Qunyang Li

List of Publications by Year
in descending order

105 papers	7,580 citations	94381 37 h-index	53190 85 g-index
109 all docs	109 docs citations	109 times ranked	8289 citing authors

#	Article	IF	Citations
1	Dual-coupling-guided epitaxial growth of wafer-scale single-crystal WS2 monolayer on vicinal a-plane sapphire. Nature Nanotechnology, 2022, 17, 33-38.	15.6	171
2	Vibration-induced nanoscale friction modulation on piezoelectric materials. Friction, 2022, 10, 1650-1659.	3.4	2
3	Evaluation local strain of twisted bilayer graphene via moirÃ© pattern. Optics and Lasers in Engineering, 2022, 152, 106946.	2.0	10
4	Mechanical Behavior of Blisters Spontaneously Formed by Multilayer 2D Materials. Advanced Materials Interfaces, 2022, 9, .	1.9	12
5	Harnessing Friction in Intertwined Structures for Highâ€Capacity Reusable Energyâ€Absorbing Architected Materials. Advanced Science, 2022, 9, e2105769.	5.6	13
6	A PMNNâ€PZT Piezoceramic Based Magnetoâ€Mechanoâ€Electric Coupled Energy Harvester. Advanced Functional Materials, 2022, 32, .	7.8	17
7	Domino-like stacking order switching in twisted monolayerâ€"multilayer graphene. Nature Materials, 2022, 21, 621-626.	13.3	28
8	Mechanical Behavior of Blisters Spontaneously Formed by Multilayer 2D Materials (Adv. Mater.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 46	1.9	0
9	Atomic stick-slip friction as a two-dimensional thermally activated process. Physical Review B, 2022, 105, .	1.1	1
10	Visualizing the Anomalous Catalysis in Two-Dimensional Confined Space. Nano Letters, 2022, 22, 4661-4668.	4.5	3
11	Dual-Scale Stick-Slip Friction on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>Graphene</mml:mtext><mml:mo>/</mml:mo><mml:mrow><mml:mi>h</mml:mi></mml:mr MoirÃ© Superlattice Structure. Physical Review Letters, 2022, 128, .	2.9	20
12	Abnormal anti-oxidation behavior of hexagonal boron nitride grown on copper. Nano Research, 2022, 15, 7577-7583.	5.8	2
13	The Origin of MoirÃ©â€Level Stickâ€Slip Behavior on Graphene/<i>h</i>â€BN Heterostructures. Advanced Functional Materials, 2022, 32, .	7.8	20
14	Toward micro- and nanoscale robust superlubricity by 2D materials. , 2021, , 131-144.		1
15	Electric resistance as a sensitive measure for detecting graphene wear during macroscale tribological tests. Science China Technological Sciences, 2021, 64, 179-186.	2.0	1
16	Sequential growth and twisted stacking of chemical-vapor-deposited graphene. Nanoscale Advances, 2021, 3, 983-990.	2.2	5
17	Effect of shear stress on adhesive contact with a generalized Maugis-Dugdale cohesive zone model. Journal of the Mechanics and Physics of Solids, 2021, 148, 104275.	2.3	25
18	Abnormal Raman Characteristics of Graphene Originating from Contact Interface Inhomogeneity. ACS Applied Materials & Interfaces, 2021, 13, 22040-22046.	4.0	14

#	Article	IF	Citations
19	Using magnetoelectric effect to reveal magnetization behavior of bulk and heavy ferromagnetic materials. Applied Materials Today, 2021, 23, 101051.	2.3	3
20	Tuning frictional properties of molecularly thin erucamide films through controlled self-assembling. Acta Mechanica Sinica/Lixue Xuebao, 2021, 37, 1041-1049.	1.5	6
21	Elastocapillary cleaning of twisted bilayer graphene interfaces. Nature Communications, 2021, 12, 5069.	5.8	19
22	Switchable adhesion with a high tuning ratio achieved on polymer surfaces with embedded low-melting-point alloy. Extreme Mechanics Letters, 2021, 49, 101488.	2.0	9
23	Wrinkle networks in exfoliated multilayer graphene and other layered materials. Carbon, 2020, 156, 24-30.	5.4	23
24	Effect of airborne contaminants on the macroscopic anti-wear performance of chemical vapor deposition graphene. Surface and Coatings Technology, 2020, 383, 125276.	2.2	9
25	Extremely Iceâ€Detached Array of Pine Needleâ€Inspired Concaveâ€Cone Pillars. Advanced Materials Interfaces, 2020, 7, 1901714.	1.9	1
26	Observations of 3 nm Silk Nanofibrils Exfoliated from Natural Silkworm Silk Fibers. , 2020, 2, 153-160.		37
27	Metal Nanoparticle Harvesting by Continuous Rotating Electrodeposition and Separation. Matter, 2020, 3, 1294-1307.	5.0	11
28	Tunable friction of monolayer MoS2 by control of interfacial chemistry. Extreme Mechanics Letters, 2020, 41, 100996.	2.0	3
29	Abnormal conductivity in low-angle twisted bilayer graphene. Science Advances, 2020, 6, .	4.7	54
30	Optocapillarity-driven assembly and reconfiguration of liquid crystal polymer actuators. Nature Communications, 2020, 11, 5780.	5.8	23
31	Universal Statistical Laws for the Velocities of Collective Migrating Cells. Advanced Biology, 2020, 4, e2000065.	3.0	13
32	Length Scale Effect in Frictional Aging of Silica Contacts. Physical Review Letters, 2020, 125, 215502.	2.9	9
33	RÃ¼cktitelbild: Droplet Precise Selfâ€Splitting on Patterned Adhesive Surfaces for Simultaneous Multidetection (Angew. Chem. 26/2020). Angewandte Chemie, 2020, 132, 10754-10754.	1.6	0
34	Droplet Precise Selfâ€Splitting on Patterned Adhesive Surfaces for Simultaneous Multidetection. Angewandte Chemie, 2020, 132, 10622-10626.	1.6	5
35	Droplet Precise Selfâ€Splitting on Patterned Adhesive Surfaces for Simultaneous Multidetection. Angewandte Chemie - International Edition, 2020, 59, 10535-10539.	7.2	65
36	Thickness-dependent frictional behavior of topological insulator Bi2Se3 nanoplates. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	1.1	2

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37	Decohesion of a rigid flat punch from an elastic layer of finite thickness. Journal of the Mechanics and Physics of Solids, 2020, 139, 103937.	2.3	19
38	Impacts of the substrate stiffness on the anti-wear performance of graphene. AIP Advances, 2019, 9, .	0.6	13
39	Rateâ€Dependent Decohesion Modes in Grapheneâ€Sandwiched Interfaces. Advanced Materials Interfaces, 2019, 6, 1901217.	1.9	13
40	Deep neural network method for predicting the mechanical properties of composites. Applied Physics Letters, 2019, 115, .	1.5	88
41	Tuning friction to a superlubric state via in-plane straining. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 24452-24456.	3.3	72
42	Epitaxial growth of a 100-square-centimetre single-crystal hexagonal boron nitride monolayer on copper. Nature, 2019, 570, 91-95.	13.7	422
43	Modeling Atomic-Scale Electrical Contact Quality Across Two-Dimensional Interfaces. Nano Letters, 2019, 19, 3654-3662.	4.5	21
44	Spontaneous droplets gyrating via asymmetric self-splitting on heterogeneous surfaces. Nature Communications, 2019, 10, 950.	5.8	135
45	Mechanical responses of boron-doped monolayer graphene. Carbon, 2019, 147, 594-601.	5.4	28
46	Tribology of two-dimensional materials: From mechanisms to modulating strategies. Materials Today, 2019, 26, 67-86.	8.3	250
47	Vacancy-controlled friction on 2D materials: Roughness, flexibility, and chemical reactions. Carbon, 2019, 142, 363-372.	5.4	31
48	3D-printed biomimetic surface structures with abnormal friction properties. Extreme Mechanics Letters, 2019, 26, 46-52.	2.0	6
49	Sliding friction and contact angle hysteresis of droplets on microhole-structured surfaces. European Physical Journal E, 2018, 41, 25.	0.7	11
50	Revisiting the Critical Condition for the Cassieâ€“Wenzel Transition on Micropillar-Structured Surfaces. Langmuir, 2018, 34, 3838-3844.	1.6	45
51	Synergistic adhesion mechanisms of spider capture silk. Journal of the Royal Society Interface, 2018, 15, 20170894.	1.5	18
52	Oxide-assisted growth of scalable single-crystalline graphene with seamlessly stitched millimeter-sized domains on commercial copper foils. RSC Advances, 2018, 8, 8800-8804.	1.7	15
53	Ice Melting to Release Reactants in Solution Syntheses. Angewandte Chemie - International Edition, 2018, 57, 3354-3359.	7.2	36
54	Printable Skinâ€Driven Mechanoluminescence Devices via Nanodoped Matrix Modification. Advanced Materials, 2018, 30, e1800291.	11.1	178

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55	Superlubricity Enabled by Pressure-Induced Friction Collapse. Journal of Physical Chemistry Letters, 2018, 9, 2554-2559.	2.1	79
56	Contact stiffness of regularly patterned multi-asperity interfaces. Journal of the Mechanics and Physics of Solids, 2018, 111, 277-289.	2.3	30
57	Antiwear Performance of Monolayer MoS₂ Modulated by Residual Straining. ACS Applied Nano Materials, 2018, 1, 7092-7097.	2.4	7
58	Tuning Local Electrical Conductivity via Fine Atomic Scale Structures of Two-Dimensional Interfaces. Nano Letters, 2018, 18, 6030-6036.	4.5	22
59	Chemical Vapor Deposition Growth of Graphene Domains Across the Cu Grain Boundaries. Nano, 2018, 13, 1850088.	0.5	5
60	Impacts of environments on nanoscale wear behavior of graphene: Edge passivation vs. substrate pinning. Carbon, 2018, 139, 59-66.	5.4	62
61	State-of-the-Art of Extreme Pressure Lubrication Realized with the High Thermal Diffusivity of Liquid Metal. ACS Applied Materials & Interfaces, 2017, 9, 5638-5644.	4.0	58
62	Wear evolution of monolayer graphene at the macroscale. Carbon, 2017, 115, 600-607.	5.4	93
63	Bioinspired Solid Organogel Materials with a Regenerable Sacrificial Alkane Surface Layer. Advanced Materials, 2017, 29, 1700865.	11.1	109
64	MoirÃ© superlattice-level stick-slip instability originated from geometrically corrugated graphene on a strongly interacting substrate. 2D Materials, 2017, 4, 025079.	2.0	33
65	Scalable Synthesis of 2D Si Nanosheets. Advanced Materials, 2017, 29, 1701777.	11.1	77
66	Adhesion Mechanics between Nanoscale Silicon Oxide Tips and Few-Layer Graphene. Tribology Letters, 2017, 65, 1.	1.2	10
67	Wear Resistance Limited by Step Edge Failure: The Rise and Fall of Graphene as an Atomically Thin Lubricating Material. ACS Applied Materials & Interfaces, 2017, 9, 1099-1106.	4.0	70
68	Friction of Droplets Sliding on Microstructured Superhydrophobic Surfaces. Langmuir, 2017, 33, 13480-13489.	1.6	39
69	Biomaterials: Disordered Topography Mediates Filopodial Extension and Morphology of Cells on Stiff Materials (Adv. Funct. Mater. 38/2017). Advanced Functional Materials, 2017, 27, .	7.8	3
70	Lateral force modulation by moirÃ© superlattice structure: Surfing on periodically undulated graphene sheets. Carbon, 2017, 125, 76-83.	5.4	18
71	Measurement of specific heat and thermal conductivity of supported and suspended graphene by a comprehensive Raman optothermal method. Nanoscale, 2017, 9, 10784-10793.	2.8	110
72	Disordered Topography Mediates Filopodial Extension and Morphology of Cells on Stiff Materials. Advanced Functional Materials, 2017, 27, 1702689.	7.8	18

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73	Iced photochemical reduction to synthesize atomically dispersed metals by suppressing nanocrystal growth. Nature Communications, 2017, 8, 1490.	5.8	322
74	Guided Selfâ€Propelled Leaping of Droplets on a Microâ€Anisotropic Superhydrophobic Surface. Angewandte Chemie - International Edition, 2016, 55, 4265-4269.	7.2	135
75	Guided Selfâ€Propelled Leaping of Droplets on a Microâ€Anisotropic Superhydrophobic Surface. Angewandte Chemie, 2016, 128, 4337-4341.	1.6	26
76	Observation of normal-force-independent superlubricity in mesoscopic graphite contacts. Physical Review B, 2016, 94, .	1.1	62
77	The evolving quality of frictional contact with graphene. Nature, 2016, 539, 541-545.	13.7	389
78	Line Scan Reconstruction: A Viable Approach for Tracking Atomic Stickâ€"Slip Events and True Tip Position in Atomic Force Microscopy. Tribology Letters, 2016, 64, 1.	1.2	3
79	Robust ultra-low-friction state of graphene via moirÃ© superlattice confinement. Nature Communications, 2016, 7, 13204.	5.8	116
80	Tribo-biological deposits on the articulating surfaces of metal-on-polyethylene total hip implants retrieved from patients. Scientific Reports, 2016, 6, 28376.	1.6	5
81	Energy corrugation in atomic-scale friction on graphite revisited by molecular dynamics simulations. Acta Mechanica Sinica/Lixue Xuebao, 2016, 32, 604-610.	1.5	19
82	Spear and Shield: Survival War between Mantis Shrimps and Abalones. Advanced Materials Interfaces, 2015, 2, 1500250.	1.9	17
83	Functional map of biological and biomimetic materials with hierarchical surface structures. RSC Advances, 2015, 5, 66901-66926.	1.7	43
84	Organogel as durable anti-icing coatings. Science China Materials, 2015, 58, 559-565.	3.5	116
85	Nanoscale Adhesive Properties of Graphene: The Effect of Sliding History. Advanced Materials Interfaces, 2014, 1, 1300053.	1.9	55
86	Fluorination of Graphene Enhances Friction Due to Increased Corrugation. Nano Letters, 2014, 14, 5212-5217.	4.5	142
87	Molecular dynamics simulation of atomic friction: A review and guide. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, .	0.9	147
88	Optical methods for determining thicknesses of few-layer graphene flakes. Nanotechnology, 2013, 24, 505701.	1.3	19
89	Mechanical properties of bioinspired bicontinuous nanocomposites. Computational Materials Science, 2013, 80, 71-78.	1.4	15
90	Adhesion-dependent negative friction coefficient on chemically modified graphite at the nanoscale. Nature Materials, 2012, 11, 1032-1037.	13.3	258

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91	Toward a probe-based method for determining exfoliation energies of lamellar materials. , 2012, , .		0
92	Speed Dependence of Atomic Stick-Slip Friction in Optimally Matched Experiments and Molecular Dynamics Simulations. Physical Review Letters, 2011, 106, 126101.	2.9	176
93	Frictional ageing from interfacial bonding and the origins of rate and state friction. Nature, 2011, 480, 233-236.	13.7	236
94	Atomic Friction Modulation on the Reconstructed Au(111) Surface. Tribology Letters, 2011, 43, 369-378.	1.2	22
95	Understanding osteoblast responses to stiff nanotopographies through experiments and computational simulations. Journal of Biomedical Materials Research - Part A, 2011, 97A, 375-382.	2.1	26
96	Friction, slip and structural inhomogeneity of the buried interface. Modelling and Simulation in Materials Science and Engineering, 2011, 19, 065003.	0.8	22
97	Substrate effect on thicknessâ€dependent friction on graphene. Physica Status Solidi (B): Basic Research, 2010, 247, 2909-2914.	0.7	206
98	Frictional Characteristics of Atomically Thin Sheets. Science, 2010, 328, 76-80.	6.0	1,504
99	The Impact of Material Nanotopography on Cell Functions and Filopodia Extension: Experiments and Modeling. Materials Research Society Symposia Proceedings, 2009, 1236, 1.	0.1	0
100	Micromechanics of rough surface adhesion: a homogenized projection method. Acta Mechanica Solida Sinica, 2009, 22, 377-390.	1.0	26
101	Elastic and frictional properties of graphene. Physica Status Solidi (B): Basic Research, 2009, 246, 2562-2567.	0.7	333
102	Micromechanics of friction: effects of nanometre-scale roughness. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 1319-1343.	1.0	44
103	Pattern instability of a soft elastic thin film under van der Waals forces. Mechanics of Materials, 2006, 38, 88-99.	1.7	47
104	Lateral force calibration of an atomic force microscope with a diamagnetic levitation spring system. Review of Scientific Instruments, 2006, 77, 065105.	0.6	165
105	Maugis-Tabor parameter dependence of pull-off in viscoelastic line Hertzian contacts. Journal of Adhesion, 0, , 1-16.	1.8	1