

Suhas Somnath

List of Publications by Year in descending order

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Version: 2024-02-01

43
papers

919
citations

471509

17
h-index

454955

30
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46
all docs

46
docs citations

46
times ranked

1690
citing authors

#	ARTICLE	IF	CITATIONS
1	Unraveling the Mechanism of Nanoscale Mechanical Reinforcement in Glassy Polymer Nanocomposites. Nano Letters, 2016, 16, 3630-3637.	9.1	142
2	Big, Deep, and Smart Data in Scanning Probe Microscopy. ACS Nano, 2016, 10, 9068-9086.	14.6	103
3	HEATED ATOMIC FORCE MICROSCOPE CANTILEVERS AND THEIR APPLICATIONS. Annual Review of Heat Transfer, 2013, 16, 287-326.	1.0	59
4	Full data acquisition in Kelvin Probe Force Microscopy: Mapping dynamic electric phenomena in real space. Scientific Reports, 2016, 6, 30557.	3.3	47
5	Tip-Based Nanofabrication for Scalable Manufacturing. Micromachines, 2017, 8, 90.	2.9	46
6	Nanometer-scale flow of molten polyethylene from a heated atomic force microscope tip. Nanotechnology, 2012, 23, 215301.	2.6	45
7	Parallelization of thermochemical nanolithography. Nanoscale, 2014, 6, 1299-1304.	5.6	41
8	Multifrequency spectrum analysis using fully digital G Mode-Kelvin probe force microscopy. Nanotechnology, 2016, 27, 105706.	2.6	36
9	Feature extraction via similarity search: application to atom finding and denoising in electron and scanning probe microscopy imaging. Advanced Structural and Chemical Imaging, 2018, 4, 3.	4.0	31
10	Data mining for better material synthesis: The case of pulsed laser deposition of complex oxides. Journal of Applied Physics, 2018, 123, .	2.5	29
11	Full information acquisition in piezoresponse force microscopy. Applied Physics Letters, 2015, 107, 263102.	3.3	28
12	USID and Pycroscopy – Open Source Frameworks for Storing and Analyzing Imaging and Spectroscopy Data. Microscopy and Microanalysis, 2019, 25, 220-221.	0.4	27
13	Parallel nanoimaging and nanolithography using a heated microcantilever array. Nanotechnology, 2014, 25, 014001.	2.6	21
14	Rapid mapping of polarization switching through complete information acquisition. Nature Communications, 2016, 7, 13290.	12.8	21
15	Fabrication of arbitrarily shaped silicon and silicon oxide nanostructures using tip-based nanofabrication. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 06FJ01.	1.2	19
16	Multifunctional atomic force microscope cantilevers with Lorentz force actuation and self-heating capability. Nanotechnology, 2014, 25, 395501.	2.6	18
17	BEAM: A Computational Workflow System for Managing and Modeling Material Characterization Data in HPC Environments. Procedia Computer Science, 2016, 80, 2276-2280.	2.0	17
18	Selective patterning of out-of-plane piezoelectricity in MoTe2 via focused ion beam. Nano Energy, 2021, 79, 105451.	16.0	17

#	ARTICLE	IF	CITATIONS
19	Improved Nanotopography Sensing via Temperature Control of a Heated Atomic Force Microscope Cantilever. IEEE Sensors Journal, 2011, 11, 2664-2670.	4.7	14
20	Imaging via complete cantilever dynamic detection: general dynamic mode imaging and spectroscopy in scanning probe microscopy. Nanotechnology, 2016, 27, 414003.	2.6	14
21	Ultrafast current imaging by Bayesian inversion. Nature Communications, 2018, 9, 513.	12.8	14
22	Ultrananocrystalline diamond tip integrated onto a heated atomic force microscope cantilever. Nanotechnology, 2012, 23, 495302.	2.6	13
23	Silicon nano-mechanical resonators fabricated by using tip-based nanofabrication. Nanotechnology, 2014, 25, 275301.	2.6	13
24	Improving superconductivity in BaFe ₂ As ₂ -based crystals by cobalt clustering and electronic uniformity. Scientific Reports, 2017, 7, 949.	3.3	13
25	Heated atomic force microscope cantilever with high resistivity for improved temperature sensitivity. Sensors and Actuators A: Physical, 2013, 201, 141-147.	4.1	11
26	Heated atomic force cantilever closed loop temperature control and application to high speed nanotopography imaging. Sensors and Actuators A: Physical, 2013, 192, 27-33.	4.1	10
27	Improved spatial resolution for spot sampling in thermal desorption atomic force microscopy " mass spectrometry via rapid heating functions. Nanoscale, 2017, 9, 5708-5717.	5.6	9
28	Parallel nanoimaging using an array of 30 heated microcantilevers. RSC Advances, 2014, 4, 24747-24754.	3.6	8
29	Decoupling Mesoscale Functional Response in PLZT across the Ferroelectric "Relaxor Phase Transition with Contact Kelvin Probe Force Microscopy and Machine Learning. ACS Applied Materials & Interfaces, 2018, 10, 42674-42680.	8.0	8
30	Direct Imaging of the Relaxation of Individual Ferroelectric Interfaces in a Tensile "Strained Film. Advanced Electronic Materials, 2017, 3, 1600508.	5.1	7
31	Few-cycle Regime Atomic Force Microscopy. Scientific Reports, 2019, 9, 12721.	3.3	7
32	An investigation of heat transfer between a microcantilever and a substrate for improved thermal topography imaging. Nanotechnology, 2014, 25, 365501.	2.6	6
33	Pycroscopy - An Open Source Approach to Microscopy and Microanalysis in the Age of Big Data and Open Science. Microscopy and Microanalysis, 2017, 23, 224-225.	0.4	6
34	Decoding Apparent Ferroelectricity in Perovskite Nanofibers. ACS Applied Materials & Interfaces, 2017, 9, 42131-42138.	8.0	6
35	Fast nanotopography imaging using a high speed cantilever with integrated heater "thermometer. Nanotechnology, 2013, 24, 135501.	2.6	5
36	Full Information Acquisition in Scanning Probe Microscopy. Microscopy Today, 2017, 25, 34-45.	0.3	3

#	ARTICLE	IF	CITATIONS
37	Dynamic Modes in Kelvin Probe Force Microscopy: Band Excitation and G-Mode. Springer Series in Surface Sciences, 2018, , 49-99.	0.3	3
38	Submicron Spatial Resolution in Thermal Desorption Mass Spectrometry via Rapid Heating Functions using Thermal AFM Probes. Microscopy and Microanalysis, 2016, 22, 368-369.	0.4	1
39	G-mode - Full Information Capture Applied to Scanning Probe Microscopy. Microscopy and Microanalysis, 2017, 23, 184-185.	0.4	1
40	Six-fold improvement in nanotopography sensing via temperature control of a heated atomic force microscope cantilever. , 2010, , .		0
41	Nanofabrication using heated probe tips. , 2011, , .		0
42	Rapid Measurement of I-V Curves via Complete Information Acquisition. Microscopy and Microanalysis, 2017, 23, 192-193.	0.4	0
43	Investigation of Strain in Core@shell Electrocatalysts with ADF-STEM and 4D STEM Scanning Nanodiffraction. Microscopy and Microanalysis, 2019, 25, 1980-1981.	0.4	0