

Toyoaki Eguchi

List of Publications by Year in descending order

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papers

1,789
citations

257450

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93
docs citations

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times ranked

1768
citing authors

#	ARTICLE	IF	CITATIONS
1	Superconducting Pb Island Nanostructures Studied by Scanning Tunneling Microscopy and Spectroscopy. <i>Physical Review Letters</i> , 2008, 101, 167001.	7.8	102
2	Comparison of force sensors for atomic force microscopy based on quartz tuning forks and length-extensional resonators. <i>Physical Review B</i> , 2011, 84, .	3.2	94
3	Cu-TBPP and PTCDA molecules on insulating surfaces studied by ultra-high-vacuum non-contact AFM. <i>Nanotechnology</i> , 2004, 15, S91-S96.	2.6	82
4	High Resolution Atomic Force Microscopic Imaging of the Si(111) $\sqrt{7\times 7}$ Surface: Contribution of Short-Range Force to the Images. <i>Physical Review Letters</i> , 2002, 89, 266105.	7.8	80
5	Imaging of all Dangling Bonds and their Potential on the Ge/Si(105) Surface by Noncontact Atomic Force Microscopy. <i>Physical Review Letters</i> , 2004, 93, 266102.	7.8	78
6	Synthesis and Characterization of Metal-Encapsulating Si ₁₆ Cage Superatoms. <i>Accounts of Chemical Research</i> , 2018, 51, 1735-1745.	15.6	63
7	Formation of a superatom monolayer using gas-phase-synthesized Ta@Si ₁₆ nanocluster ions. <i>Nanoscale</i> , 2014, 6, 14702-14707.	5.6	61
8	Dimer buckling of the Si(001)2 \times 1 surface below 10 K observed by low-temperature scanning tunneling microscopy. <i>Physical Review B</i> , 2003, 67, .	3.2	59
9	Chemical Characterization of an Alkali-Like Superatom Consisting of a Ta-Encapsulating Si ₁₆ Cage. <i>Journal of the American Chemical Society</i> , 2015, 137, 14015-14018.	13.7	59
10	Metallic Transport in a Monatomic Layer of In on a Silicon Surface. <i>Physical Review Letters</i> , 2011, 106, 116802.	7.8	56
11	Electrostatic Potential Screened by a Two-Dimensional Electron System: A Real-Space Observation by Scanning-Tunneling Spectroscopy. <i>Physical Review Letters</i> , 2006, 96, 016801.	7.8	55
12	Size and Structure Dependence of Electronic States in Thiolate-Protected Gold Nanoclusters of Au ₂₅ (SR) ₁₈ , Au ₃₈ (SR) ₂₄ , and Au ₁₄₄ (SR) ₆₀ . <i>Journal of Physical Chemistry C</i> , 2013, 117, 3674-3679.	3.1	53
13	Atomically-resolved imaging by frequency-modulation atomic force microscopy using a quartz length-extension resonator. <i>Applied Physics Letters</i> , 2005, 87, 133114.	3.3	48
14	Development of a metal ϵ -tip cantilever for noncontact atomic force microscopy. <i>Review of Scientific Instruments</i> , 2005, 76, 033705.	1.3	43
15	Superconductivity of nanometer-size Pb islands studied by low-temperature scanning tunneling microscopy. <i>Applied Physics Letters</i> , 2006, 88, 113115.	3.3	41
16	Atomically resolved imaging by low-temperature frequency-modulation atomic force microscopy using a quartz length-extension resonator. <i>Review of Scientific Instruments</i> , 2008, 79, 033703.	1.3	41
17	Nanoscale Chemical Imaging by Scanning Tunneling Microscopy Assisted by Synchrotron Radiation. <i>Physical Review Letters</i> , 2009, 102, 105503.	7.8	41
18	Element specific imaging by scanning tunneling microscopy combined with synchrotron radiation light. <i>Applied Physics Letters</i> , 2006, 89, 243119.	3.3	34

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19	Charge Transfer Complexation of Ta-Encapsulating Ta@Si ₁₆ Superatom with C ₆₀ . Journal of Physical Chemistry C, 2016, 120, 15265-15271.	3.1	34
20	Molecular-Scale and Wide-Energy-Range Tunneling Spectroscopy on Self-Assembled Monolayers of Alkanethiol Molecules. ACS Nano, 2012, 6, 8728-8734.	14.6	33
21	Heterodimerization via the Covalent Bonding of Ta@Si ₁₆ Nanoclusters and C ₆₀ Molecules. Journal of Physical Chemistry C, 2015, 119, 10962-10968.	3.1	31
22	Development and trial measurement of synchrotron-radiation-light-illuminated scanning tunneling microscope. Review of Scientific Instruments, 2004, 75, 2149-2153.	1.3	27
23	Charge Separation at the Molecular Monolayer Surface: Observation and Control of the Dynamics. Journal of Physical Chemistry Letters, 2012, 3, 981-985.	4.6	27
24	Direct observation of photocarrier electron dynamics in C ₆₀ films on graphite by time-resolved two-photon photoemission. Scientific Reports, 2016, 6, 35853.	3.3	25
25	Fabrication of a glass-coated metal tip for synchrotron-radiation-light-irradiated scanning tunneling microscopy. Review of Scientific Instruments, 2005, 76, 083711.	1.3	24
26	Improvement of a dynamic scanning force microscope for highest resolution imaging in ultrahigh vacuum. Review of Scientific Instruments, 2008, 79, 083701.	1.3	24
27	Imaging and Characterizing Long-Range Surface Plasmon Polaritons Propagating in a Submillimeter Scale by Two-Color Two-Photon Photoelectron Emission Microscopy. Plasmonics, 2013, 8, 1411-1415.	3.4	22
28	Size-Effect on Electrochemical Hydrogen Evolution Reaction by Single-Size Platinum Nanocluster Catalysts Immobilized on Strontium Titanate. Topics in Catalysis, 2018, 61, 126-135.	2.8	22
29	Structures and electronic states of the InSb{111}A,B-(2 \bar{A} -2) surfaces. Surface Science, 2002, 514, 343-349.	1.9	21
30	Direct evidence of the contribution of surface states to the Kondo resonance. Physical Review B, 2009, 80, .	3.2	19
31	Surface states of a Pd monolayer formed on a Au(111) surface studied by angle-resolved photoemission spectroscopy. Physical Review B, 2006, 74, .	3.2	17
32	Photoexcited State Confinement in Two-Dimensional Crystalline Anthracene Monolayer at Room Temperature. ACS Nano, 2017, 11, 4307-4314.	14.6	17
33	Confined Hot Electron Relaxation at the Molecular Heterointerface of the Size-Selected Plasmonic Noble Metal Nanocluster and Layered C ₆₀ . ACS Nano, 2021, 15, 1199-1209.	14.6	17
34	Trapping and squeezing of vortices in voids directly observed by scanning tunneling microscopy and spectroscopy. Physical Review B, 2013, 87, .	3.2	14
35	Formation and Control of Ultrasharp Metal/Molecule Interfaces by Controlled Immobilization of Size-Selected Metal Nanoclusters onto Organic Molecular Films. Advanced Functional Materials, 2014, 24, 1202-1210.	14.9	14
36	Adsorption, manipulation and self-assembling of TBrPP-Co molecules on a Ag/Si(111) surface by scanning tunnelling microscopy. Nanotechnology, 2008, 19, 465707.	2.6	13

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37	Local Excitation of Ferromagnetic Resonance and Its Spatially Resolved Detection With an Open-Ended Radio-Frequency Probe. <i>IEEE Magnetics Letters</i> , 2010, 1, 3500104-3500104.	1.1	13
38	Imaging and spectromicroscopy of photocarrier electron dynamics in C60 fullerene thin films. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	13
39	Al13 ⁺ and B@Al12 ⁺ superatoms on a molecularly decorated substrate. <i>Nature Communications</i> , 2022, 13, 1336.	12.8	13
40	Structure and Electronic States of the $\sqrt{3}\times\sqrt{3}$ -Sn(111)-(2 \times 2) Surface. <i>Journal of the Physical Society of Japan</i> , 1998, 67, 381-384.	1.6	12
41	Structure of the InSb(111) $\sqrt{3}\times\sqrt{3}$ surface and its dynamical formation processes. <i>Physical Review B</i> , 1998, 57, 6317-6320.	3.2	11
42	Potential profile around step edges of Si surface measured by nc-AFM. <i>Applied Surface Science</i> , 2002, 188, 386-390.	6.1	11
43	Probing of an Adsorbate-Specific Excited State on an Organic Insulating Surface by Two-Photon Photoemission Spectroscopy. <i>Journal of the American Chemical Society</i> , 2014, 136, 1825-1831.	13.7	11
44	Excitation and Relaxation Dynamics of Two-Dimensional Photoexcited Electrons on Alkanethiolate Self-Assembled Monolayers. <i>Journal of Physical Chemistry C</i> , 2015, 119, 22945-22953.	3.1	11
45	Fabrication and Characterization of Floating Memory Devices Based on Thiolate-Protected Gold Nanoclusters. <i>Journal of Physical Chemistry C</i> , 2017, 121, 10638-10644.	3.1	11
46	Geometry and lattice formation of surface layers of Sn growing on InSb{111}A,B. <i>Physical Review B</i> , 1996, 54, 10358-10361.	3.2	10
47	Real-Space Observation of Screened Potential and Friedel Oscillation by Scanning Tunneling Spectroscopy. <i>Journal of Physics: Conference Series</i> , 2007, 61, 399-403.	0.4	10
48	Dimer structure of the Si(001) 2×1 surface observed by low-temperature scanning tunneling microscope. <i>Physica B: Condensed Matter</i> , 2003, 329-333, 1644-1646.	2.7	9
49	Scanning tunnelling microscope combined with synchrotron radiation for element specific analysis. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2005, 144-147, 1157-1161.	1.7	9
50	Nanoscale lithography with frequency-modulation atomic force microscopy. <i>Review of Scientific Instruments</i> , 2008, 79, 123706.	1.3	9
51	Excited electron dynamics at ferrocene-terminated self-assembled monolayers on Au(111): Lengthened lifetime of image potential state. <i>Chemical Physics Letters</i> , 2013, 561-562, 131-136.	2.6	9
52	Photoexcited Electron-transfer Properties of C ₆₀ Film on Graphite and on Au(111) Interfaces Studied by Two-photon Photoemission Spectroscopy. <i>Chemistry Letters</i> , 2017, 46, 1528-1531.	1.3	9
53	Direct imaging of the evolving Au/InSb(111) B interface. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1998, 16, 2324.	1.6	8
54	Calculation of Noise Intensity in the Frequency Demodulation for Atomic Force Microscopy. <i>Japanese Journal of Applied Physics</i> , 2004, 43, L303-L305.	1.5	8

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55	Observation of the screened potential and the Friedel oscillation by low-temperature scanning tunneling microscopy/spectroscopy. Applied Surface Science, 2009, 256, 469-474.	6.1	8
56	STM study of the InSb(111)A-(2 Å ⁻¹ × 6) surface. Applied Surface Science, 1997, 121-122, 204-207.	6.1	7
57	Observation of Vortex Clustering in Nano-Size Superconducting Pb Island Structures by Low-Temperature Scanning Tunneling Microscopy/Spectroscopy. Journal of Superconductivity and Novel Magnetism, 2012, 25, 1375-1378.	1.8	7
58	Atomic motion induced by a scanning tunneling microscope tip on the Si(111) surface. Surface Science, 1994, 320, L101-L104.	1.9	6
59	Highly Ordered Self-Assembled Monolayers of Carboxy- and Ester-Terminated Alkanethiols on Au(111): Infrared Absorption and Hyperthermal-Deposition Experiments with Cr(benzene) ₂ Ions. Journal of Physical Chemistry C, 2017, 121, 6736-6747.	3.1	6
60	Liquid-phase catalysis by single-size palladium nanoclusters supported on strontium titanate: size-specific catalysts for Suzuki-Miyaura coupling. Catalysis Science and Technology, 2018, 8, 5827-5834.	4.1	6
61	Size-Dependent Superconductivity of Pb Islands under Magnetic Fields Studied by Low-Temperature Scanning Tunneling Microscopy/Spectroscopy. Japanese Journal of Applied Physics, 2007, 46, L880-L882.	1.5	5
62	Functional Probes for Scanning Probe Microscopy. Journal of Physics: Conference Series, 2007, 61, 22-25.	0.4	5
63	Tip-induced excitation of a single vortex in nano-size superconductors using scanning tunneling microscopy. Nanotechnology, 2010, 21, 465704.	2.6	5
64	Probing buried organic-organic and metal-organic heterointerfaces by hard x-ray photoelectron spectroscopy. Applied Physics Letters, 2012, 101, 221603.	3.3	5
65	Molecularly Designed Cluster-Surface Interaction for Halogen-like and Alkali-like Metal-Encapsulating Silicon Cage Superatoms on n- and p-Type Organic Substrates. Journal of Physical Chemistry C, 2022, 126, 10889-10899.	3.1	5
66	The Cu(1 0 0)-c(2 Å ⁻¹ × 2) N structure studied by combined nc-AFM/STM. Applied Surface Science, 2003, 210, 43-48.	6.1	4
67	Energy Level Alignment of Organic Molecules with Chemically Modified Alkanethiolate Self-Assembled Monolayers. Journal of Physical Chemistry C, 2017, 121, 27399-27405.	3.1	4
68	Atomistic investigation on the initial stage of growth and interface formation of Fe on H-terminated Si(111)-(1 Å ⁻¹ × 1) surface. Surface Science, 2019, 686, 52-57.	1.9	4
69	Vibrational Spectra of Thiolate-Protected Gold Nanocluster with Infrared Reflection Absorption Spectroscopy: Size- and Temperature-Dependent Ordering Behavior of Organic Monolayer. Journal of Physical Chemistry C, 2020, 124, 363-371.	3.1	4
70	Initial Adsorption and Kondo Resonance of 5,10,15,20-Tetrakis(4-bromophenyl)porphyrin-Co Molecules on Ag/Si(111) Surface Studied by Low-Temperature Scanning Tunneling Microscopy/Spectroscopy. Japanese Journal of Applied Physics, 2009, 48, 08JB01.	1.5	3
71	Self-Assembly of TBrPP-Co Molecules on an Ag/Si(111) Surface Studied by Scanning Tunneling Microscopy. Chinese Physics Letters, 2010, 27, 026801.	3.3	3
72	Effects of the deposition rate on growth modes of Ag islands on the hydrogen-terminated Si(111)-(1 Å ⁻¹ × 1) surface: The role of surface energy and quantum size effect. Journal of Applied Physics, 2017, 122, 095303.	2.5	3

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73	Chemical bonding features for faultily stacked interfaces of GaAs{111}. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 2426.	1.6	2
74	Enhancement of electron correlation in Co thin clusters grown on S ⁺ GaAs(001). Physical Review B, 2006, 73, .	3.2	2
75	Pressure dependence of Meissner effect in films of ropes of boron-doped carbon nanotubes. Superlattices and Microstructures, 2009, 46, 333-339.	3.1	2
76	Formation of Highly Ordered Semiconducting Anthracene Monolayer Rigidly Connected to Insulating Alkanethiolate Thin Film. Journal of Physical Chemistry C, 2018, 122, 26080-26087.	3.1	2
77	Morphological evolution of Ag nanoclusters grown on hydrogen-terminated si(111)-(1 \times 1) surface: Appearance of quantum size effect at room-temperature. Surface Science, 2019, 690, 121483.	1.9	2
78	Development of ultralow temperature scanning tunneling microscope cooled by a dilution refrigerator. E-Journal of Surface Science and Nanotechnology, 2004, 2, 151-154.	0.4	2
79	Development of a Scanning Tunneling Microscope Combined with a Synchrotron Radiation Light Source. Hyomen Kagaku, 2005, 26, 752-756.	0.0	2
80	Atom manipulation of bright and dark spots on Cu(111) surface by scanning tunneling microscope. E-Journal of Surface Science and Nanotechnology, 2004, 2, 165-168.	0.4	2
81	Modification of electron density in surface states: scanning tunnelling microscopy observation of standing waves on Pd overlayers. Nanotechnology, 2002, 13, 710-713.	2.6	1
82	Meissner effect in films of ropes of boron-doped single-walled carbon nanotubes; Correlation with applied pressure and boron-doped multi-walled nanotubes. Journal of Physics: Conference Series, 2009, 153, 012070.	0.4	1
83	Electronic states of titanyl phthalocyanine films on alkanethiolate self-assembled monolayers probed by two-photon photoemission. Journal of Electron Spectroscopy and Related Phenomena, 2014, 195, 272-277.	1.7	1
84	Surface Core-Level Shift as Assessed by Using the Voigt Function.. Hyomen Kagaku, 2000, 21, 426-433.	0.0	1
85	Direct Observation of Screened Coulomb Potential by Two-dimensional Electron System using Scanning Tunneling Spectroscopy. Hyomen Kagaku, 2006, 27, 695-701.	0.0	1
86	On Possibility of Real Space Observation of the Aharonov-Bohm Effect by Scanning Tunneling Microscopy. Japanese Journal of Applied Physics, 2004, 43, L206-L209.	1.5	0
87	Electronic States and Excited Electron Dynamics for Alkanethiolate SAM. Hyomen Kagaku, 2014, 35, 432-437.	0.0	0
88	Formation Processes of the Au/Si(111)-GAMMA.(.RAD.3 * .RAD.3) R30.DEG. Surface. Shinku/Journal of the Vacuum Society of Japan, 2003, 46, 347-351.	0.2	0
89	AFM Observation of Ge/Si(105) Surfaces. Hyomen Kagaku, 2005, 26, 486-491.	0.0	0
90	Scanning Tunneling Microscopy Assisted by Synchrotron Radiation Light for High-resolution Element Specific Imaging. Hyomen Kagaku, 2010, 31, 452-458.	0.0	0