

Masahiko Tomitori

List of Publications by Year in descending order

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116
all docs

116
docs citations

116
times ranked

1274
citing authors

#	ARTICLE	IF	CITATIONS
1	STM study of the Ge growth mode on Si(001) substrates. Applied Surface Science, 1994, 76-77, 322-328.	6.1	155
2	Viscoelastic and electrical properties of self-assembled monolayers on gold (111) films. Langmuir, 1993, 9, 3600-3611.	3.5	149
3	Observation of Electronic States on Si(111)-(7 \times 7) through Short-Range Attractive Force with Noncontact Atomic Force Spectroscopy. Physical Review Letters, 2004, 93, 256101.	7.8	86
4	Two-Dimensional, Hierarchical Ag-Doped TiO ₂ Nanocatalysts: Effect of the Metal Oxidation State on the Photocatalytic Properties. ACS Omega, 2018, 3, 2579-2587.	3.5	59
5	Interplay between Nonlinearity, Scan Speed, Damping, and Electronics in Frequency Modulation Atomic-Force Microscopy. Physical Review Letters, 2002, 89, 146104.	7.8	54
6	Layered heteroepitaxial growth of germanium on Si(015) observed by scanning tunneling microscopy. Surface Science, 1994, 301, 214-222.	1.9	43
7	Bias dependence of Si(111)7 \times 7 images observed by noncontact atomic force microscopy. Applied Surface Science, 2000, 157, 207-211.	6.1	43
8	STM study of initial stage of Ge epitaxy on Si(001). Ultramicroscopy, 1992, 42-44, 902-909.	1.9	41
9	XPS and STM Study of Nb-Doped TiO ₂ (110)-(1 \times 1) Surfaces. Journal of Physical Chemistry C, 2013, 117, 17680-17686.	3.1	35
10	STM study of Ge overlayers on Si(001). Surface Science, 1992, 266, 285-288.	1.9	34
11	Reproducibility of scanning tunneling spectroscopy of Si(111)7 \times 7 using a build-up tip. Surface Science, 1996, 355, 21-30.	1.9	34
12	Tip cleaning and sharpening processes for noncontact atomic force microscope in ultrahigh vacuum. Applied Surface Science, 1999, 140, 432-438.	6.1	34
13	Nanometer scale mechanical properties of gold(111) thin films. Langmuir, 1992, 8, 2832-2842.	3.5	32
14	STM study of epitaxial growth of Ge on Si(001). Surface Science, 1991, 253, L411-L416.	1.9	29
15	Quasi-stabilized hydration layers on muscovite mica under a thin water film grown from humid air. Scientific Reports, 2017, 7, 4054.	3.3	27
16	Removal of contamination and oxide layers from UHV-AFM tips. Applied Physics A: Materials Science and Processing, 1998, 66, S319-S323.	2.3	25
17	Arrangement and stability of atoms at the apex of a scanning tip. Journal of Microscopy, 1988, 152, 637-641.	1.8	24
18	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

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19	Visualization of tip-surface geometry at atomic distance by TEM-STM holder. <i>Surface Science</i> , 1996, 357-358, 208-212.	1.9	23
20	Correlation between scanning tunneling microscopy/spectroscopy images and apex profiles of scanning tips. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1990, 8, 421-424.	2.1	22
21	Energy spectrum of backscattered electrons excited by a field emission scanning tunneling microscope with a build-up [111]-oriented W tip. <i>Applied Surface Science</i> , 1999, 144-145, 123-127.	6.1	21
22	A Si nanopillar grown on a Si tip by atomic force microscopy in ultrahigh vacuum for a high-quality scanning probe. <i>Applied Physics Letters</i> , 2005, 86, 073110.	3.3	21
23	Sharpening Processes of Scanning Tunneling Microscopy/Scanning Tunneling Spectroscopy Tips by Thermal Field Treatment. <i>Japanese Journal of Applied Physics</i> , 1997, 36, 3844-3849.	1.5	20
24	Scanning Tunneling and Atomic Force Microscopy of T4 Bacteriophage and Tobacco Mosaic Virus. <i>Japanese Journal of Applied Physics</i> , 1993, 32, 2962-2964.	1.5	19
25	An Atomic-Scale Study of TiO ₂ (110) Surfaces Exposed to Humid Environments. <i>Journal of Physical Chemistry C</i> , 2016, 120, 21427-21435.	3.1	19
26	STM study of geometric and electronic structures of Ge dimers on Si(001). <i>Ultramicroscopy</i> , 1992, 42-44, 895-901.	1.9	18
27	An applicability of scanning tunneling microscopy for surface electron spectroscopy. <i>Surface Science</i> , 2001, 493, 49-55.	1.9	18
28	Hexagonal arrangement of Ge clusters self-organized on a template of half unit cells of Si(111)-7 \times 7 observed by scanning tunneling microscopy. <i>Surface Science</i> , 2005, 574, L17-L22.	1.9	18
29	Atomic configurations of tip apexes and scanning tunnelling microscopy-spectroscopy. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 1991, 8, 81-97.	3.5	17
30	Piezoelectric and electrostrictive ceramics for STM. <i>Surface Science</i> , 1987, 181, 210-215.	1.9	16
31	Atomic Scale Analysis of Ultrathin SiO ₂ Films Prepared on TiO ₂ (100) Surfaces. <i>Journal of Physical Chemistry C</i> , 2010, 114, 20189-20194.	3.1	15
32	Resonance frequency-retuned quartz tuning fork as a force sensor for noncontact atomic force microscopy. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	15
33	Hierarchical Bimetallic AgPt Nanoferns as High-Performance Catalysts for Selective Acetone Hydrogenation to Isopropanol. <i>ACS Omega</i> , 2018, 3, 11526-11536.	3.5	15
34	Germanium islands grown on a Si(111)7 \times 7 surface observed by noncontact atomic force microscopy with simultaneous imaging on damping. <i>Applied Surface Science</i> , 2002, 188, 292-300.	6.1	14
35	Evaluation of the discrete thickness of exfoliated artificially synthesized mica nanosheets on silicon substrates: Toward characterization of the tunneling current through the nanosheets. <i>Applied Surface Science</i> , 2020, 532, 147388.	6.1	14
36	Simultaneous Imaging of Tunneling Current Variation by Noncontact Atomic Force Microscopy in Ultrahigh Vacuum. <i>Japanese Journal of Applied Physics</i> , 2000, 39, 3753-3757.	1.5	13

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37	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
38	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
39	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
40	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
41	DLTS Study of Heat Treatments on CdTe Crystals. Japanese Journal of Applied Physics, 1987, 26, 588-591.	1.5	11
42	Scanning tunneling microscopy/spectroscopy studies of conducting polymer polypyrrole. Journal of Applied Physics, 1994, 76, 5595-5597.	2.5	11
43	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
44	Hydration of MgO(100) Surface Promoted at $\sqrt{011}$ Steps. Journal of Physical Chemistry C, 2015, 119, 8250-8257.	3.1	11
45	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
46	Frequency modulation atomic force microscope observation of TiO ₂ (110) surfaces in water. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2010, 28, C4C5-C4C10.	1.2	10
47	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
48	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
49	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
50	Evidence of temperature dependence of initial adsorption sites of Ge atoms on Si(111)- $\sqrt{7}$. Applied Physics Letters, 2006, 88, 171902.	3.3	9
51	Energy dissipation unveils atomic displacement in the noncontact atomic force microscopy imaging of Si(111)- $\sqrt{7}$. Physical Review B, 2018, 97, .	3.2	9
52	Peculiar Atomic Bond Nature in Platinum Monatomic Chains. Nano Letters, 2021, 21, 3922-3928.	9.1	9
53	DLTS Study of Pulsed Ruby Laser Irradiation Effects on n-CdTe. Japanese Journal of Applied Physics, 1985, 24, L329-L331.	1.5	8
54	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

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55	XPS and STM study of TiO ₂ (110)-(1 Å ⁻¹) surfaces immersed in simulated body fluid. Surface Science, 2018, 668, 61-67.	1.9	8
56	Work function, field emitted electron energy spectrum and surface composition of silicon covered molybdenum. Surface Science, 1991, 246, 201-204.	1.9	7
57	High resolution tunneling microscopies: from FEM to STS. Surface Science, 1992, 266, 204-213.	1.9	7
58	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
59	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
60	Adsorption of Propylene Carbonate Molecules on a TiO ₂ (110) Surface. Journal of Physical Chemistry C, 2013, 117, 10410-10416.	3.1	6
61	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
62	Nanoscale characterisation of TiO ₂ (110) annealed in air. Applied Surface Science, 2018, 428, 1000-1005.	6.1	6
63	Atomic scale mechanics explored by <i>in situ</i> transmission electron microscopy with a quartz length-extension resonator as a force sensor. Nanotechnology, 2020, 31, 205706.	2.6	6
64	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
65	Germanium Nanostructures on Silicon Observed by Scanning Probe Microscopy. MRS Bulletin, 2004, 29, 484-487.	3.5	5
66	Electric conductance through chemical bonding states being formed between a Si tip and a Si(111)-(7 Å ⁻¹) surface by bias-voltage noncontact atomic force spectroscopy. Physical Review B, 2006, 73, .	3.2	5
67	Low-flux elucidation of initial growth of Ge clusters deposited on Si(111)-(7 Å ⁻¹) surface by scanning tunneling microscopy. Physical Review B, 2009, 79, .	3.2	5
68	Adsorption State of 4,4'-Diamino-p-terphenyl through an Amino Group Bound to Si(111)-(7 Å ⁻¹) Surface Examined by X-ray Photoelectron Spectroscopy and Scanning Tunneling Microscopy. Journal of Physical Chemistry C, 2010, 114, 11109-11114.	3.1	5
69	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
70	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
71	Lateral Distribution of Li Atoms at the Initial Stage of Adsorption on TiO ₂ (110) Surface. Journal of Physical Chemistry C, 2012, 116, 13688-13692.	3.1	4
72	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

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73	Local protrusions formed on Si(111) surface by surface melting and solidification under applied tensile stress. <i>Applied Physics Letters</i> , 2016, 109, 121601.	3.3	4
74	Microanalysis of silicon protrusions with a titanium cap formed via surface melting and solidification under applied tensile stress. <i>Japanese Journal of Applied Physics</i> , 2019, 58, 025501.	1.5	4
75	Layer etching of mica nanosheets using a focused electron beam. <i>Applied Physics Express</i> , 2020, 13, 106502.	2.4	4
76	STM study of the effects of pulsed laser irradiation on semiconductor surfaces. <i>Journal of Microscopy</i> , 1988, 152, 337-345.	1.8	3
77	Interaction measurements between a tip and a sample in proximity regions controlled by tunneling current in a UHV STM- <i>AFM</i> . <i>Applied Surface Science</i> , 1999, 144-145, 501-504.	6.1	3
78	Atomic force microscope tip sharpening and evaluation by electric field confinement using a metal grid close to the tip. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2000, 18, 648.	1.6	3
79	Evaluation and optimization of quartz resonant-frequency retuned fork force sensors with high <i>Q</i> factors, and the associated electric circuits, for non-contact atomic force microscopy. <i>Review of Scientific Instruments</i> , 2016, 87, 023702.	1.3	3
80	Dependence of calcium phosphate formation on nanostructure of rutile TiO ₂ (110) surfaces. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 115501.	1.5	3
81	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. <i>Japanese Journal of Applied Physics</i> , 2020, 59, 085501.	1.5	3
82	Atom-probe and field emission electron spectroscopy studies of Ge on Ir. <i>Applied Surface Science</i> , 1993, 67, 43-47.	6.1	2
83	Atom probe and field emission electron spectroscopy studies of semiconductor films on metals. <i>Applied Surface Science</i> , 1995, 87-88, 12-17.	6.1	2
84	Differential Conductance Imaging of Si and Ge Islands Deposited on Si(001) by Scanning Tunneling Microscopy. <i>Japanese Journal of Applied Physics</i> , 1998, 37, 3789-3792.	1.5	2
85	Atomic force microscope Si tip with Ge clusters with the capability of remoulding by heating. <i>Nanotechnology</i> , 2007, 18, 084020.	2.6	2
86	Thermal Transformation of 4,4'-Diamino- <i>p</i> -terphenyl on a Si(111)-7 Å ⁻⁷ Surface Analyzed by X-ray Photoemission Spectroscopy and Scanning Tunneling Microscopy. <i>Journal of Physical Chemistry C</i> , 2014, 118, 25104-25109.	3.1	2
87	Difference in etching between Si(111) and (001) surfaces induced by atomic hydrogen irradiation observed by noncontact atomic force microscopy. <i>Japanese Journal of Applied Physics</i> , 2015, 54, 08LB08.	1.5	2
88	Thermal Stability of Single-Atom Termination at a Pyramidal Apex of an Ir-W Tip. <i>E-Journal of Surface Science and Nanotechnology</i> , 2018, 16, 294-297.	0.4	2
89	Resistivity change in Joule heat energy dissipation detected by noncontact atomic force microscopy using a silicon tip terminated with/without atomic hydrogen. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 08NB04.	1.5	2
90	Nanomechanical Properties of Epitaxial Silicene Revealed by Noncontact Atomic Force Microscopy. <i>Advanced Materials Interfaces</i> , 2019, 6, 1801278.	3.7	2

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91	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
92	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
93	Bias Dependence of NC-AFM Images and Tunneling Current Variations on Semiconductor Surfaces. Nanoscience and Technology, 2002, , 79-92.	1.5	2
94	Surface Effect on Young's Modulus of Sub-Two-Nanometer Gold [111] Nanocontacts. Physical Review Letters, 2022, 128, 146101.	7.8	2
95	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
96	STM study of epitaxial growth of Ge on Si(001). Surface Science Letters, 1991, 253, L411-L416.	0.1	1
97	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
98	Stable alignment of 4,4'-diamino-p-terphenyl chemically adsorbed on a Si(001)-(2 × 1) surface observed by scanning tunneling microscopy. Surface Science, 2014, 630, 96-100.	1.9	1
99	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
100	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
101	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
102	STM study of the effects of pulsed laser irradiation on semiconductor surfaces. The Monthly Microscopical Journal, 1870, 3, 337-345.	0.0	0
103	ULTRAMICROANALYSIS UTILIZING ELECTRON TUNNELING. Analytical Sciences, 1991, 7, 1225-1230.	1.6	0
104	NC-AFM 2006: Proceedings of the 9th International Conference on Non-contact Atomic Force Microscopy. Nanotechnology, 2007, 18, 080301.	2.6	0
105	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
106	Local interaction imaging by SiGe quantum dot probe. Current Applied Physics, 2012, 12, 581-584.	2.4	0
107	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
108	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

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109	Non-thermal liquid-to-solid Si conversion induced by electron beam irradiation. Japanese Journal of Applied Physics, 2021, 60, SBBM03.	1.5	0
110	Characterization of Semiconducting Materials. Nanoscience and Technology, 2007, , 133-137.	1.5	0
111	Scanning Tunneling Microscopy. Nanoscience and Technology, 2007, , 7-14.	1.5	0
112	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
113	<i>A Special Section on</i> Nano-Bio Materials and Systems. Science of Advanced Materials, 2012, 4, 93-95.	0.7	0
114	How Have We Tried to Get STM Images with Atomic Resolution in UHV Using Our Lab-made STMs? Receptes for Designs and Experiments. (I).. Hyomen Kagaku, 1996, 17, 286-289.	0.0	0
115	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
116	STM/STS Study of Semiconductor Clusters. Springer Series in Cluster Physics, 1999, , 419-427.	0.3	0