Masahiko Tomitori

List of Publications by Year
in descending order

116	1,593	331670	361022
papers	citations	21 h-index	35 g-index

116	116	116	1274
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Surface Effect on Youngâ€™s Modulus of Sub-Two-Nanometer Gold [111] Nanocontacts. Physical Review Letters, 2022, 128, 146101.	7.8	2
2	Mechanical energy dissipation of an oscillating cantilever close to a conductive substrate partly covered with thin mica films evaluated by frequency modulation atomic force microscopy. Japanese Journal of Applied Physics, 2022, 61, 065006.	1.5	1
3	Non-thermal liquid-to-solid Si conversion induced by electron beam irradiation. Japanese Journal of Applied Physics, 2021, 60, SBBM03.	1.5	0
4	In-situ high-resolution scanning electron microscopy observation of electrodeposition and stripping of lead in an electrochemical cell. Japanese Journal of Applied Physics, 2021, 60, 035509.	1.5	2
5	Peculiar Atomic Bond Nature in Platinum Monatomic Chains. Nano Letters, 2021, 21, 3922-3928.	9.1	9
6	Critical shear stress of gold nanocontacts estimated by in situ transmission electron microscopy equipped with a quartz length-extension resonator. Applied Physics Express, 2021, 14, 075006.	2.4	2
7	Fabrication of Si protrusions by local melting of a narrow current path on a Si wafer via resistive heating. Japanese Journal of Applied Physics, 2021, 60, 126506.	1.5	2
8	Evaluation of the discrete thickness of exfoliated artificially synthesized mica nanosheets on silicon substrates: Toward characterization of the tunneling current through the nanosheets. Applied Surface Science, 2020, 532, 147388.	6.1	14
9	Mechanical analysis of gold nanocontacts during stretching using an in-situ transmission electron microscope equipped with a force sensor. Applied Physics Express, 2020, 13, 025001.	2.4	5
10	Atomic scale mechanics explored by in situ transmission electron microscopy with a quartz length-extension resonator as a force sensor. Nanotechnology, 2020, 31, 205706.	2.6	6
11	Silicon protrusions with caps containing precipitates of iron silicides fabricated via liquid-phase epitaxy under a temperature distribution with a local maximum caused by applied tensile stress. Japanese Journal of Applied Physics, 2020, 59, 085501.	1.5	3
12	Layer etching of mica nanosheets using a focused electron beam. Applied Physics Express, 2020, 13, 106502.	2.4	4
13	Two-Dimensional Materials: Nanomechanical Properties of Epitaxial Silicene Revealed by Noncontact Atomic Force Microscopy (Adv. Mater. Interfaces 2/2019). Advanced Materials Interfaces, 2019, 6, 1970014.	3.7	0
14	Microanalysis of silicon protrusions with a titanium cap formed via surface melting and solidification under applied tensile stress. Japanese Journal of Applied Physics, 2019, 58, 025501.	1.5	4
15	Nanomechanical Properties of Epitaxial Silicene Revealed by Noncontact Atomic Force Microscopy. Advanced Materials Interfaces, 2019, 6, 1801278.	3.7	2
16	Two-Dimensional, Hierarchical Ag-Doped TiO₂ Nanocatalysts: Effect of the Metal Oxidation State on the Photocatalytic Properties. ACS Omega, 2018, 3, 2579-2587.	3.5	59
17	Energy dissipation unveils atomic displacement in the noncontact atomic force microscopy imaging of Si(111)â^'(7Ã—7). Physical Review B, 2018, 97, .	3.2	9
18	Nanoscale characterisation of TiO2(110) annealed in air. Applied Surface Science, 2018, 428, 1000-1005.	6.1	6

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19	XPS and STM study of TiO 2 (110)-(1â€¯Ã—â€¯1) surfaces immersed in simulated body fluid. Surface Science, 2018, 668, 61-67.	1.9	8
20	Hierarchical Bimetallic AgPt Nanoferns as High-Performance Catalysts for Selective Acetone Hydrogenation to Isopropanol. ACS Omega, 2018, 3, 11526-11536.	3.5	15
21	Dependence of calcium phosphate formation on nanostructure of rutile TiO₂(110) surfaces. Japanese Journal of Applied Physics, 2018, 57, 115501.	1.5	3
22	Thermal Stability of Single-Atom Termination at a Pyramidal Apex of an Ir-W Tip. E-Journal of Surface Science and Nanotechnology, 2018, 16, 294-297.	0.4	2
23	Resistivity change in Joule heat energy dissipation detected by noncontact atomic force microscopy using a silicon tip terminated with/without atomic hydrogen. Japanese Journal of Applied Physics, 2018, 57, 08NB04.	1.5	2
24	Quasi-stabilized hydration layers on muscovite mica under a thin water film grown from humid air. Scientific Reports, 2017, 7, 4054.	3.3	27
25	Atomic-scale electric capacitive change detected with a charge amplifier installed in a non-contact atomic force microscope. Applied Physics Express, 2016, 9, 046601.	2.4	1
26	Evaluation and optimization of quartz resonant-frequency retuned fork force sensors with high Q factors, and the associated electric circuits, for non-contact atomic force microscopy. Review of Scientific Instruments, 2016, 87, 023702.	1.3	3
27	Local protrusions formed on Si(111) surface by surface melting and solidification under applied tensile stress. Applied Physics Letters, 2016, 109, 121601.	3.3	4
28	An Atomic-Scale Study of TiO₂(110) Surfaces Exposed to Humid Environments. Journal of Physical Chemistry C, 2016, 120, 21427-21435.	3.1	19
29	Difference in etching between Si(111) and (001) surfaces induced by atomic hydrogen irradiation observed by noncontact atomic force microscopy. Japanese Journal of Applied Physics, 2015, 54, 08LB08.	1.5	2
30	Water wettability of Si(1 1 1) and (0 0 1) surfaces prepared to be reconstructed, atomic-hydrogen terminated and thinly oxidized in an ultrahigh vacuum chamber. Applied Surface Science, 2015, 349, 904-910.	6.1	5
31	Hydration of MgO(100) Surface Promoted at âŸ¨011âŸ© Steps. Journal of Physical Chemistry C, 2015, 119, 8250-8257.	3.1	11
32	Atom-Resolved Analysis of an Ionic KBr(001) Crystal Surface Covered with a Thin Water Layer by Frequency Modulation Atomic Force Microscopy. Langmuir, 2015, 31, 3876-3883.	3.5	12
33	Resonance frequency-retuned quartz tuning fork as a force sensor for noncontact atomic force microscopy. Applied Physics Letters, 2014, 105, .	3.3	15
34	Microscopic techniques bridging between nanoscale and microscale with an atomically sharpened tip - field ion microscopy/scanning probe microscopy/ scanning electron microscopy. Microscopy (Oxford, England), 2014, 63, i11.1-i12.	1.5	0
35	Thermal Transformation of 4,4â€³-Diamino-p-terphenyl on a Si(111)-7 Ã— 7 Surface Analyzed by X-ray Photoemission Spectroscopy and Scanning Tunneling Microscopy. Journal of Physical Chemistry C, 2014, 118, 25104-25109.	3.1	2
36	Stable alignment of 4,4â€³-diamino-p-terphenyl chemically adsorbed on a Si(001)-(2 Ã— 1) surface observed by scanning tunneling microscopy. Surface Science, 2014, 630, 96-100.	1.9	1

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37	XPS and STM Study of Nb-Doped TiO₂(110)-(1 Ã— 1) Surfaces. Journal of Physical Chemistry C, 2013, 117, 17680-17686.	3.1	35
38	Electrochemical etching of metal wires in low-stress electric contact using a liquid metal electrode to fabricate tips for scanning tunneling microscopy. Applied Surface Science, 2013, 284, 715-719.	6.1	4
39	Adsorption of Propylene Carbonate Molecules on a TiO2(110) Surface. Journal of Physical Chemistry C, 2013, 117, 10410-10416.	3.1	6
40	Water Wettability of an Ultrathin Layer of Silicon Oxide Epitaxially Grown on a Rutile Titanium Dioxide (110) Surface. Journal of Physical Chemistry C, 2013, 117, 23621-23625.	3.1	6
41	Lateral Distribution of Li Atoms at the Initial Stage of Adsorption on TiO₂(110) Surface. Journal of Physical Chemistry C, 2012, 116, 13688-13692.	3.1	4
42	Local interaction imaging by SiGe quantum dot probe. Current Applied Physics, 2012, 12, 581-584.	2.4	0
43	A Special Section on Nano-Bio Materials and Systems. Science of Advanced Materials, 2012, 4, 93-95.	0.7	0
44	Principles and Topics of Scanning Probe Microscopy for Nanoscale Evaluation. Journal of the Japan Society of Colour Material, 2010, 83, 233-239.	0.1	0
45	Adsorption State of 4,4â€²â€²-Diamino-p-terphenyl through an Amino Group Bound to Si(111)-7 Ã— 7 Surface Examined by X-ray Photoelectron Spectroscopy and Scanning Tunneling Microscopy. Journal of Physical Chemistry C, 2010, 114, 11109-11114.	3.1	5
46	Atomic Scale Analysis of Ultrathin SiO₂ Films Prepared on TiO₂(100) Surfaces. Journal of Physical Chemistry C, 2010, 114, 20189-20194.	3.1	15
47	Frequency modulation atomic force microscope observation of TiO2(110) surfaces in water. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C4C5-C4C10.	1.2	10
48	Low-flux elucidation of initial growth of Ge clusters deposited on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>Si</mml:mtext><mml:mrow><mml:mo>(</mml:mo><mml:mrow><mml:mn>111</mml:mn></mml:mrow></mml:mrow></mml:mrow></mml:math> by scanning tunneling microscopy. Physical Review B, 2009, 79, .	3.2	5
49	Nanomechanical Interaction between a Tip and a Sample with Changing Bias Voltage Observed by Using Scanning Probe Microscopy. Hyomen Kagaku, 2008, 29, 239-245.	0.0	0
50	Atomic force microscope Si tip with Ge clusters with the capability of remoulding by heating. Nanotechnology, 2007, 18, 084020.	2.6	2
51	NC-AFM 2006: Proceedings of the 9th International Conference on Non-contact Atomic Force Microscopy. Nanotechnology, 2007, 18, 080301.	2.6	0
52	Characterization of Semiconducting Materials. Nanoscience and Technology, 2007, , 133-137.	1.5	0
53	Scanning Tunneling Microscopy. Nanoscience and Technology, 2007, , 7-14.	1.5	0
54	Energy Spectra of Electrons Backscattered from Sample Surfaces with Heterostructures using Field-Emission Scanning Tunneling Microscopy. Japanese Journal of Applied Physics, 2006, 45, 2278-2282.	1.5	10

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55	Evidence of temperature dependence of initial adsorption sites of Ge atoms on Si(111)-7Ã—7. Applied Physics Letters, 2006, 88, 171902.	3.3	9
56	Electric conductance through chemical bonding states being formed between a Si tip and aSi(111)â˜'(7Ã—7)surface by bias-voltage noncontact atomic force spectroscopy. Physical Review B, 2006, 73, .	3.2	5
57	Hexagonal arrangement of Ge clusters self-organized on a template of half unit cells of Si(111)-7Ã—7 observed by scanning tunneling microscopy. Surface Science, 2005, 574, L17-L22.	1.9	18
58	A Si nanopillar grown on a Si tip by atomic force microscopy in ultrahigh vacuum for a high-quality scanning probe. Applied Physics Letters, 2005, 86, 073110.	3.3	21
59	Observation of Electronic States on Si(111)-(7Ã—7)through Short-Range Attractive Force with Noncontact Atomic Force Spectroscopy. Physical Review Letters, 2004, 93, 256101.	7.8	86
60	Germanium Nanostructures on Silicon Observed by Scanning Probe Microscopy. MRS Bulletin, 2004, 29, 484-487.	3.5	5
61	Detection Improvement for Electron Energy Spectra for Surface Analysis Using a Field Emission Scanning Tunneling Microscope. Japanese Journal of Applied Physics, 2003, 42, 4837-4840.	1.5	12
62	Interplay between Nonlinearity, Scan Speed, Damping, and Electronics in Frequency Modulation Atomic-Force Microscopy. Physical Review Letters, 2002, 89, 146104.	7.8	54
63	DNA molecules sticking on a vicinal Si(111) surface observed by noncontact atomic force microscopy. Applied Surface Science, 2002, 188, 474-480.	6.1	9
64	Germanium islands grown on a Si(111)7Ã—7 surface observed by noncontact atomic force microscopy with simultaneous imaging on damping. Applied Surface Science, 2002, 188, 292-300.	6.1	14
65	Bias Dependence of NC-AFM Images and Tunneling Current Variations on Semiconductor Surfaces. Nanoscience and Technology, 2002, , 79-92.	1.5	2
66	An applicability of scanning tunneling microscopy for surface electron spectroscopy. Surface Science, 2001, 493, 49-55.	1.9	18
67	Simultaneous imaging of tunneling current and damping energy by noncontact-AFM in ultra-high vacuum. Applied Physics A: Materials Science and Processing, 2001, 72, S51-S54.	2.3	12
68	Bias dependence of Si(111)7Ã—7 images observed by noncontact atomic force microscopy. Applied Surface Science, 2000, 157, 207-211.	6.1	43
69	Analysis of electron standing waves in a vacuum gap of scanning tunneling microscopy: Measurement of band bending through energy shifts of electron standing wave. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 48.	1.6	9
70	Simultaneous Imaging of Tunneling Current Variation by Noncontact Atomic Force Microscopy in Ultrahigh Vacuum. Japanese Journal of Applied Physics, 2000, 39, 3753-3757.	1.5	13
71	Evaluation of an Electric Field over Sample Surfaces by Electron Standing Waves in a Vacuum Gap of Scanning Tunneling Microscopy. Japanese Journal of Applied Physics, 2000, 39, 3758-3760.	1.5	8
72	Atomic force microscope tip sharpening and evaluation by electric field confinement using a metal grid close to the tip. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 648.	1.6	3

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73	Tip cleaning and sharpening processes for noncontact atomic force microscope in ultrahigh vacuum. Applied Surface Science, 1999, 140, 432-438.	6.1	34
74	Energy spectrum of backscattered electrons excited by a field emission scanning tunneling microscope with a build-up [111]-oriented W tip. Applied Surface Science, 1999, 144-145, 123-127.	6.1	21
75	Interaction measurements between a tip and a sample in proximity regions controlled by tunneling current in a UHV STMâ€“AFM. Applied Surface Science, 1999, 144-145, 501-504.	6.1	3
76	Tunneling condition dependence of electron standing waves in vacuum gaps on Au(111) and Si(001) observed by scanning tunneling microscopy. Surface Science, 1999, 438, 311-318.	1.9	6
77	STM/STS Study of Semiconductor Clusters. Springer Series in Cluster Physics, 1999, , 419-427.	0.3	0
78	Removal of contamination and oxide layers from UHV-AFM tips. Applied Physics A: Materials Science and Processing, 1998, 66, S319-S323.	2.3	25
79	Differential Conductance Imaging of Si and Ge Islands Deposited on Si(001) by Scanning Tunneling Microscopy. Japanese Journal of Applied Physics, 1998, 37, 3789-3792.	1.5	2
80	Scanning Auger Electron Microscopy Evaluation and Composition Control of Cantilevers for Ultrahigh Vacuum Atomic Force Microscopy. Japanese Journal of Applied Physics, 1997, 36, 3855-3859.	1.5	12
81	Sharpening Processes of Scanning Tunneling Microscopy/Scanning Tunneling Spectroscopy Tips by Thermal Field Treatment. Japanese Journal of Applied Physics, 1997, 36, 3844-3849.	1.5	20
82	Titanium distribution on the surface of Ziegler-Natta catalysts observed by scanning Auger electron microscopy. Journal of Molecular Catalysis A, 1997, 115, 259-263.	4.8	11
83	Reproducibility of scanning tunneling spectroscopy of Si(111)7 Ã— 7 using a build-up tip. Surface Science, 1996, 355, 21-30.	1.9	34
84	Visualization of tip-surface geometry at atomic distance by TEM-STM holder. Surface Science, 1996, 357-358, 208-212.	1.9	23
85	How Have We Tried to Get STM Images with Atomic Resolution in UHV Using Our Lab-made STMs? Recepes for Designs and Experiments. (I).. Hyomen Kagaku, 1996, 17, 286-289.	0.0	0
86	How Have We Tried to Get STM Images with Atomic Resolution in UHV Using Our Lab-made STMs?. Hyomen Kagaku, 1996, 17, 352-355.	0.0	0
87	Atom probe and field emission electron spectroscopy studies of semiconductor films on metals. Applied Surface Science, 1995, 87-88, 12-17.	6.1	2
88	Scanning tunneling microscopy/spectroscopy studies of conducting polymer polypyrrole. Journal of Applied Physics, 1994, 76, 5595-5597.	2.5	11
89	Atom-probe and field emission electron spectroscopy studies of ordered structures and electronic properties of Ge overlayers on Ir-tips. Applied Surface Science, 1994, 76-77, 291-296.	6.1	1
90	STM study of the Ge growth mode on Si(001) substrates. Applied Surface Science, 1994, 76-77, 322-328.	6.1	155

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91	Layered heteroepitaxial growth of germanium on Si(015) observed by scanning tunneling microscopy. Surface Science, 1994, 301, 214-222.	1.9	43
92	Atom-probe and field emission electron spectroscope studies of Ge on Ir. Applied Surface Science, 1993, 67, 43-47.	6.1	2
93	Viscoelastic and electrical properties of self-assembled monolayers on gold (111) films. Langmuir, 1993, 9, 3600-3611.	3.5	149
94	Scanning Tunneling and Atomic Force Microscopy of T4 Bacteriophage and Tobacco Mosaic Virus. Japanese Journal of Applied Physics, 1993, 32, 2962-2964.	1.5	19
95	High resolution tunneling microscopies: from FEM to STS. Surface Science, 1992, 266, 204-213.	1.9	7
96	STM study of Ge overlayers on Si(001). Surface Science, 1992, 266, 285-288.	1.9	34
97	Nanometer scale mechanical properties of gold(111) thin films. Langmuir, 1992, 8, 2832-2842.	3.5	32
98	STM study of geometric and electronic structures of Ge dimers on Si(001). Ultramicroscopy, 1992, 42-44, 895-901.	1.9	18
99	STM study of initial stage of Ge epitaxy on Si(001). Ultramicroscopy, 1992, 42-44, 902-909.	1.9	41
100	Work function, field emitted electron energy spectrum and surface composition of silicon covered molybdenum. Surface Science, 1991, 246, 201-204.	1.9	7
101	STM study of epitaxial growth of Ge on Si(001). Surface Science, 1991, 253, L411-L416.	1.9	29
102	ULTRAMICROANALYSIS UTILIZING ELECTRON TUNNELING. Analytical Sciences, 1991, 7, 1225-1230.	1.6	0
103	STM study of epitaxial growth of Ge on Si(001). Surface Science Letters, 1991, 253, L411-L416.	0.1	1
104	Atomic configurations of tip apexes and scanning tunnelling microscopy-spectroscopy. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1991, 8, 81-97.	3.5	17
105	Correlation between scanning tunneling microscopy/spectroscopy images and apex profiles of scanning tips. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1990, 8, 421-424.	2.1	22
106	Corrugation of Si surfaces and profiles of tip apexes. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1990, 8, 222-225.	2.1	24
107	Elaboration and evaluation of tip manipulation of scanning tunneling microscopy. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1990, 8, 425-428.	2.1	6
108	Arrangement and stability of atoms at the apex of a scanning tip. Journal of Microscopy, 1988, 152, 637-641.	1.8	24

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109	Scanning tunneling microscopy study of conductive ceramics. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1988, 6, 454-456.	2.1	5
110	STM study of the effects of pulsed laser irradiation on semiconductor surfaces. Journal of Microscopy, 1988, 152, 337-345.	1.8	3
111	DLTS Study of Heat Treatments onn-CdTe Crystals. Japanese Journal of Applied Physics, 1987, 26, 588-591.	1.5	11
112	Piezoelectric and electrostrictive ceramics for STM. Surface Science, 1987, 181, 210-215.	1.9	16
113	DLTS Study on the Gradation of the Trap Concentration Profiles in n-CdTe Crystals. Japanese Journal of Applied Physics, 1985, 24, 1488-1492.	1.5	9
114	DLTS Study of Pulsed Ruby Laser Irradiation Effects on n-CdTe. Japanese Journal of Applied Physics, 1985, 24, L329-L331.	1.5	8
115	STM study of the effects of pulsed laser irradiation on semiconductor surfaces. The Monthly Microscopical Journal, 1870, 3, 337-345.	0.0	0
116	In-situ observation of formation of Si protrusions by local melting of a Si narrow current path using resistive heating together with electron beam irradiation. Japanese Journal of Applied Physics, 0, , .	1.5	1