Roger Proksch

List of Publications by Year
in descending order

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69 papers	5,524 citations	101496 36 h-index	88593 70 g-index
73 all docs	73 docs citations	73 times ranked	6305 citing authors

#	ARTICLE	IF	CITATIONS
1	Enhanced ferroelectricity in ultrathin films grown directly on silicon. Nature, 2020, 580, 478-482.	13.7	486
2	Normal and torsional spring constants of atomic force microscope cantilevers. Review of Scientific Instruments, 2004, 75, 1988-1996.	0.6	455
3	Dual-frequency resonance-tracking atomic force microscopy. Nanotechnology, 2007, 18, 475504.	1.3	428
4	The band excitation method in scanning probe microscopy for rapid mapping of energy dissipation on the nanoscale. Nanotechnology, 2007, 18, 435503.	1.3	413
5	Does Abalone Nacre Form by Heteroepitaxial Nucleation or by Growth through Mineral Bridges?. Chemistry of Materials, 1997, 9, 1731-1740.	3.2	387
6	Magnetite defines a vertebrate magnetoreceptor. Nature, 2000, 406, 299-302.	13.7	231
7	Nanomechanical mapping of soft matter by bimodal force microscopy. European Polymer Journal, 2013, 49, 1897-1906.	2.6	198
8	Multifrequency, repulsive-mode amplitude-modulated atomic force microscopy. Applied Physics Letters, 2006, 89, 113121.	1.5	190
9	Chemical nature of ferroelastic twin domains in CH3NH3PbI3 perovskite. Nature Materials, 2018, 17, 1013-1019.	13.3	183
10	Bias-Dependent Molecular-Level Structure of Electrical Double Layer in Ionic Liquid on Graphite. Nano Letters, 2013, 13, 5954-5960.	4.5	142
11	Comparison of Scanning Ion Conductance Microscopy with Atomic Force Microscopy for Cell Imaging. Langmuir, 2011, 27, 697-704.	1.6	134
12	Fast, High Resolution, and Wide Modulus Range Nanomechanical Mapping with Bimodal Tapping Mode. ACS Nano, 2017, 11, 10097-10105.	7.3	110
13	Big, Deep, and Smart Data in Scanning Probe Microscopy. ACS Nano, 2016, 10, 9068-9086.	7.3	103
14	Interplay between Ferroelastic and Metalâˆ’Insulator Phase Transitions in Strained Quasi-Two-Dimensional VO₂ Nanoplatelets. Nano Letters, 2010, 10, 2003-2011.	4.5	101
15	Magnetic and acoustic tapping mode microscopy of liquid phase phospholipid bilayers and DNA molecules. Journal of Applied Physics, 2000, 87, 526-533.	1.1	99
16	Quantitative measurements of electromechanical response with a combined optical beam and interferometric atomic force microscope. Applied Physics Letters, 2015, 106, .	1.5	96
17	Nanocrystalline multiferroic BiFeO3 ultrafine fibers by sol-gel based electrospinning. Applied Physics Letters, 2008, 93, .	1.5	94
18	Quantitative Viscoelastic Mapping of Polyolefin Blends with Contact Resonance Atomic Force Microscopy. Macromolecules, 2012, 45, 4363-4370.	2.2	90

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19	Quantitative Electromechanical Atomic Force Microscopy. ACS Nano, 2019, 13, 8055-8066.	7.3	84
20	High resolution quantitative piezoresponse force microscopy of BiFeO₃nanofibers with dramatically enhanced sensitivity. Nanoscale, 2012, 4, 408-413.	2.8	82
21	Assembly of submicrometre ferromagnets in gallium arsenide semiconductors. Nature, 1995, 377, 707-710.	13.7	81
22	Loss tangent imaging: Theory and simulations of repulsive-mode tapping atomic force microscopy. Applied Physics Letters, 2012, 100, .	1.5	81
23	Li-ion dynamics and reactivity on the nanoscale. Materials Today, 2011, 14, 548-558.	8.3	73
24	Mesoscopic Metalâˆ’Insulator Transition at Ferroelastic Domain Walls in VO₂. ACS Nano, 2010, 4, 4412-4419.	7.3	68
25	Generalized Hertz model for bimodal nanomechanical mapping. Beilstein Journal of Nanotechnology, 2016, 7, 970-982.	1.5	65
26	Spatially and Temporally Synchronized Atomic Force and Total Internal Reflection Fluorescence Microscopy for Imaging and Manipulating Cells and Biomolecules. Biophysical Journal, 2006, 91, 2665-2677.	0.2	55
27	Bimodal magnetic force microscopy: Separation of short and long range forces. Applied Physics Letters, 2009, 94, .	1.5	55
28	Comparing the resolution of magnetic force microscopes using the CAMST reference samples. Journal of Magnetism and Magnetic Materials, 1998, 190, 135-147.	1.0	51
29	Near-field microwave scanning probe imaging of conductivity inhomogeneities in CVD graphene. Nanotechnology, 2012, 23, 385706.	1.3	51
30	Quantitative magnetic field measurements with the magnetic force microscope. Applied Physics Letters, 1996, 69, 2599-2601.	1.5	46
31	Measuring the gigahertz response of recording heads with the magnetic force microscope. Applied Physics Letters, 1999, 74, 1308-1310.	1.5	45
32	Localized micromagnetic perturbation of domain walls in magnetite using a magnetic force microscope. Applied Physics Letters, 1996, 69, 3426-3428.	1.5	44
33	Towards local electromechanical probing of cellular and biomolecular systems in a liquid environment. Nanotechnology, 2007, 18, 424020.	1.3	41
34	Practical loss tangent imaging with amplitude-modulated atomic force microscopy. Journal of Applied Physics, 2016, 119, .	1.1	40
35	Calibration of higher eigenmodes of cantilevers. Review of Scientific Instruments, 2016, 87, 073705.	0.6	40
36	Nanocrystalline Structure and Thermoelectric Properties of Electrospun NaCo₂O₄ Nanofibers. Journal of Physical Chemistry C, 2010, 114, 22038-22043.	1.5	39

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37	High field magnetic force microscopy. Journal of Applied Physics, 1995, 78, 3303-3307.	1.1	36
38	Creep compliance mapping by atomic force microscopy. Polymer, 2014, 55, 219-225.	1.8	32
39	Magnetic microscopies: the new additions. Journal of Magnetism and Magnetic Materials, 1999, 200, 720-728.	1.0	31
40	High-Speed Nanomechanical Mapping of the Early Stages of Collagen Growth by Bimodal Force Microscopy. ACS Nano, 2021, 15, 1850-1857.	7.3	31
41	Contact resonance atomic force microscopy imaging in air and water using photothermal excitation. Review of Scientific Instruments, 2015, 86, 083706.	0.6	29
42	Intermittent contact mode piezoresponse force microscopy in a liquid environment. Nanotechnology, 2009, 20, 195701.	1.3	28
43	Energy dissipation measurements in frequency-modulated scanning probe microscopy. Nanotechnology, 2010, 21, 455705.	1.3	26
44	Interactions between single domain particles. Journal of Applied Physics, 1994, 75, 5894-5896.	1.1	25
45	G-mode magnetic force microscopy: Separating magnetic and electrostatic interactions using big data analytics. Applied Physics Letters, 2016, 108, .	1.5	24
46	Sub-7-nm textured ZrO2 with giant ferroelectricity. Acta Materialia, 2021, 205, 116536.	3.8	24
47	Multimodal atomic force microscopy: Biological imaging using atomic force microscopy combined with light fluorescence and confocal microscopies and electrophysiologic recording. International Journal of Imaging Systems and Technology, 1997, 8, 293-300.	2.7	21
48	Magnetic dissipation microscopy in ambient conditions. Applied Physics Letters, 1999, 74, 419-421.	1.5	21
49	Reply to: On the ferroelectricity of CH3NH3PbI3 perovskites. Nature Materials, 2019, 18, 1051-1053.	13.3	21
50	High sensitivity piezomagnetic force microscopy for quantitative probing of magnetic materials at the nanoscale. Nanoscale, 2013, 5, 5747.	2.8	20
51	Recent advances in magnetic force microscopy. Current Opinion in Solid State and Materials Science, 1999, 4, 231-236.	5.6	17
52	Measurement of the effects of the localized field of a magnetic force microscope tip on a 180Â° domain wall. Journal of Applied Physics, 1997, 81, 5032-5034.	1.1	14
53	Discrimination of adhesion and viscoelasticity from nanoscale maps of polymer surfaces using bimodal atomic force microscopy. Nanoscale, 2021, 13, 17428-17441.	2.8	14
54	Correlating Crystallographic Orientation and Ferroic Properties of Twin Domains in Metal Halide Perovskites. ACS Nano, 2021, 15, 7139-7148.	7.3	14

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55	A detection technique for scanning force microscopy. Review of Scientific Instruments, 1993, 64, 912-916.	0.6	13
56	Magnetic fine structure of domain walls in iron films observed with a magnetic force microscope. Journal of Applied Physics, 1994, 75, 5776-5778.	1.1	12
57	Magnetic force microscopy of avalanche dynamics in magnetic media. Journal of Applied Physics, 1998, 84, 5709-5714.	1.1	12
58	Optically stabilized, constantâ€height mode operation of a magnetic force microscope. Journal of Applied Physics, 1993, 73, 5808-5810.	1.1	11
59	Magnetic force gradient mapping. Journal of Applied Physics, 2003, 94, 6525-6532.	1.1	9
60	Piezoresponse Force Microscopy. Microscopy Today, 2009, 17, 10-15.	0.2	9
61	MAPPING STORAGE MODULUS AND LOSS MODULUS OF POLYOLEFIN/POLYSTYRENE BLENDS WITH ATOMIC FORCE MICROSCOPY. Rubber Chemistry and Technology, 2012, 85, 559-564.	0.6	8
62	Spatial spectrograms of vibrating atomic force microscopy cantilevers coupled to sample surfaces. Applied Physics Letters, 2013, 103, .	1.5	8
63	Ferroic twin domains in metal halide perovskites. MRS Advances, 2019, 4, 2817-2830.	0.5	7
64	Nanoscale Mass Spectrometry Multimodal Imaging <i>via</i> Tip-Enhanced Photothermal Desorption. ACS Nano, 2020, 14, 16791-16802.	7.3	6
65	Static and dynamic calibration of torsional spring constants of cantilevers. Review of Scientific Instruments, 2018, 89, 093701.	0.6	4
66	Quantifying Molecular Forces: Sensitivities and Spring Constants Without Touching a Surface. Microscopy and Microanalysis, 2001, 7, 862-863.	0.2	1
67	Forces in Biology and Atomic Force Microscopy (AFM) Imaging: Pull and See This!. Microscopy and Microanalysis, 2004, 10, 1092-1093.	0.2	0
68	Photoinduced Thermal Desorption on an Atomic Force Microscope Platform Coupled with Mass Spectrometry for Multimodal Imaging. Microscopy and Microanalysis, 2019, 25, 1064-1065.	0.2	0
69	Nanomechanical sampling of material for nanoscale mass spectrometry chemical analysis. Analytical and Bioanalytical Chemistry, 2021, 413, 2747-2754.	1.9	0