Roger Proksch

List of Publications by Citations

69 papers	4,469 citations	33 h-index	66 g-index
73 ext. papers	5,035 ext. citations	7.7 avg, IF	5.48 L-index

#	Paper	IF	Citations
69	Normal and torsional spring constants of atomic force microscope cantilevers. *Review of Scientific Instruments*, **2004**, 75, 1988-1996	1.7	400
68	The band excitation method in scanning probe microscopy for rapid mapping of energy dissipation on the nanoscale. *Nanotechnology*, **2007**, 18, 435503	3.4	383
67	Dual-frequency resonance-tracking atomic force microscopy. *Nanotechnology*, **2007**, 18, 475504	3.4	365
66	Does Abalone Nacre Form by Heteroepitaxial Nucleation or by Growth through Mineral Bridges?. *Chemistry of Materials*, **1997**, 9, 1731-1740	9.6	348
65	Enhanced ferroelectricity in ultrathin films grown directly on silicon. *Nature*, **2020**, 580, 478-482	50.4	232
64	Magnetite defines a vertebrate magnetoreceptor. *Nature*, **2000**, 406, 299-302	50.4	196
63	Multifrequency, repulsive-mode amplitude-modulated atomic force microscopy. *Applied Physics Letters*, **2006**, 89, 113121	3.4	179
62	Nanomechanical mapping of soft matter by bimodal force microscopy. *European Polymer Journal*, **2013**, 49, 1897-1906	5.2	164
61	Bias-dependent molecular-level structure of electrical double layer in ionic liquid on graphite. *Nano Letters*, **2013**, 13, 5954-60	11.5	117
60	Chemical nature of ferroelastic twin domains in CHNHPbI perovskite. *Nature Materials*, **2018**, 17, 1013-1019	41	114
59	Comparison of scanning ion conductance microscopy with atomic force microscopy for cell imaging. *Langmuir*, **2011**, 27, 697-704	4	113
58	Interplay between ferroelastic and metal-insulator phase transitions in strained quasi-two-dimensional VO2 nanoplatelets. *Nano Letters*, **2010**, 10, 2003-11	11.5	91
57	Nanocrystalline multiferroic BiFeO3 ultrafine fibers by sol-gel based electrospinning. *Applied Physics Letters*, **2008**, 93, 222904	3.4	88
56	Quantitative measurements of electromechanical response with a combined optical beam and interferometric atomic force microscope. *Applied Physics Letters*, **2015**, 106, 253103	3.4	83
55	Big, Deep, and Smart Data in Scanning Probe Microscopy. *ACS Nano*, **2016**, 10, 9068-9086	16.7	79
54	Quantitative Viscoelastic Mapping of Polyolefin Blends with Contact Resonance Atomic Force Microscopy. *Macromolecules*, **2012**, 45, 4363-4370	5.5	77
53	Assembly of submicrometre ferromagnets in gallium arsenide semiconductors. *Nature*, **1995**, 377, 707-710	50.4	76

52	Fast, High Resolution, and Wide Modulus Range Nanomechanical Mapping with Bimodal Tapping Mode. *ACS Nano*, **2017**, 11, 10097-10105	16.7	71
51	High resolution quantitative piezoresponse force microscopy of BiFeO3 nanofibers with dramatically enhanced sensitivity. *Nanoscale*, **2012**, 4, 408-13	7.7	71
50	Loss tangent imaging: Theory and simulations of repulsive-mode tapping atomic force microscopy. *Applied Physics Letters*, **2012**, 100, 073106	3.4	70
49	Li-ion dynamics and reactivity on the nanoscale. *Materials Today*, **2011**, 14, 548-558	21.8	68
48	Magnetic and acoustic tapping mode microscopy of liquid phase phospholipid bilayers and DNA molecules. *Journal of Applied Physics*, **2000**, 87, 526-533	2.5	65
47	Mesoscopic metal-insulator transition at ferroelastic domain walls in VO2. *ACS Nano*, **2010**, 4, 4412-9	16.7	63
46	Quantitative Electromechanical Atomic Force Microscopy. *ACS Nano*, **2019**, 13, 8055-8066	16.7	58
45	Bimodal magnetic force microscopy: Separation of short and long range forces. *Applied Physics Letters*, **2009**, 94, 163118	3.4	49
44	Generalized Hertz model for bimodal nanomechanical mapping. *Beilstein Journal of Nanotechnology* , **2016**, 7, 970-82	3	49
43	Spatially and temporally synchronized atomic force and total internal reflection fluorescence microscopy for imaging and manipulating cells and biomolecules. *Biophysical Journal*, **2006**, 91, 2665-77	2.9	47
42	Comparing the resolution of magnetic force microscopes using the CAMST reference samples. *Journal of Magnetism and Magnetic Materials*, **1998**, 190, 135-147	2.8	46
41	Measuring the gigahertz response of recording heads with the magnetic force microscope. *Applied Physics Letters*, **1999**, 74, 1308-1310	3.4	41
40	Localized micromagnetic perturbation of domain walls in magnetite using a magnetic force microscope. *Applied Physics Letters*, **1996**, 69, 3426-3428	3.4	41
39	Near-field microwave scanning probe imaging of conductivity inhomogeneities in CVD graphene. *Nanotechnology*, **2012**, 23, 385706	3.4	40
38	Quantitative magnetic field measurements with the magnetic force microscope. *Applied Physics Letters*, **1996**, 69, 2599-2601	3.4	38
37	Nanocrystalline Structure and Thermoelectric Properties of Electrospun NaCo2O4 Nanofibers. *Journal of Physical Chemistry C*, **2010**, 114, 22038-22043	3.8	36
36	Towards local electromechanical probing of cellular and biomolecular systems in a liquid environment. *Nanotechnology*, **2007**, 18, 424020	3.4	33
35	High field magnetic force microscopy. *Journal of Applied Physics*, **1995**, 78, 3303-3307	2.5	33

34	Calibration of higher eigenmodes of cantilevers. *Review of Scientific Instruments*, **2016**, 87, 073705	1.7	32
33	Practical loss tangent imaging with amplitude-modulated atomic force microscopy. *Journal of Applied Physics*, **2016**, 119, 134901	2.5	30
32	Creep compliance mapping by atomic force microscopy. *Polymer*, **2014**, 55, 219-225	3.9	28
31	Intermittent contact mode piezoresponse force microscopy in a liquid environment. *Nanotechnology*, **2009**, 20, 195701	3.4	27
30	Magnetic microscopies: the new additions. *Journal of Magnetism and Magnetic Materials*, **1999**, 200, 720-738	2.8	26
29	Energy dissipation measurements in frequency-modulated scanning probe microscopy. *Nanotechnology*, **2010**, 21, 455705	3.4	25
28	Contact resonance atomic force microscopy imaging in air and water using photothermal excitation. *Review of Scientific Instruments*, **2015**, 86, 083706	1.7	23
27	Interactions between single domain particles. *Journal of Applied Physics*, **1994**, 75, 5894-5896	2.5	22
26	G-mode magnetic force microscopy: Separating magnetic and electrostatic interactions using big data analytics. *Applied Physics Letters*, **2016**, 108, 193103	3.4	21
25	Reply to: On the ferroelectricity of CHNHPbI perovskites. *Nature Materials*, **2019**, 18, 1051-1053	27	21
24	Magnetic dissipation microscopy in ambient conditions. *Applied Physics Letters*, **1999**, 74, 419-421	3.4	20
23	High sensitivity piezomagnetic force microscopy for quantitative probing of magnetic materials at the nanoscale. *Nanoscale*, **2013**, 5, 5747-51	7.7	19
22	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	2.5	18
21	A detection technique for scanning force microscopy. *Review of Scientific Instruments*, **1993**, 64, 912-916	1.7	13
20	Measurement of the effects of the localized field of a magnetic force microscope tip on a 180° domain wall. *Journal of Applied Physics*, **1997**, 81, 5032-5034	2.5	12
19	Recent advances in magnetic force microscopy. *Current Opinion in Solid State and Materials Science*, **1999**, 4, 231-236	12	12
18	Magnetic force microscopy of avalanche dynamics in magnetic media. *Journal of Applied Physics*, **1998**, 84, 5709-5714	2.5	11
17	Magnetic fine structure of domain walls in iron films observed with a magnetic force microscope. *Journal of Applied Physics*, **1994**, 75, 5776-5778	2.5	9

List of Publications

16	High-Speed Nanomechanical Mapping of the Early Stages of Collagen Growth by Bimodal Force Microscopy. *ACS Nano*, **2021**, 15, 1850-1857	16.7	9
15	Spatial spectrograms of vibrating atomic force microscopy cantilevers coupled to sample surfaces. *Applied Physics Letters*, **2013**, 103, 263102	3.4	7
14	MAPPING STORAGE MODULUS AND LOSS MODULUS OF POLYOLEFIN/POLYSTYRENE BLENDS WITH ATOMIC FORCE MICROSCOPY. *Rubber Chemistry and Technology*, **2012**, 85, 559-564	1.7	7
13	Magnetic force gradient mapping. *Journal of Applied Physics*, **2003**, 94, 6525-6532	2.5	7
12	Optically stabilized, constant-height mode operation of a magnetic force microscope. *Journal of Applied Physics*, **1993**, 73, 5808-5810	2.5	7
11	Correlating Crystallographic Orientation and Ferroic Properties of Twin Domains in Metal Halide Perovskites. *ACS Nano*, **2021**, 15, 7139-7148	16.7	7
10	Sub-7-nm textured ZrO2 with giant ferroelectricity. *Acta Materialia*, **2021**, 205, 116536	8.4	6
9	Ferroic twin domains in metal halide perovskites. *MRS Advances*, **2019**, 4, 2817-2830	0.7	5
8	Piezoresponse Force Microscopy. *Microscopy Today*, **2009**, 17, 10-15	0.4	5
7	Nanoscale Mass Spectrometry Multimodal Imaging Tip-Enhanced Photothermal Desorption. *ACS Nano*, **2020**,	16.7	3
6	Static and dynamic calibration of torsional spring constants of cantilevers. *Review of Scientific Instruments*, **2018**, 89, 093701	1.7	3
5	Discrimination of adhesion and viscoelasticity from nanoscale maps of polymer surfaces using bimodal atomic force microscopy. *Nanoscale*, **2021**, 13, 17428-17441	7.7	2
4	Photoinduced Thermal Desorption on an Atomic Force Microscope Platform Coupled with Mass Spectrometry for Multimodal Imaging. *Microscopy and Microanalysis*, **2019**, 25, 1064-1065	0.5	
3	Forces in Biology and Atomic Force Microscopy (AFM) Imaging: Pull and See This!. *Microscopy and Microanalysis*, **2004**, 10, 1092-1093	0.5	
2	Quantifying Molecular Forces: Sensitivities and Spring Constants Without Touching a Surface. *Microscopy and Microanalysis*, **2001**, 7, 862-863	0.5	
1	Nanomechanical sampling of material for nanoscale mass spectrometry chemical analysis. *Analytical and Bioanalytical Chemistry*, **2021**, 413, 2747-2754	4.4	