Ferry Kienberger

List of Publications by Year
in descending order

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91 papers	3,364 citations	159358 30 h-index	143772 57 g-index
92 all docs	92 docs citations	92 times ranked	3390 citing authors

#	Article	IF	Citations
1	A New, Simple Method for Linking of Antibodies to Atomic Force Microscopy Tips. Bioconjugate Chemistry, 2007, 18, 1176-1184.	1.8	242
2	Static and Dynamical Properties of Single Poly(Ethylene Glycol) Molecules Investigated by Force Spectroscopy. Single Molecules, 2000, 1, 123-128.	1.7	238
3	Ultrastructural characterization of cystic fibrosis sputum using atomic force and scanning electron microscopy. Journal of Cystic Fibrosis, 2012, 11, 84-92.	0.3	199
4	Molecular Recognition Imaging and Force Spectroscopy of Single Biomolecules. Accounts of Chemical Research, 2006, 39, 29-36.	7.6	181
5	Simultaneous Topography and Recognition Imaging Using Force Microscopy. Biophysical Journal, 2004, 87, 1981-1990.	0.2	169
6	Multiple receptors involved in human rhinovirus attachment to live cells. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 17778-17783.	3.3	159
7	Localization of Single Avidin-Biotin Interactions Using Simultaneous Topography and Molecular Recognition Imaging. ChemPhysChem, 2005, 6, 897-900.	1.0	123
8	Recognition Force Spectroscopy Studies of the NTA-His6 Bond. Single Molecules, 2000, 1, 59-65.	1.7	111
9	A molecular switch between alternative conformational states in the complex of Ran and importin Î²1. Nature Structural and Molecular Biology, 2003, 10, 553-557.	3.6	107
10	Single Molecule Studies of Antibodyâ€“Antigen Interaction Strength Versus Intra-molecular Antigen Stability. Journal of Molecular Biology, 2005, 347, 597-606.	2.0	106
11	Antibody Linking to Atomic Force Microscope Tips via Disulfide Bond Formation. Bioconjugate Chemistry, 2006, 17, 1473-1481.	1.8	87
12	Poly(Ethylene Glycol): An Ideal Spacer for Molecular Recognition Force Microscopy/Spectroscopy.. Single Molecules, 2000, 1, 99-103.	1.7	83
13	Directed Assembly of Au Nanoparticles onto Planar Surfaces via Multiple Hydrogen Bonds. Langmuir, 2005, 21, 8414-8421.	1.6	83
14	Heterobifunctional crosslinkers for tethering single ligand molecules to scanning probes. Analytica Chimica Acta, 2003, 497, 101-114.	2.6	82
15	Atomic force microscopy in bionanotechnology. Nano Today, 2008, 3, 12-19.	6.2	74
16	Nanoscale Electric Permittivity of Single Bacterial Cells at Gigahertz Frequencies by Scanning Microwave Microscopy. ACS Nano, 2016, 10, 280-288.	7.3	67
17	Surface attachment of ligands and receptors for molecular recognition force microscopy. Colloids and Surfaces B: Biointerfaces, 2002, 23, 115-123.	2.5	64
18	Dynamic force microscopy imaging of native membranes. Ultramicroscopy, 2003, 97, 229-237.	0.8	62

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19	Nanomechanical recognition measurements of individual DNA molecules reveal epigenetic methylation patterns. Nature Nanotechnology, 2010, 5, 788-791.	15.6	59
20	Following single antibody binding to purple membranes in real time. EMBO Reports, 2004, 5, 579-583.	2.0	57
21	Nondestructive imaging of atomically thin nanostructures buried in silicon. Science Advances, 2017, 3, e1602586.	4.7	56
22	Hydrodynamic damping of a magnetically oscillated cantilever close to a surface. Ultramicroscopy, 2004, 100, 301-308.	0.8	52
23	Imaging morphological details and pathological differences of red blood cells using tapping-mode AFM. Biological Chemistry, 2004, 385, 955-60.	1.2	49
24	Probing resistivity and doping concentration of semiconductors at the nanoscale using scanning microwave microscopy. Nanoscale, 2015, 7, 14715-14722.	2.8	49
25	Quantitative sub-surface and non-contact imaging using scanning microwave microscopy. Nanotechnology, 2015, 26, 135701.	1.3	47
26	Free Energy of Membrane Protein Unfolding Derived from Single-Molecule Force Measurements. Biophysical Journal, 2007, 93, 930-937.	0.2	45
27	Dynamic force microscopy imaging of plasmid DNA and viral RNA. Biomaterials, 2007, 28, 2403-2411.	5.7	39
28	Vacuolar structures can be identified by AFM elasticity mapping. Ultramicroscopy, 2007, 107, 895-901.	0.8	36
29	Calibrated complex impedance of CHO cells andE.colibacteria at GHz frequencies using scanning microwave microscopy. Nanotechnology, 2016, 27, 135702.	1.3	36
30	Monitoring RNA Release from Human Rhinovirus by Dynamic Force Microscopy. Journal of Virology, 2004, 78, 3203-3209.	1.5	35
31	Visualization of Single Receptor Molecules Bound to Human Rhinovirus under Physiological Conditions. Structure, 2005, 13, 1247-1253.	1.6	30
32	Measuring low loss dielectric substrates with scanning probe microscopes. Applied Physics Letters, 2014, 105, .	1.5	28
33	Second harmonic atomic force microscopy imaging of live and fixed mammalian cells. Ultramicroscopy, 2009, 109, 1056-1060.	0.8	24
34	A calibration algorithm for nearfield scanning microwave microscopes. , 2012, , .		24
35	Nanoscale imaging of mobile carriers and trapped charges in delta doped silicon pâ€“n junctions. Nature Electronics, 2020, 3, 531-538.	13.1	24
36	High-frequency electromagnetic dynamics properties of THP1 cells using scanning microwave microscopy. Ultramicroscopy, 2011, 111, 1625-1629.	0.8	23

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37	Atomic-Force-Microscopy Imaging and Molecular-Recognition-Force Microscopy of Recrystallized Heterotetramers Comprising an S-Layer-Streptavidin Fusion Protein. ChemBioChem, 2006, 7, 588-591.	1.3	22
38	Molecular recognition imaging using tuning fork-based transverse dynamic force microscopy. Ultramicroscopy, 2010, 110, 605-611.	0.8	21
39	Nanoscale Charge Accumulation and Its Effect on Carrier Dynamics in Tri-cation Perovskite Structures. ACS Applied Materials & Interfaces, 2020, 12, 48057-48066.	4.0	21
40	Electrochemical impedance spectroscopy error analysis and round robin on dummy cells and lithium-ion-batteries. Journal of Power Sources, 2022, 536, 231407.	4.0	19
41	Dithio-Phospholipids for Biospecific Immobilization of Proteins on Gold Surfaces. Single Molecules, 2002, 3, 119-125.	1.7	17
42	Atomic Force Microscopyâ€Đerived Nanoscale Chip for the Detection of Human Pathogenic Viruses. Small, 2008, 4, 847-854.	5.2	17
43	Assessment of lithium ion battery ageing by combined impedance spectroscopy, functional microscopy and finite element modelling. Journal of Power Sources, 2021, 512, 230459.	4.0	17
44	Broadband 120 MHz Impedance Quartz Crystal Microbalance (QCM) with Calibrated Resistance and Quantitative Dissipation for Biosensing Measurements at Higher Harmonic Frequencies. Biosensors, 2016, 6, 23.	2.3	16
45	Determination of the Kinetic On- and Off-Rate of Single Virusâ€“Cell Interactions. Methods in Molecular Biology, 2011, 736, 197-210.	0.4	16
46	Quasi-crystalline Arrangement of Human Rhinovirus 2 on Model Cell Membranes. Single Molecules, 2001, 2, 99-103.	1.7	15
47	Interferometer Scanning Microwave Microscopy: Performance Evaluation. IEEE Nanotechnology Magazine, 2017, 16, 991-998.	1.1	15
48	Dynamic force microscopy for imaging of viruses under physiological conditions. Biological Procedures Online, 2004, 6, 120-128.	1.4	14
49	Single Molecule Force Microscopy on Cells and Biological Membranes. Current Nanoscience, 2007, 3, 49-56.	0.7	14
50	Detection and characterization of single biomolecules at surfaces. Reviews in Molecular Biotechnology, 2001, 82, 25-35.	2.9	13
51	Static and Dynamical Properties of Single Poly(Ethylene Glycol) Molecules Investigated by Force Spectroscopy. , 2000, 1, 123.		13
52	Correlations Between AFM and SEM Imaging of Acid-Etched Tooth Enamel. Ultrastructural Pathology, 2008, 32, 1-4.	0.4	11
53	A broadband toolbox for scanning microwave microscopy transmission measurements. Review of Scientific Instruments, 2016, 87, 053701.	0.6	11
54	Scanning microwave microscopy applied to semiconducting GaAs structures. Review of Scientific Instruments, 2018, 89, 023704.	0.6	11

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55	Multiplexed 16 Ã— 16 Li-Ion Cell Measurements Including Internal Resistance for Quality Inspection and Classification. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-9.	2.4	11
56	Accuracy Estimation in Force Spectroscopy Experiments. Japanese Journal of Applied Physics, 2007, 46, 5536.	0.8	10
57	Effects of Viscoelastic Cantilever - Sample Interaction on Laser Beam Deflection in MAC Mode MRFM. Single Molecules, 2000, 1, 165-170.	1.7	8
58	Nanoscale materials and device characterization via a scanning microwave microscope. , 2009, , .		8
59	Examination of Native and Carbamide Peroxide-bleached Human Tooth Enamel by Atomic Force Microscopy. Ultrastructural Pathology, 2009, 33, 189-196.	0.4	8
60	Semiconductor Material and Device Characterization via Scanning Microwave Microscopy. , 2013, , .		8
61	SCANNING MICROWAVE MICROSCOPY: ADVANCES IN QUANTITATIVE CAPACITANCE AND CARRIER DENSITY MEASUREMENTS AT THE NANOMETER SCALE. World Scientific Series in Nanoscience and Nanotechnology, 2013, , 481-512.	0.1	8
62	Frequency Analysis of Dopant Profiling and Capacitance Spectroscopy using Scanning Microwave Microscopy. IEEE Nanotechnology Magazine, 2016, , 1-1.	1.1	7
63	Nanoscale dipole dynamics of protein membranes studied by broadband dielectric microscopy. Nanoscale, 2019, 11, 4303-4309.	2.8	7
64	Ion-driven nanograin formation in early-stage degradation of tri-cation perovskite films. Nanoscale, 2022, 14, 2605-2616.	2.8	6
65	Monitoring of glass derivatization with pulsed force mode atomic force microscopy. Microscopy Research and Technique, 2004, 65, 246-251.	1.2	5
66	Selective binding of nanoparticles on surfaces and into polymeric matrices via directed hydrogen bonding interactions. Polymers for Advanced Technologies, 2006, 17, 754-757.	1.6	5
67	Kinetics of bioconjugate nanoparticle label binding in a sandwich-type immunoassay. Analytical and Bioanalytical Chemistry, 2014, 406, 493-503.	1.9	5
68	Atomic Force Microscopy Studies of Human Rhinovirus. Methods in Enzymology, 2010, 475, 515-539.	0.4	4
69	Transmission and reflection mode scanning microwave microscopy (SMM): Experiments, calibration, and simulations. , 2015, , .		4
70	Advanced Electrochemical Impedance Spectroscopy of Industrial Ni-Cd Batteries. Batteries, 2022, 8, 50.	2.1	4
71	Calibrated Nanoscale Dopant Profiling and Capacitance of a High-Voltage Lateral MOS Transistor at 20 GHz Using Scanning Microwave Microscopy. IEEE Nanotechnology Magazine, 2017, 16, 245-252.	1.1	3
72	Advanced Self-Discharge Measurements of Lithium-Ion Cells and Comparison to Modeling. , 2020, , .		3

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73	Roll-to-Roll In-Line Implementation of Microwave Free-Space Non-Destructive Evaluation of Conductive Composite Thin Layer Materials. Applied Sciences (Switzerland), 2021, 11, 378.	1.3	3
74	An Advanced Impedance Calibration Method for Nanoscale Microwave Imaging at Broad Frequency Range. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 2418-2424.	2.9	2
75	Poly(Ethylene Glycol): An Ideal Spacer for Molecular Recognition Force Microscopy/Spectroscopy.. , 2000, 1, 99.		2
76	Local Characterization of Ferromagnetic Resonance in Bulk and Patterned Magnetic Materials Using Scanning Microwave Microscopy. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-11.	2.4	2
77	Quantitative measurement of electric properties on the nanometer scale using atomic force microscopy. , 2011, , .		1
78	A new one-port S-parameter calibration workflow by means of a MEMS-based variable capacitor array. , 2017, , .		1
79	Fast Measurements of Dielectric Properties with Small Size Microwave Transceiver. , 2020, , .		1
80	High-Sensitivity Dual Electrochemical QCM for Reliable Three-Electrode Measurements. Sensors, 2021, 21, 2592.	2.1	1
81	Recognition Force Spectroscopy Studies of the NTA-His6 Bond. , 2000, 1, 59.		1
82	Recognition Force Spectroscopy Studies of the NTA-His6 Bond. , 2000, 1, 59.		1
83	Recognition Force Spectroscopy Studies of the NTA-His6 Bond. , 2000, 1, 59.		1
84	Single-Molecule Studies on Cells and Membranes Using the Atomic Force Microscope. Nanoscience and Technology, 2007, , 101-125.	1.5	1
85	Dynamic Force Microscopy and Spectroscopy. Nanoscience and Technology, 2006, , 143-164.	1.5	0
86	Exploring Carbon Nanotubes and Their Interaction with Cells Using Atomic Force Microscopy. , 2011, , 1-16.		0
87	Nanoanalysis of lanthanum scandate MOS capacitors addressing reliability after local current flow. , 2011, , .		0
88	White Paper: Nanoscale impedance and permittivity properties at microwave frequencies using SMM. MRS Bulletin, 2017, 42, 180-182.	1.7	0
89	Near-field microwave techniques for micro- and nano-scale characterization in materials science. , 2017, , .		0
90	Scanning Microwave and Electrostatic Force Microscopy for Investigation of Conductive and Dielectric Properties at a Wide Frequency Range. , 2018, , .		0

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91	Single-Molecule Studies on Cells and Membranes Using the Atomic Force Microscope. , 2010, , 479-503.		0