

Takeshi Fukuma

List of Publications by Year in descending order

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90
papers

3,445
citations

136740

32
h-index

149479

56
g-index

90
all docs

90
docs citations

90
times ranked

3046
citing authors

#	ARTICLE	IF	CITATIONS
1	Atomic-scale structures and dynamics at the growing calcite step edge investigated by high-speed frequency modulation atomic force microscopy. <i>Faraday Discussions</i> , 2022, , .	1.6	0
2	Direct Electrochemical Visualization of the Orthogonal Charge Separation in Anatase Nanotube Photoanodes for Water Splitting. <i>ACS Catalysis</i> , 2022, 12, 1201-1208.	5.5	25
3	Chemical fixation creates nanoscale clusters on the cell surface by aggregating membrane proteins. <i>Communications Biology</i> , 2022, 5, .	2.0	16
4	Inhibition of Silica Nanoparticle Adhesion to Poly(vinyl alcohol) Surfaces by Ammonia-Mediated Hydration: Implications for Effective Post-Chemical Mechanical Planarization Cleaning. <i>ACS Applied Nano Materials</i> , 2021, 4, 71-83.	2.4	7
5	Structural and mechanical characteristics of exosomes from osteosarcoma cells explored by 3D-atomic force microscopy. <i>Nanoscale</i> , 2021, 13, 6661-6677.	2.8	28
6	Nanoscale Reactivity Mapping of a Single-Crystal Boron-Doped Diamond Particle. <i>Analytical Chemistry</i> , 2021, 93, 5831-5838.	3.2	33
7	High-Speed Atomic Force Microscopy of the Structure and Dynamics of Calcite Nanoscale Etch Pits. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 8039-8045.	2.1	5
8	Visualisation of helical structures of poly(diphenylacetylene)s bearing chiral amide pendants by atomic force microscopy. <i>Chemical Communications</i> , 2021, 57, 12266-12269.	2.2	10
9	Characterization of the Depth of Discharge-Dependent Charge Transfer Resistance of a Single LiFePO ₄ Particle. <i>Analytical Chemistry</i> , 2021, 93, 14448-14453.	3.2	13
10	Macrocyclic Peptide-Conjugated Tip for Fast and Selective Molecular Recognition Imaging by High-Speed Atomic Force Microscopy. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 54817-54829.	4.0	7
11	Local Cross-Coupling Activity of Azide-Hexa(ethylene glycol)-Terminated Self-Assembled Monolayers Investigated by Atomic Force Microscopy. <i>Langmuir</i> , 2021, 37, 14688-14696.	1.6	3
12	Visualizing intracellular nanostructures of living cells by nanoendoscopy-AFM. <i>Science Advances</i> , 2021, 7, eabj4990.	4.7	21
13	High-Speed SICM for the Visualization of Nanoscale Dynamic Structural Changes in Hippocampal Neurons. <i>Analytical Chemistry</i> , 2020, 92, 2159-2167.	3.2	42
14	Improvements in fundamental performance of in-liquid frequency modulation atomic force microscopy. <i>Microscopy (Oxford, England)</i> , 2020, 69, 340-349.	0.7	4
15	Geometrical Characterization of Glass Nanopipettes with Sub-10 nm Pore Diameter by Transmission Electron Microscopy. <i>Analytical Chemistry</i> , 2020, 92, 15388-15393.	3.2	13
16	Tip dependence of three-dimensional scanning force microscopy images of calcite-water interfaces investigated by simulation and experiments. <i>Nanoscale</i> , 2020, 12, 12856-12868.	2.8	15
17	Direct Measurement of Adhesion Force of Individual Aerosol Particles by Atomic Force Microscopy. <i>Atmosphere</i> , 2020, 11, 489.	1.0	7
18	Self-assembly of small molecules at hydrophobic interfaces using group effect. <i>Nanoscale</i> , 2020, 12, 5452-5463.	2.8	27

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19	Chiral Monolayers with Achiral Tetrapod Molecules on Highly Oriented Pyrolytic Graphite. <i>Journal of Physical Chemistry C</i> , 2020, 124, 7760-7767.	1.5	12
20	Photo-sensitive 2D Arrangement of $\text{OH}/\text{H}_2\text{O}$ on Brookite TiO_2 (210). <i>Journal of Physical Chemistry C</i> , 2020, 124, 19091-19100.	1.5	4
21	Nanoscale kinetic imaging of lithium ion secondary battery materials using scanning electrochemical cell microscopy. <i>Chemical Communications</i> , 2020, 56, 9324-9327.	2.2	49
22	Subnanometer-scale imaging of nanobio-interfaces by frequency modulation atomic force microscopy. <i>Biochemical Society Transactions</i> , 2020, 48, 1675-1682.	1.6	5
23	Variations in Atomic-Scale Step Edge Structures and Dynamics of Dissolving Calcite in Water Revealed by High-Speed Frequency Modulation Atomic Force Microscopy. <i>Journal of Physical Chemistry C</i> , 2019, 123, 19786-19793.	1.5	8
24	Self-Assembling Supramolecular Nanostructures Constructed from <i>de Novo</i> Extender Protein Nanobuilding Blocks. <i>ACS Synthetic Biology</i> , 2018, 7, 1381-1394.	1.9	23
25	Nanoscale Imaging of Primary Cilia with Scanning Ion Conductance Microscopy. <i>Analytical Chemistry</i> , 2018, 90, 2891-2895.	3.2	32
26	Quantitative comparison of wideband low-latency phase-locked loop circuit designs for high-speed frequency modulation atomic force microscopy. <i>Beilstein Journal of Nanotechnology</i> , 2018, 9, 1844-1855.	1.5	9
27	Atomic- and Molecular-Resolution Mapping of Solid-Liquid Interfaces by 3D Atomic Force Microscopy. <i>ACS Nano</i> , 2018, 12, 11785-11797.	7.3	122
28	Direct Imaging of Atomic-Scale Surface Structures of Brookite TiO_2 Nanoparticles by Frequency Modulation Atomic Force Microscopy in Liquid. <i>Journal of Physical Chemistry C</i> , 2018, 122, 24085-24093.	1.5	9
29	Hydration Layer Structure of Biofouling-Resistant Nanoparticles. <i>ACS Nano</i> , 2018, 12, 11610-11624.	7.3	70
30	Direct comparison between subnanometer hydration structures on hydrophilic and hydrophobic surfaces via three-dimensional scanning force microscopy. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 23522-23527.	1.3	31
31	Morphology and Physical Properties of Hydrophilic-Polymer-Modified Lipids in Supported Lipid Bilayers. <i>Langmuir</i> , 2018, 34, 7201-7209.	1.6	17
32	Visualizing charges accumulated in an electric double layer by three-dimensional open-loop electric potential microscopy. <i>Nanoscale</i> , 2018, 10, 14736-14746.	2.8	17
33	Loosening of Lipid Packing Promotes Oligoarginine Entry into Cells. <i>Angewandte Chemie</i> , 2017, 129, 7752-7755.	1.6	11
34	Influence of ions on two-dimensional and three-dimensional atomic force microscopy at fluorite-water interfaces. <i>Nanotechnology</i> , 2017, 28, 245701.	1.3	17
35	Loosening of Lipid Packing Promotes Oligoarginine Entry into Cells. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 7644-7647.	7.2	59
36	Self-assembled monolayers of sulfonate-terminated alkanethiols investigated by frequency modulation atomic force microscopy in liquid. <i>Nanotechnology</i> , 2017, 28, 455603.	1.3	5

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37	Hydration Structure of Brookite TiO ₂ (210). Journal of Physical Chemistry C, 2017, 121, 20790-20801.	1.5	10
38	Dissolution Processes at Step Edges of Calcite in Water Investigated by High-Speed Frequency Modulation Atomic Force Microscopy and Simulation. Nano Letters, 2017, 17, 4083-4089.	4.5	67
39	Reversible Changes in the Structural Features of Photosynthetic Light-Harvesting Complex 2 by Removal and Reconstitution of B800 Bacteriochlorophyll <i>a</i> Pigments. Biochemistry, 2017, 56, 3484-3491.	1.2	18
40	Efficiency improvement in the cantilever photothermal excitation method using a photothermal conversion layer. Beilstein Journal of Nanotechnology, 2016, 7, 409-417.	1.5	10
41	Number density distribution of solvent molecules on a substrate: a transform theory for atomic force microscopy. Physical Chemistry Chemical Physics, 2016, 18, 15534-15544.	1.3	18
42	Understanding 2D atomic resolution imaging of the calcite surface in water by frequency modulation atomic force microscopy. Nanotechnology, 2016, 27, 415709.	1.3	20
43	Flattened-Top Domical Water Drops Formed through Self-Organization of Hydrophobin Membranes: A Structural and Mechanistic Study Using Atomic Force Microscopy. ACS Nano, 2016, 10, 81-87.	7.3	18
44	Visualizing Nanoscale Distribution of Corrosion Cells by Open-Loop Electric Potential Microscopy. ACS Nano, 2016, 10, 2575-2583.	7.3	34
45	Nanoscale corrosion behavior of polycrystalline copper fine wires in dilute NaCl solution investigated by in-situ atomic force microscopy. Corrosion Science, 2016, 105, 177-182.	3.0	15
46	A relationship between three-dimensional surface hydration structures and force distribution measured by atomic force microscopy. Nanoscale, 2016, 8, 7334-7342.	2.8	59
47	Fabrication of electron beam deposited tip for atomic-scale atomic force microscopy in liquid. Nanotechnology, 2015, 26, 105707.	1.3	10
48	Note: High-speed Z tip scanner with screw cantilever holding mechanism for atomic-resolution atomic force microscopy in liquid. Review of Scientific Instruments, 2014, 85, 126106.	0.6	11
49	Molecular-scale surface structures of oligo(ethylene glycol)-terminated self-assembled monolayers investigated by frequency modulation atomic force microscopy in aqueous solution. Nanotechnology, 2014, 25, 305602.	1.3	19
50	Electrochemical properties of honeycomb-like structured HFBI self-organized membranes on HOPG electrodes. Colloids and Surfaces B: Biointerfaces, 2014, 123, 803-808.	2.5	8
51	Significant improvements in stability and reproducibility of atomic-scale atomic force microscopy in liquid. Nanotechnology, 2014, 25, 455701.	1.3	42
52	Atomic-Scale Processes at the Fluorite-Water Interface Visualized by Frequency Modulation Atomic Force Microscopy. Journal of Physical Chemistry C, 2013, 117, 24388-24396.	1.5	29
53	Three-dimensional quantitative force maps in liquid with 10 piconewton, angstrom and sub-minute resolutions. Nanoscale, 2013, 5, 2678-2685.	2.8	109
54	Closed Fluid Cell with Liquid-Sealing Mechanism for Stable and Flexible Operation of Liquid-Environment Atomic Force Microscopy. Japanese Journal of Applied Physics, 2013, 52, 110109.	0.8	3

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55	The relationship between local liquid density and force applied on a tip of atomic force microscope: A theoretical analysis for simple liquids. <i>Journal of Chemical Physics</i> , 2013, 139, 224710.	1.2	52
56	Real-time atomic-resolution imaging of crystal growth process in water by phase modulation atomic force microscopy at one frame per second. <i>Applied Physics Letters</i> , 2013, 103, 203104.	1.5	14
57	Spatial Distribution of Lipid Headgroups and Water Molecules at Membrane/Water Interfaces Visualized by Three-Dimensional Scanning Force Microscopy. <i>ACS Nano</i> , 2012, 6, 9013-9020.	7.3	81
58	Atomic-resolution imaging in liquid by frequency modulation atomic force microscopy using small cantilevers with megahertz-order resonance frequencies. <i>Nanotechnology</i> , 2012, 23, 135706.	1.3	66
59	Submolecular-Scale Imaging of α -Helices and C-Terminal Domains of Tubulins by Frequency Modulation Atomic Force Microscopy in Liquid. <i>Biophysical Journal</i> , 2011, 101, 1270-1276.	0.2	41
60	Ordered nano-structure of a stamped self-organized protein layer on a HOPG surface using a HFB carrier. <i>Colloids and Surfaces B: Biointerfaces</i> , 2011, 84, 395-399.	2.5	4
61	Nanoscale potential measurements in liquid by frequency modulation atomic force microscopy. <i>Review of Scientific Instruments</i> , 2010, 81, 123705.	0.6	60
62	Near-field light detection by conservative and dissipative force modulation methods using a piezoelectric cantilever. <i>Applied Physics Letters</i> , 2010, 96, 233104.	1.5	9
63	The molecular-scale arrangement and mechanical strength of phospholipid/cholesterol mixed bilayers investigated by frequency modulation atomic force microscopy in liquid. <i>Nanotechnology</i> , 2009, 20, 264008.	1.3	35
64	Spurious-free cantilever excitation in liquid by piezoactuator with flexure drive mechanism. <i>Review of Scientific Instruments</i> , 2009, 80, 103703.	0.6	37
65	High-speed atomic force microscopy for nano-visualization of dynamic biomolecular processes. <i>Progress in Surface Science</i> , 2008, 83, 337-437.	3.8	493
66	Revealing molecular-level surface structure of amyloid fibrils in liquid by means of frequency modulation atomic force microscopy. <i>Nanotechnology</i> , 2008, 19, 384010.	1.3	41
67	High resonance frequency force microscope scanner using inertia balance support. <i>Applied Physics Letters</i> , 2008, 92, 243119.	1.5	65
68	Direct Imaging of Lipid-Ion Network Formation under Physiological Conditions by Frequency Modulation Atomic Force Microscopy. <i>Physical Review Letters</i> , 2007, 98, 106101.	2.9	154
69	Direct Imaging of Individual Intrinsic Hydration Layers on Lipid Bilayers at \AA -Resolution. <i>Biophysical Journal</i> , 2007, 92, 3603-3609.	0.2	182
70	Nanoscale Mechanical Characterisation of Amyloid Fibrils Discovered in a Natural Adhesive. <i>Journal of Biological Physics</i> , 2007, 32, 393-401.	0.7	105
71	Structured Water Layers Adjacent to Biological Membranes. <i>Biophysical Journal</i> , 2006, 91, 2532-2542.	0.2	145
72	Explanation for the mechanical strength of amyloid fibrils. <i>Tribology Letters</i> , 2006, 22, 233-237.	1.2	42

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73	Phase modulation atomic force microscope with true atomic resolution. Review of Scientific Instruments, 2006, 77, 123703.	0.6	55
74	Self-Assembled Monolayers of Alkanethiol and Fluoroalkanethiol Investigated by Noncontact Atomic Force Microscopy. Japanese Journal of Applied Physics, 2005, 44, 5378-5381.	0.8	6
75	Frequency-modulation atomic force microscopy at high cantilever resonance frequencies using the heterodyne optical beam deflection method. Review of Scientific Instruments, 2005, 76, 126110.	0.6	20
76	Molecular-scale investigations of semi-insulating polymer single crystals by noncontact atomic force microscopy. Nanotechnology, 2005, 16, S22-S26.	1.3	11
77	True molecular resolution in liquid by frequency-modulation atomic force microscopy. Applied Physics Letters, 2005, 86, 193108.	1.5	125
78	Noncontact Atomic Force Microscopy Investigation of Phase-Separated Alkanethiol Self-Assembled Monolayers with Different Head Groups. Japanese Journal of Applied Physics, 2004, 43, 4545-4548.	0.8	8
79	Submolecular-Resolution Studies on Metal-Phthalocyanines by Noncontact Atomic Force Microscopy. Japanese Journal of Applied Physics, 2004, 43, 4691-4694.	0.8	14
80	Surface potential measurements of phase-separated alkanethiol self-assembled monolayers by non-contact atomic force microscopy. Nanotechnology, 2004, 15, S30-S33.	1.3	33
81	Molecular-scale noncontact atomic force microscopy contrasts in topography and energy dissipation on $c(4\sqrt{2})$ superlattice structures of alkanethiol self-assembled monolayers. Journal of Applied Physics, 2004, 95, 1222-1226.	1.1	44
82	Noncontact atomic force microscopy study of copper-phthalocyanines: Submolecular-scale contrasts in topography and energy dissipation. Journal of Applied Physics, 2004, 95, 4742-4746.	1.1	37
83	Dynamic force microscopy at high cantilever resonance frequencies using heterodyne optical beam deflection method. Applied Physics Letters, 2004, 85, 6287-6289.	1.5	13
84	Surface potential measurements by the dissipative force modulation method. Review of Scientific Instruments, 2004, 75, 4589-4594.	0.6	26
85	Phase-separated alkanethiol self-assembled monolayers investigated by non-contact AFM. Applied Surface Science, 2003, 210, 99-104.	3.1	30
86	Local structures and electrical properties of organic molecular films investigated by non-contact atomic force microscopy. Applied Surface Science, 2002, 188, 391-398.	3.1	42
87	Molecular-scale non-contact AFM studies of ferroelectric organic thin films epitaxially grown on alkali halides. Surface Science, 2002, 516, 103-108.	0.8	23
88	Alkanethiol self-assembled monolayers on Au(111) surfaces investigated by non-contact AFM. Applied Physics A: Materials Science and Processing, 2001, 72, S109-S112.	1.1	42
89	Structures and local electrical properties of ferroelectric polymer thin films in thermal process investigated by dynamic-mode atomic force microscopy. Thin Solid Films, 2001, 397, 133-137.	0.8	12
90	Nanoscale characterization of the site-specific degradation of electric double-layer capacitor using scanning electrochemical cell microscopy. Electrochemical Science Advances, 0, , e2100053.	1.2	2