705.	2.6	12
22	Development of wafer-level-packaging technology for simultaneous sealing of accelerometer and gyroscope under different pressures. Journal of Micromechanics and Microengineering, 2016, 26, 105007.	2.6	12
23	Strain engineering of core-shell silicon carbide nanowires for mechanical and piezoresistive characterizations. Nanotechnology, 2019, 30, 265702.	2.6	12
24	Surface-enhanced Raman spectroscopy using linearly arranged gold nanoparticles embedded in nanochannels. Japanese Journal of Applied Physics, 2015, 54, 06FL03.	1.5	11
25	Influences of surface roughness and phase transformations induced by grinding on the strength of ZrO ₂ -Y ₂ O ₃ . Precision Engineering, 1995, 17, 117-123.	3.4	9
26	Characterization of Interlayer Sliding Deformation for Individual Multiwalled Carbon Nanotubes Using Electrostatically Actuated Nanotensile Testing Device. Journal of Microelectromechanical Systems, 2014, 23, 944-954.	2.5	9
27	Mechanical characterization of sub-micrometer thick DLC films by AFM tensile testing for surface modification in MEMS. , 0, , .		8
28	Characterization method for relative Raman enhancement for surface-enhanced Raman spectroscopy using gold nanoparticle dimer array. Japanese Journal of Applied Physics, 2017, 56, 06GK03.	1.5	8
29	Influence of Gas Flow Ratio in PE-CVD Process on Mechanical Properties of Silicon Nitride Film. IEEJ Transactions on Electrical and Electronic Engineering, 2008, 3, 281-289.	1.4	7
30	Detection of wavelength shift of near-infrared laser using mechanical microresonator-based sensor with Si-covered gold nanorods as optical absorber. Sensors and Actuators A: Physical, 2020, 315, 112337.	4.1	7
31	Mechanical characterization of single crystal silicon and UV-LIGA nickel thin films using tensile tester operated in AFM. Fatigue and Fracture of Engineering Materials and Structures, 2005, 28, 675-686.	3.4	6
32	Surface-enhanced Raman spectroscopy analysis of DNA bases using arrayed and single dimer of gold nanoparticle. , 2017, , .		6
33	Surface-enhanced Raman Spectroscopy Analysis Device with Gold Nanoparticle Arranged Nanochannel. Electronics and Communications in Japan, 2017, 100, 33-41.	0.5	6
34	Effect of clamped beam pattern on resonant frequency shift of microresonator under near-infrared laser irradiation. Japanese Journal of Applied Physics, 2020, 59, S11104.	1.5	6
35	Location and Density Control of Carbon Nanotubes Synthesized Using Ferritin Molecules. Japanese Journal of Applied Physics, 2011, 50, 075102.	1.5	6
36	Scanning Probe Lithography with Negative and Positive Electron Beam Resists. Japanese Journal of Applied Physics, 2013, 52, 056501.	1.5	5

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37	Mechanical characterization of sub-100-nm-thick Au thin films by electrostatically actuated tensile testing with several strain rates. Japanese Journal of Applied Physics, 2014, 53, 027201.	1.5	5
38	Wavelength-dependent near-infrared microbolometer for short-wavelength infrared light with gold nanowire grating optical absorber. Microsystem Technologies, 2021, 27, 997-1005.	2.0	5
39	Electronic States and Piezoresistivity in Silicon Nanowires. , 0, , .		5
40	Thermal actuated multi-probes cantilever array for scanning probe parallel nano writing system. , 2007, , .		4
41	Scanning Probe Parallel Nanolithography with Multiprobe Cantilever Array Fabricated by Bulk Silicon Micromachining. IEEJ Transactions on Electrical and Electronic Engineering, 2008, 3, 260-267.	1.4	4
42	Quasi-static/cyclic loading tests of nanometric SiO ₂ /sub 2/ wires using AFM technique for NEMS designs. , 0, , .		3
43	Development of Scanning Probe Parallel Nanowriting System with Electron Beam Resist. , 2007, , .		3
44	Adsorption Density Control of Ferritin Molecules by Multistep Alternate Coating. Japanese Journal of Applied Physics, 2011, 50, 065201.	1.5	3
45	Development of in-situ SEM nano manipulation & MEMS-based testing system with ultra-precision displacement sensors for nanomechanics of MWCNTs. , 2012, , .		3
46	Fabrication and characterization of a CNT forest integrated micromechanical resonator for a rarefied gas analyzer in a medium vacuum atmosphere. Journal of Micromechanics and Microengineering, 2016, 26, 075010.	2.6	3
47	Vapor-liquid-solid growth of silicon nanowires from surface nanoholes formed with metal-assisted chemical etching. Japanese Journal of Applied Physics, 2021, 60, 055502.	1.5	3
48	Multiaxial Low-Cycle Fatigue Damage Evaluation Using A. C. Potential Method for Alloy 738LC Superalloy. Journal of Engineering Materials and Technology, Transactions of the ASME, 1994, 116, 488-494.	1.4	2
49	Development of Electrostatic Actuated Nano Tensile Testing Device for Mechanical and Electrical Characteristics of FIB Deposited Carbon Nanowire. Materials Research Society Symposia Proceedings, 2006, 924, 1.	0.1	2
50	Strain rate dependence of mechanical properties for sub 100 nm-thick Au film using Electrostatically Actuated Nano Tensile testing device. , 2011, , .		2
51	Microresonator with gold nanorod array for laser wavelength measurement by photo-thermal conversion. , 2017, , .		2
52	SERS detection and analysis of a single DNA oligomer using a single gold nanoparticle dimer. , 2017, , .		2
53	Dynamic electrical measurement of biomolecule behavior via plasmonically-excited nanogap fabricated by electromigration. Nano Express, 2021, 2, 010032.	2.4	2
54	Silicon-coated gold nanodiffraction grating structures as plasmonic absorbers for short-wavelength infrared light. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 2863.	2.1	2

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55	Fatigue Characteristics of the Si Moveable Comb Inserted into MEMS Optical Devices. IEICE Transactions on Electronics, 2005, E88-C, 1020-1024.	0.6	2
56	Polarization Dependence of Near-infrared Absorption Spectrum of Si-deposited Gold Nano-grating Structures. IEEJ Transactions on Sensors and Micromachines, 2020, 140, 72-78.	0.1	2
57	Dynamic surface-enhanced Raman spectroscopy of DNA oligomer with a single hotspot from a gold nanoparticle dimer. Optics Letters, 2022, 47, 373.	3.3	2
58	Integration of silicon nanowire bridges in microtrenches with perpendicular bottom-up growth promoted by surface nanoholes. Japanese Journal of Applied Physics, 2022, 61, 075502.	1.5	2
59	Mechanical characteristics of fib deposited carbon nanowire by electrostatic actuated nano tensile testing devices (eanat). , 0, , .		1
60	Development of Full-Reversed Bending Fatigue Tester Based on AFM Technique for Cyclic Damage Evaluation of MEMS. Key Engineering Materials, 2005, 297-300, 567-573.	0.4	1
61	New fatigue damage evaluation of MEMS materials under tension-compression cyclic loading. , 0, , .		1
62	Evaluation of Piezoresistive Effects for Carbon Nanowire using MEMS Actuators. , 2007, , .		1
63	Location and Density Control of Carbon Nanotubes Synthesized Using Ferritin Molecules. Japanese Journal of Applied Physics, 2011, 50, 075102.	1.5	1
64	Semi-empirical calculation for design of flexural mode silicon mechanical resonator with variable cross section. Sensors and Actuators A: Physical, 2016, 243, 25-34.	4.1	1
65	Eutectic-based wafer-level-packaging technique for piezoresistive MEMS accelerometers and bond characterization using molecular dynamics simulations. Journal of Micromechanics and Microengineering, 2018, 28, 035004.	2.6	1
66	Nanolithography on the Electron Beam Resist using the Scanning Probe Microscope Cantilever. ITB Journal of Science, 2010, 42, 1-10.	0.1	1
67	Fabrication and Characterization of Micro Connector for High Density Packaging Using UV Thick Photoresist. Journal of Japan Institute of Electronics Packaging, 2005, 8, 125-132.	0.1	1
68	First-Principle Study on Piezoresistance Effect in Silicon Nanowires. , 2007, , .		0
69	Novel shear strength evaluation of MEMS materials using asymmetrical four-point bending technique. , 2007, , .		0
70	A novel DFM cantilever with tuning function of resonant frequency for biomaterial imaging. , 2011, , .		0
71	Fabrication of gold nanoparticle-embedded nanochannels for surface-enhanced Raman spectroscopy. , 2014, , .		0
72	Direct measurement of shear piezoresistance coefficient on single crystal silicon nanowire by asymmetrical four-point bending test. , 2014, , .		0

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73	Bonding strength characterization of eutectic-based WLP using molecular dynamics and wafer level shear testing. , 2017, , .		0
74	A novel 3-axis tiny tactile sensor developed by 3-D microstructuring using punch creep forming process. , 2018, , .		0
75	SERS Detection of a Single Nucleobase in a DNA Oligomer Using a Gold Nanoparticle Dimer. , 2019, , .		0
76	Manipulation of Biomolecules Into Nanogap by Plasmonic Optical Excitation for Highly Sensitive Biosensing. , 2019, , .		0
77	Anomalous Piezoresistive Changes of Core-Shell Structured SiC Nanowires. , 2021, , .		0
78	Three-axis force sensor miniaturized by 3D microstructuring using high-temperature punch creep-forming process. Journal of Micromechanics and Microengineering, 2021, 31, 025009.	2.6	0
79	Spectroscopic Measurement of Water Using an Electrostatic Transducer with Near-infrared Absorber. IEEJ Transactions on Sensors and Micromachines, 2021, 141, 321-326.	0.1	0
80	Spectroscopic measurement of water using an electrostatic transducer with near-infrared absorber. Electronics and Communications in Japan, 2021, 104, e12340.	0.5	0
81	High Temperature Bending Tests for Si and SiO ₂ Fixed Beam on a Nanometer Scale using AFM. The Proceedings of the JSME Annual Meeting, 2000, 2000.3, 215-216.	0.0	0
82	218 Evaluation of Polishing Ability for Grinding Stone Developed by Using Rapid Prototyping. The Proceedings of Conference of Kansai Branch, 2000, 2000.75, _2-35_- _2-36_.	0.0	0
83	220 The Study of Machining in Fluorescence State Excited by Ultraviolet : Inspection of basic principal and phenomenon. The Proceedings of Conference of Kansai Branch, 2000, 2000.75, _2-39_- _2-40_.	0.0	0
84	K-0704 Nano-indentation tests for Evaluation of Mechanical Properties of a-Si:C:H thin film deposited by PE-CVD method. The Proceedings of the JSME Annual Meeting, 2001, I.01.1, 297-298.	0.0	0
85	K-0718 Development of strain measurement technique for MEMS materials using micro tensile tester built in AFM. The Proceedings of the JSME Annual Meeting, 2001, I.01.1, 325-326.	0.0	0
86	OS06W0370 AFM tensile test of sub-micron thick DLC film for surface modification in MEMS. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003.2, _OS06W0370_- _OS06W0370_.	0.0	0
87	OS6(1)-3(OS06W0370) AFM Tensile Test of Sub-Micron Thick DLC Film for Surface Modification in MEMS. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003, 105.	0.0	0
88	High-Cycle Fatigue Tests of Micro/Nano-Scale Single Crystal Silicon for Reliable Design of MEMS/NEMS. The Proceedings of the JSME Annual Meeting, 2004, 2004.1, 369-370.	0.0	0
89	Inelastic Constitutive Relationship of Electroplated Nickel Films at Elevated Temperatures for Design of Micro Connector. IEEJ Transactions on Sensors and Micromachines, 2005, 125, 294-301.	0.1	0
90	T0302-2-2 Design of Fixed-Fixed Beam MEMS Resonator with Non-uniform Rectangular Cross Section. The Proceedings of the JSME Annual Meeting, 2009, 2009.8, 67-68.	0.0	0

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91	OS06-2-3 Carbon nanotubes-embedded MEMS resonator device for hydrogen gas sensing system. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, _OS06-2-3-	0.0	0
92	OS06-1-2 Evaluation of mechanical properties of sub 100 nm-thick Au thin films for nano transfer printing. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2011, 2011.10, _OS06-1-2-	0.0	0
93	6PM1-A-4 Study on interlayer sliding deformation mechanism of MWCNT using MEMS-based nanotensile testing device. The Proceedings of the Symposium on Micro-Nano Science and Technology, 2013, 2013.5, 139-140.	0.0	0
94	J2240304 Evaluation of Shear Piezoresistance Coefficient of Silicon Nanowire by Asymmetrical Four Point Bending Test. The Proceedings of Mechanical Engineering Congress Japan, 2014, 2014, _J2240304-_J2240304-	0.0	0
95	EVALUATION OF MECHANICAL AND THERMAL PROPERTIES OF CUBIC BORON NITRIDE BY AB-INITIO CALCULATION. Zairyo/Journal of the Society of Materials Science, Japan, 1998, 47, 39-44.	0.2	0
96	MICROSTRUCTURAL STUDY OF MECHANICAL AND THERMAL PROPERTIES OF DIAMOND-LIKE CARBON. Zairyo/Journal of the Society of Materials Science, Japan, 1998, 47, 267-274.	0.2	0
97	Surface-Enhanced Raman Spectroscopy Analysis Device with Gold Nanoparticle Arranged Nanochannel. IEEJ Transactions on Sensors and Micromachines, 2015, 135, 214-220.	0.1	0
98	OS12-2 Evaluation of Piezoresistivity for VLS-Grown Silicon Nanowires Under Enormous Elastic Strain(Mechanical properties of nano- and micro-materials-1,OS12 Mechanical properties of nano- and) Tj ETQq0 0 0 rgBT /Overlock 10 Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2015, 2015.14, 184.	0.0	0
99	Highly-sensitive Detection of Adenine Molecule using Surface-Enhanced Raman Spectroscopy with Gold Nanoparticle Dimer Array. IEEJ Transactions on Sensors and Micromachines, 2016, 136, 256-260.	0.1	0
100	Effects of beam length and vibration amplitude on measurement resolution in microresonator-based optical sensing. Microsystem Technologies, 0, , .	2.0	0