Elisa Riedo

List of Publications by Year
in descending order

75 papers	5,923 citations	109321 35 h-index	85541 71 g-index
80 all docs	80 docs citations	80 times ranked	8836 citing authors

#	Article	IF	Citations
1	Nanoscale Tunable Reduction of Graphene Oxide for Graphene Electronics. Science, 2010, 328, 1373-1376.	12.6	658
2	Advanced scanning probe lithography. Nature Nanotechnology, 2014, 9, 577-587.	31.5	541
3	Room-temperature metastability of multilayer graphene oxide films. Nature Materials, 2012, 11, 544-549.	27.5	512
4	sp2/sp3hybridization ratio in amorphous carbon from C1score-level shifts: X-ray photoelectron spectroscopy and first-principles calculation. Physical Review B, 2001, 65, .	3.2	313
5	Elastic Property of Vertically Aligned Nanowires. Nano Letters, 2005, 5, 1954-1958.	9.1	280
6	Structured and viscous water in subnanometer gaps. Physical Review B, 2007, 75, .	3.2	276
7	Kinetics of Capillary Condensation in Nanoscopic Sliding Friction. Physical Review Letters, 2002, 88, 185505.	7.8	262
8	The interplay between apparent viscosity and wettability in nanoconfined water. Nature Communications, 2013, 4, 2482.	12.8	227
9	Ultrahard carbon film from epitaxial two-layer graphene. Nature Nanotechnology, 2018, 13, 133-138.	31.5	172
10	High-Speed, Sub-15 nm Feature Size Thermochemical Nanolithography. Nano Letters, 2007, 7, 1064-1069.	9.1	165
11	Aspect Ratio Dependence of the Elastic Properties of ZnO Nanobelts. Nano Letters, 2007, 7, 1314-1317.	9.1	130
12	Scalable, Highly Conductive, and Micropatternable MXene Films for Enhanced Electromagnetic Interference Shielding. Matter, 2020, 3, 546-557.	10.0	127
13	Systematic Study on Experimental Conditions for Large-Scale Growth of Aligned ZnO Nanwires on Nitrides. Journal of Physical Chemistry B, 2005, 109, 9869-9872.	2.6	124
14	Volume of a Nanoscale Water Bridge. Langmuir, 2006, 22, 1093-1098.	3.5	122
15	Nucleation Time of Nanoscale Water Bridges. Physical Review Letters, 2005, 95, 135502.	7.8	119
16	Analysis of improved photovoltaic properties of pentacene/C60 organic solar cells: Effects of exciton blocking layer thickness and thermal annealing. Solid-State Electronics, 2007, 51, 1367-1375.	1.4	117
17	Patterning metal contacts on monolayer MoS2 with vanishing Schottky barriers using thermal nanolithography. Nature Electronics, 2019, 2, 17-25.	26.0	113
18	Identification of Defect Sites on MgO(100) Thin Films by Decoration with Pd Atoms and Studying CO Adsorption Properties. Journal of the American Chemical Society, 2001, 123, 6172-6178.	13.7	108

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19	Nonlinear Viscoelastic Dynamics of Nanoconfined Wetting Liquids. Physical Review Letters, 2008, 100, 106102.	7.8	84
20	Elastic coupling between layers in two-dimensional materials. Nature Materials, 2015, 14, 714-720.	27.5	78
21	Imaging thermal conductivity with nanoscale resolution using a scanning spin probe. Nature Communications, 2015, 6, 8954.	12.8	74
22	Nanoscale spin-wave circuits based on engineered reconfigurable spin-textures. Communications Physics, 2018, 1, .	5.3	74
23	Hindered rolling and friction anisotropy in supported carbon nanotubes. Nature Materials, 2009, 8, 876-881.	27.5	70
24	Young modulus dependence of nanoscopic friction coefficient in hard coatings. Applied Physics Letters, 2003, 83, 1986-1988.	3.3	68
25	Invited Review Article: Combining scanning probe microscopy with optical spectroscopy for applications in biology and materials science. Review of Scientific Instruments, 2012, 83, 061101.	1.3	68
26	Thermochemical Nanolithography of Multifunctional Nanotemplates for Assembling Nanoâ€Objects. Advanced Functional Materials, 2009, 19, 3696-3702.	14.9	61
27	Optically Inspired Nanomagnonics with Nonreciprocal Spin Waves in Synthetic Antiferromagnets. Advanced Materials, 2020, 32, e1906439.	21.0	58
28	Plastic deformation of pentagonal silver nanowires: Comparison between AFM nanoindentation and atomistic simulations. Physical Review B, 2008, 77, .	3.2	57
29	RNA intrusions change DNA elastic properties and structure. Nanoscale, 2014, 6, 10009-10017.	5.6	49
30	Parallelization of thermochemical nanolithography. Nanoscale, 2014, 6, 1299-1304.	5.6	41
31	Spatial defects nanoengineering for bipolar conductivity in MoS2. Nature Communications, 2020, 11, 3463.	12.8	41
32	Fabricating Nanoscale Chemical Gradients with ThermoChemical NanoLithography. Langmuir, 2013, 29, 8675-8682.	3.5	40
33	Layer dependence of graphene-diamene phase transition in epitaxial and exfoliated few-layer graphene using machine learning. 2D Materials, 2019, 6, 035043.	4.4	40
34	Friction and work function oscillatory behavior for an even and odd number of layers in polycrystalline MoS₂. Nanoscale, 2018, 10, 8304-8312.	5.6	36
35	Q-carbon harder than diamond. MRS Communications, 2018, 8, 428-436.	1.8	36
36	Epitaxial two-layer graphene under pressure: Diamene stiffer than Diamond. FlatChem, 2018, 10, 8-13.	5.6	36

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37	Van der Waals Force Isolation of Monolayer MoS₂. Advanced Materials, 2016, 28, 10055-10060.	21.0	34
38	Development of Self-Organizing, Self-Directing Molecular Nanowires: Synthesis and Characterization of Conjoined DNAâˆ'2,5-Bis(2-thienyl)pyrrole Oligomers. Macromolecules, 2010, 43, 4032-4040.	4.8	33
39	Direct Fabrication of Arbitraryâ€Shaped Ferroelectric Nanostructures on Plastic, Glass, and Silicon Substrates. Advanced Materials, 2011, 23, 3786-3790.	21.0	31
40	Nanoscopic friction as a probe of local phase transitions. Applied Physics Letters, 2005, 87, 033105.	3.3	30
41	Linear ripples and traveling circular ripples produced on polymers by thermal AFM probes. Physical Review B, 2009, 79, .	3.2	30
42	Growth direction and morphology of ZnO nanobelts revealed by combiningin situatomic force microscopy and polarized Raman spectroscopy. Physical Review B, 2010, 81, .	3.2	30
43	Combined polarized Raman and atomic force microscopy: In situ study of point defects and mechanical properties in individual ZnO nanobelts. Applied Physics Letters, 2009, 95, 051904.	3.3	28
44	Nanorheology by atomic force microscopy. Review of Scientific Instruments, 2014, 85, 123707.	1.3	28
45	Two-dimensional diamonds from sp2-to-sp3 phase transitions. Nature Reviews Materials, 2022, 7, 814-832.	48.7	28
46	Thermally activated effects in nanofriction. Nanotechnology, 2004, 15, S288-S292.	2.6	26
47	Selfâ€Assembly Propensity Dictates Lifetimes in Transient Naphthalimideâ€“Dipeptide Nanofibers. Chemistry - A European Journal, 2020, 26, 8372-8376.	3.3	25
48	Ã…-Indentation for non-destructive elastic moduli measurements of supported ultra-hard ultra-thin films and nanostructures. Scientific Reports, 2019, 9, 4075.	3.3	23
49	Tip size effects on atomic force microscopy nanoindentation of a gold single crystal. Journal of Applied Physics, 2008, 104, .	2.5	20
50	Direct writing and characterization of poly(p-phenylene vinylene) nanostructures. Applied Physics Letters, 2009, 95, .	3.3	20
51	Thermal scanning probe lithography. Nature Reviews Methods Primers, 2022, 2, .	21.2	19
52	Sub-10 nm Resolution Patterning of Pockets for Enzyme Immobilization with Independent Density and Quasi-3D Topography Control. ACS Applied Materials & Interfaces, 2019, 11, 41780-41790.	8.0	15
53	Stabilization and control of topological magnetic solitons via magnetic nanopatterning of exchange bias systems. Applied Physics Letters, 2018, 113, .	3.3	14
54	Nanomanufacturing: Direct Fabrication of Arbitrary-Shaped Ferroelectric Nanostructures on Plastic, Glass, and Silicon Substrates (Adv. Mater. 33/2011). Advanced Materials, 2011, 23, 3740-3740.	21.0	13

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55	High-throughput protein nanopatterning. Faraday Discussions, 2019, 219, 33-43.	3.2	13
56	Pressureâ€Induced Formation and Mechanical Properties of 2D Diamond Boron Nitride. Advanced Science, 2021, 8, 2002541.	11.2	11
57	Adhesion and size dependent friction anisotropy in boron nitride nanotubes. Nanotechnology, 2012, 23, 455706.	2.6	9
58	Understanding How Charged Nanoparticles Electrostatically Assemble and Distribute in 1-D. Langmuir, 2016, 32, 13600-13610.	3.5	9
59	Speed Dependence of Thermochemical Nanolithography for Grayâ€Scale Patterning. ChemPhysChem, 2014, 15, 2530-2535.	2.1	8
60	Measuring the Elasticity of Ribonucleotide(s)-Containing DNA Molecules Using AFM. Methods in Molecular Biology, 2015, 1297, 43-57.	0.9	8
61	Atomic force microscopy phase imaging of epitaxial graphene films. JPhys Materials, 2020, 3, 024005.	4.2	8
62	Cost and Time Effective Lithography of Reusable Millimeter Size Bone Tissue Replicas With Subâ€15Ânm Feature Size on A Biocompatible Polymer. Advanced Functional Materials, 2021, 31, 2008662.	14.9	8
63	Sliding on a Nanotube: Interplay of Friction, Deformations and Structure. Advanced Materials, 2012, 24, 2879-2884.	21.0	7
64	Nanofabrication of graphene field-effect transistors by thermal scanning probe lithography. APL Materials, 2021, 9, .	5.1	7
65	Sliding charges. Nature Materials, 2014, 13, 666-668.	27.5	2
66	Learning to 'think systems'. Nature Nanotechnology, 2016, 11, 824-824.	31.5	2
67	Thermally activated phenomena observed by atomic force microscopy. Materials Research Society Symposia Proceedings, 2003, 790, 1.	0.1	1
68	A New AFM-Based Lithography Method: Thermochemical Nanolithography. Nanoscience and Technology, 2010, , 795-811.	1.5	1
69	Reversible Nanoscale Local Wettability Modifications by Thermochemcial Nanolithography. Materials Research Society Symposia Proceedings, 2007, 1059, 1.	0.1	0
70	Nanomechanics: Fundamentals and Application in NEMS Technology. Nanostructure Science and Technology, 2008, , 223-254.	0.1	0
71	Nanofabrication of Functional Nanostructures by Thermochemical Nanolithography. , 2011, , 265-297.		0
72	Thermo-chemical metastability of multilayer epitaxial graphene oxide: Experiments and density functional theory calculations. Materials Research Society Symposia Proceedings, 2012, 1451, 39-44.	0.1	0

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73	Tissue Engineering: Cost and Time Effective Lithography of Reusable Millimeter Size Bone Tissue Replicas With Subâ€15Ânm Feature Size on A Biocompatible Polymer (Adv. Funct. Mater. 19/2021). Advanced Functional Materials, 2021, 31, 2170129.	14.9	0
74	Thermal scanning probe lithography: from spintronics to biomedical applications. , 2018, , .		0
75	Spin textures patterned via thermally assisted magnetic scanning probe lithography for magnonics. , 2018, , .		0