Teng Li

List of Publications by Year
in descending order

144	12,965	26567	23472
papers	citations	56 h-index	111 g-index

149	149	149	14788
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Processing bulk natural wood into a high-performance structural material. Nature, 2018, 554, 224-228.	13.7	970
2	A review on mechanics and mechanical properties of 2D materialsâ€"Graphene and beyond. Extreme Mechanics Letters, 2017, 13, 42-77.	2.0	920
3	Structureâ€"propertyâ€"function relationships of natural and engineered wood. Nature Reviews Materials, 2020, 5, 642-666.	23.3	616
4	Stretchable Interconnects for Elastic Electronic Surfaces. Proceedings of the IEEE, 2005, 93, 1459-1467.	16.4	558
5	Tin Anode for Sodium-Ion Batteries Using Natural Wood Fiber as a Mechanical Buffer and Electrolyte Reservoir. Nano Letters, 2013, 13, 3093-3100.	4.5	556
6	Novel Nanostructured Paper with Ultrahigh Transparency and Ultrahigh Haze for Solar Cells. Nano Letters, 2014, 14, 765-773.	4.5	419
7	Mechanisms of reversible stretchability of thin metal films on elastomeric substrates. Applied Physics Letters, 2006, 88, 204103.	1.5	363
8	Anomalous scaling law of strength and toughness of cellulose nanopaper. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 8971-8976.	3.3	296
9	Stretchability of thin metal films on elastomer substrates. Applied Physics Letters, 2004, 85, 3435-3437.	1.5	291
10	A strong, biodegradable and recyclable lignocellulosic bioplastic. Nature Sustainability, 2021, 4, 627-635.	11.5	291
11	High temperature shockwave stabilized single atoms. Nature Nanotechnology, 2019, 14, 851-857.	15.6	278
12	Electronic skin: architecture and components. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 25, 326-334.	1.3	275
13	Electromechanical Properties of Graphene Drumheads. Science, 2012, 336, 1557-1561.	6.0	264
14	High ductility of a metal film adherent on a polymer substrate. Applied Physics Letters, 2005, 87, 161910.	1.5	262
15	Scalable and Sustainable Approach toward Highly Compressible, Anisotropic, Lamellar Carbon Sponge. CheM, 2018, 4, 544-554.	5.8	246
16	Anisotropic, Transparent Films with Aligned Cellulose Nanofibers. Advanced Materials, 2017, 29, 1606284.	11.1	202
17	Atomic-Layer-Deposition Oxide Nanoglue for Sodium Ion Batteries. Nano Letters, 2014, 14, 139-147.	4.5	191
18	Reduced Graphene Oxide Films with Ultrahigh Conductivity as Li-Ion Battery Current Collectors. Nano Letters, 2016, 16, 3616-3623.	4.5	187

#	Article	IF	Citations
19	Hydrogenation-Assisted Graphene Origami and Its Application in Programmable Molecular Mass Uptake, Storage, and Release. ACS Nano, 2014, 8, 2864-2872.	7.3	176
20	Flexible Batteries: From Mechanics to Devices. ACS Energy Letters, 2016, 1, 1065-1079.	8.8	170
21	Low temperature carbonization of cellulose nanocrystals for high performance carbon anode of sodium-ion batteries. Nano Energy, 2017, 33, 37-44.	8.2	159
22	Compliant thin film patterns of stiff materials as platforms for stretchable electronics. Journal of Materials Research, 2005, 20, 3274-3277.	1.2	157
23	Ductility of thin metal films on polymer substrates modulated by interfacial adhesion. International Journal of Solids and Structures, 2007, 44, 1696-1705.	1.3	149
24	Deformability of thin metal films on elastomer substrates. International Journal of Solids and Structures, 2006, 43, 2351-2363.	1.3	148
25	Transparent, Anisotropic Biofilm with Aligned Bacterial Cellulose Nanofibers. Advanced Functional Materials, 2018, 28, 1707491.	7.8	142
26	Lightweight, strong, moldable wood via cell wall engineering as a sustainable structural material. Science, 2021, 374, 465-471.	6.0	137
27	Celluloseâ€Nanofiberâ€Enabled 3D Printing of a Carbonâ€Nanotube Microfiber Network. Small Methods, 2017, 1, 1700222.	4.6	130
28	3D Printing of Ultralight Biomimetic Hierarchical Graphene Materials with Exceptional Stiffness and Resilience. Advanced Materials, 2019, 31, e1902930.	11.1	130
29	Ultra-fast self-assembly and stabilization of reactive nanoparticles in reduced graphene oxide films. Nature Communications, 2016, 7, 12332.	5.8	123
30	Nanoscale Interfacial Friction and Adhesion on Supported versus Suspended Monolayer and Multilayer Graphene. Langmuir, 2013, 29, 235-243.	1.6	112
31	Lithium-Assisted Electrochemical Welding in Silicon Nanowire Battery Electrodes. Nano Letters, 2012, 12, 1392-1397.	4.5	110
32	Stiff subcircuit islands of diamondlike carbon for stretchable electronics. Journal of Applied Physics, 2006, 100, 014913.	1.1	109
33	A mechanics model of microtubule buckling in living cells. Journal of Biomechanics, 2008, 41, 1722-1729.	0.9	109
34	Allâ€Natural, Degradable, Rolledâ€Up Straws Based on Cellulose Microâ€and Nanoâ€Hybrid Fibers. Advanced Functional Materials, 2020, 30, 1910417.	7.8	109
35	Alignment of Cellulose Nanofibers: Harnessing Nanoscale Properties to Macroscale Benefits. ACS Nano, 2021, 15, 3646-3673.	7.3	108
36	Programmable Extreme Pseudomagnetic Fields in Graphene by a Uniaxial Stretch. Physical Review Letters, 2015, 115, 245501.	2.9	100

#	Article	IF	Citations
37	Highly Elastic Hydrated Cellulosic Materials with Durable Compressibility and Tunable Conductivity. ACS Nano, 2020, 14, 16723-16734.	7.3	98
38	Hybridizing wood cellulose and graphene oxide toward high-performance fibers. NPG Asia Materials, 2015, 7, e150-e150.	3.8	95
39	Carbon Welding by Ultrafast Joule Heating. Nano Letters, 2016, 16, 7282-7289.	4.5	88
40	Millisecond synthesis of CoS nanoparticles for highly efficient overall water splitting. Nano Research, 2019, 12, 2259-2267.	5.8	85
41	A printed, recyclable, ultra-strong, and ultra-tough graphite structural material. Materials Today, 2019, 30, 17-25.	8.3	83
42	Strong, Hydrostable, and Degradable Straws Based on Celluloseâ€Lignin Reinforced Composites. Small, 2021, 17, e2008011.	5.2	81
43	Substrate-regulated morphology of graphene. Journal Physics D: Applied Physics, 2010, 43, 075303.	1.3	77
44	Mechanics Design in Celluloseâ€Enabled Highâ€Performance Functional Materials. Advanced Materials, 2021, 33, e2002504.	11.1	77
45	Red-phosphorus-impregnated carbon nanofibers for sodium-ion batteries and liquefaction of red phosphorus. Nature Communications, 2020, 11, 2520.	5.8	77
46	Recent Advances in Functional Materials through Cellulose Nanofiber Templating. Advanced Materials, 2021, 33, e2005538.	11.1	77
47	A multiscale crack-bridging model of cellulose nanopaper. Journal of the Mechanics and Physics of Solids, 2017, 103, 22-39.	2.3	75
48	Two dimensional silicon nanowalls for lithium ion batteries. Journal of Materials Chemistry A, 2014, 2, 6051-6057.	5.2	70
49	A silicon anode for garnet-based all-solid-state batteries: Interfaces and nanomechanics. Energy Storage Materials, 2019, 21, 246-252.	9.5	70
50	Carbon nanotube initiated formation of carbon nanoscrolls. Applied Physics Letters, 2010, 97, .	1.5	69
51	A Beaded-String Silicon Anode. ACS Nano, 2013, 7, 2717-2724.	7.3	68
52	Hybrid hydrogel sheets that undergo pre-programmed shape transformations. Soft Matter, 2014, 10, 8157-8162.	1.2	65
53	Selectively aligned cellulose nanofibers towards high-performance soft actuators. Extreme Mechanics Letters, 2019, 29, 100463.	2.0	65
54	Direct observation of the formation and stabilization of metallic nanoparticles on carbon supports. Nature Communications, 2020, 11, 6373.	5.8	65

#	Article	IF	Citations
55	3D-printed highly deformable electrodes for flexible lithium ion batteries. Energy Storage Materials, 2020, 33, 55-61.	9.5	64
56	In situ electro-mechanical experiments and mechanics modeling of tensile cracking in indium tin oxide thin films on polyimide substrates. Journal of Applied Physics, 2011, 109, .	1.1	61
57	Failure mechanics of organicâ€“inorganic multilayer permeation barriers in flexible electronics. Composites Science and Technology, 2011, 71, 365-372.	3.8	59
58	Rational design of transition metal single-atom electrocatalysts: a simulation-based, machine learning-accelerated study. Journal of Materials Chemistry A, 2020, 8, 19290-19299.	5.2	57
59	Stress-modulated driving force for lithiation reaction in hollow nano-anodes. Journal of Power Sources, 2015, 275, 866-876.	4.0	54
60	Carbonized Wood Decorated with Cobaltâ€Nickel Binary Nanoparticles as a Lowâ€Cost and Efficient Electrode for Water Splitting. Advanced Functional Materials, 2021, 31, 2010951.	7.8	54
61	Snap-Through Instability of Graphene on Substrates. Nanoscale Research Letters, 2010, 5, 169-173.	3.1	50
62	Flexible Garnet Solid-State Electrolyte Membranes Enabled by Tile-and-Grout Design. ACS Energy Letters, 2019, 4, 2668-2674.	8.8	50
63	Determining graphene adhesion via substrate-regulated morphology of graphene. Journal of Applied Physics, 2011, 110, .	1.1	49
64	Hydrogenation enabled scrolling of graphene. Journal Physics D: Applied Physics, 2013, 46, 075301.	1.3	49
65	Nanomanufacturing of graphene nanosheets through nano-hole opening and closing. Materials Today, 2019, 24, 26-32.	8.3	48
66	Machine learning-accelerated prediction of overpotential of oxygen evolution reaction of single-atom catalysts. IScience, 2021, 24, 102398.	1.9	48
67	Effects of nanofiber orientations on the fracture toughness of cellulose nanopaper. Engineering Fracture Mechanics, 2018, 194, 350-361.	2.0	47
68	Compressible, Dense, Three-Dimensional Holey Graphene Monolithic Architecture. ACS Nano, 2017, 11, 3189-3197.	7.3	44
69	Decoupling Ionic and Electronic Pathways in Low-Dimensional Hybrid Conductors. Journal of the American Chemical Society, 2019, 141, 17830-17837.	6.6	42
70	Extremely compliant and highly stretchable patterned graphene. Applied Physics Letters, 2014, 104, .	1.5	41
71	Pseudomagnetic fields in a locally strained graphene drumhead. Physical Review B, 2014, 90, .	1.1	40
72	Dataâ€Driven Highâ€Throughput Rational Design of Doubleâ€Atom Catalysts for Oxygen Evolution and Reduction. Advanced Functional Materials, 2022, 32, .	7.8	40

#	Article	IF	Citations
73	Hierarchical Polyelemental Nanoparticles as Bifunctional Catalysts for Oxygen Evolution and Reduction Reactions. Advanced Energy Materials, 2020, 10, 2001119.	10.2	39
74	Hardened wood as a renewable alternative to steel and plastic. Matter, 2021, 4, 3941-3952.	5.0	39
75	Geometric design of micron-sized crystalline silicon anodes through in situ observation of deformation and fracture behaviors. Journal of Materials Chemistry A, 2017, 5, 12793-12802.	5.2	38
76	Stabilizing mechanism of single-atom catalysts on a defective carbon surface. Npj Computational Materials, 2020, 6, .	3.5	38
77	Mechanical Control of Graphene on Engineered Pyramidal Strain Arrays. ACS Nano, 2015, 9, 5799-5806.	7.3	37
78	In Situ Electro-Mechanical Experiments and Mechanics Modeling of Fracture in Indium Tin Oxide-Based Multilayer Electrodes. Advanced Engineering Materials, 2013, 15, 250-256.	1.6	36
79	Toward stretchable batteries: 3D-printed deformable electrodes and separator enabled by nanocellulose. Materials Today, 2022, 54, 18-26.	8.3	35
80	Intrinsic stress mitigation via elastic softening during two-step electrochemical lithiation of amorphous silicon. Journal of the Mechanics and Physics of Solids, 2016, 91, 278-290.	2.3	34
81	Bioinspired Controllable Electroâ€Chemomechanical Coloration Films. Advanced Functional Materials, 2019, 29, 1806383.	7.8	34
82	Strain-induced programmable half-metal and spin-gapless semiconductor in an edge-doped boron nitride nanoribbon. Physical Review B, 2016, 93, .	1.1	33
83	Damage-tolerant 3D-printed ceramics via conformal coating. Science Advances, 2021, 7, .	4.7	32
84	Ultrafast nano-oscillators based on interlayer-bridged carbon nanoscrolls. Nanoscale Research Letters, 2011, 6, 470.	3.1	30
85	A map of competing buckling-driven failure modes of substrate-supported thin brittle films. Thin Solid Films, 2012, 520, 6576-6580.	0.8	30
86	Interface Engineering Between Multiâ€Elemental Alloy Nanoparticles and a Carbon Support Toward Stable Catalysts. Advanced Materials, 2022, 34, e2106436.	11.1	30
87	Size-dependent rupture strain of elastically stretchable metal conductors. Scripta Materialia, 2012, 66, 919-922.	2.6	28
88	Strength of graphene grain boundaries under arbitrary in-plane tension. Carbon, 2019, 142, 388-400.	5.4	28
89	Buckling instability of carbon nanoscrolls. Journal of Applied Physics, 2012, 112, 063515.	1.1	26
90	Effects of grain boundary adhesion and grain size on ductility of thin metal films on polymer substrates. Scripta Materialia, 2008, 59, 862-865.	2.6	25

#	Article	IF	Citations
91	Wrinkling Instability of Graphene on Substrate-Supported Nanoparticles. Journal of Applied Mechanics, Transactions ASME, 2014, 81, .	1.1	25
92	Directional transport of molecular mass on graphene by straining. Extreme Mechanics Letters, 2014, 1, 83-89.	2.0	24
93	Failure mechanics of a wrinkling thin film anode on a substrate under cyclic charging and discharging. Extreme Mechanics Letters, 2016, 8, 273-282.	2.0	24
94	A constitutive model of microfiber reinforced anisotropic hydrogels: With applications to wood-based hydrogels. Journal of the Mechanics and Physics of Solids, 2020, 138, 103893.	2.3	24
95	A quality map of transfer printing. Journal of Applied Physics, 2009, 106, 103504.	1.1	23
96	Reprogrammable ultra-fast shape-transformation of macroporous composite hydrogel sheets. Journal of Materials Chemistry B, 2017, 5, 2883-2887.	2.9	23
97	3Dâ€Printed, Highâ€Porosity, Highâ€Strength Graphite Aerogel. Small Methods, 2021, 5, e2001188.	4.6	21
98	Fabrication of Celluloseâ€“Graphite Foam via Ion Cross-linking and Ambient-Drying. Nano Letters, 2022, 22, 3931-3938.	4.5	21
99	Graphene morphology regulated by nanowires patterned in parallel on a substrate surface. Journal of Applied Physics, 2010, 107, .	1.1	20
100	Extrinsic morphology of graphene. Modelling and Simulation in Materials Science and Engineering, 2011, 19, 054005.	0.8	20
101	Necking limit of substrate-supported metal layers under biaxial in-plane loading. International Journal of Plasticity, 2013, 51, 65-79.	4.1	20
102	Programming the Shape Transformation of a Composite Hydrogel Sheet via Erasable and Rewritable Nanoparticle Patterns. ACS Applied Materials & Interfaces, 2019, 11, 42654-42660.	4.0	19
103	Nonlocal Elasticity Theory for Free Vibration of Single-Walled Carbon Nanotubes. Advanced Materials Research, 0, 747, 257-260.	0.3	17
104	Molecular Mass Transportation Via Carbon Nanoscrolls. Journal of Applied Mechanics, Transactions ASME, 2013, 80, .	1.1	15
105	Thermal conductivity of graphene grain boundaries along arbitrary in-plane directions: A comprehensive molecular dynamics study. Journal of Applied Physics, 2019, 125, .	1.1	15
106	Effects of surface compliance and relaxation on the frictional properties of lamellar materials. RSC Advances, 2014, 4, 26721-26728.	1.7	14
107	Dielectric-elastomer-based capacitive force sensing with tunable and enhanced sensitivity. Extreme Mechanics Letters, 2018, 21, 49-56.	2.0	14
108	EML Webinar Overview: Advanced materials toward a sustainable futureâ€”Mechanics design. Extreme Mechanics Letters, 2021, 42, 101107.	2.0	14

#	Article	IF	Citations
109	Mechanics of cellulose nanopaper using a scalable coarse-grained modeling scheme. Cellulose, 2021, 28, 3359-3372.	2.4	13
110	Reversible Mechanical and Electrical Properties of Ripped Graphene. Physical Review Applied, 2015, 3, .	1.5	12
111	Competing failure mechanisms of thin metal films on polymer substrates under tension. Theoretical and Applied Mechanics Letters, 2011, 1, 041002.	1.3	11
112	Delayed burst of a gel balloon. Journal of the Mechanics and Physics of Solids, 2019, 124, 143-158.	2.3	11
113	Machine Learning Accelerated, High Throughput, Multiâ€Objective Optimization of Multiprincipal Element Alloys. Small, 2021, 17, e2102972.	5.2	11
114	Statistical strength of brittle materials with strongly interacted collinear microcracks. International Journal of Solids and Structures, 1998, 35, 995-1008.	1.3	10
115	Bifurcation instability of substrate-supported metal films under biaxial in-plane tension. Journal of the Mechanics and Physics of Solids, 2019, 126, 52-75.	2.3	9
116	How Stretchable Can We Make Thin Metal Films?. Materials Research Society Symposia Proceedings, 2005, 875, 1.	0.1	8
117	Resonant frequency of gold/polycarbonate hybrid nano resonators fabricated on plastics via nano-transfer printing. Nanoscale Research Letters, 2011, 6, 90.	3.1	8
118	STRAIN DECONCENTRATION IN THIN FILMS PATTERNED WITH CIRCULAR HOLES. International Journal of Applied Mechanics, 2009, 01, 557-568.	1.3	7
119	One-Step, Catalyst-Free, Scalable in Situ Synthesis of Single-Crystal Aluminum Nanowires in Confined Graphene Space. ACS Applied Materials & Interfaces, 2019, 11, 6009-6014.	4.0	7
120	Catalyst-Free In Situ Carbon Nanotube Growth in Confined Space via High Temperature Gradient. Research, 2018, 2018, 1793784.	2.8	7
121	Line defects guided molecular patterning on graphene. Applied Physics Letters, 2014, 104, 093102.	1.5	6
122	Giant tunability of interlayer friction in graphite via ion intercalation. Extreme Mechanics Letters, 2020, 35, 100616.	2.0	6
123	Mechanics and strain engineering of bulk and monolayer Bi2O2Se. Journal of the Mechanics and Physics of Solids, 2021, 157, 104626.	2.3	6
124	ELASTOMERIC INTERCONNECTS. International Journal of High Speed Electronics and Systems, 2006, 16, 397-407.	0.3	5
125	3-axis all elastomer MEMS tactile sensor. , 2015, , .		5
126	What really governs the upper bound of uniform ductility in gradient or layered materials?. Extreme Mechanics Letters, 2021, 48, 101413.	2.0	5

#	Article	IF	Citations
127	A Molecular Mechanics Study of Morphologic Interaction between Graphene and Si Nanowires on a SiO₂Substrate. Journal of Nanomaterials, 2011, 2011, 1-7.	1.5	4
128	Critical Dispersion Distance of Silicon Nanoparticles Intercalated between Graphene Layers. Journal of Nanomaterials, 2012, 2012, 1-4.	1.5	4
129	Probing the adhesion of submicron thin films fabricated on a polymer substrate via nano-transfer printing. Journal of Micromechanics and Microengineering, 2012, 22, 095002.	1.5	4
130	Effect of interfacial stiffness on the stretchability of metal/elastomer bilayers under in-plane biaxial tension. Theoretical and Applied Mechanics Letters, 2021, 11, 100247.	1.3	4
131	Correlation Between Rockwell and Brinell Hardness Measurements. Journal of Applied Mechanics, Transactions ASME, 2022, 89, .	1.1	2
132	Low-Dimensional Carbon Nanomaterials: Synthesis, Properties, and Applications. Journal of Nanomaterials, 2011, 2011, 1-2.	1.5	1
133	Cellulose Nanofiber Templating: Recent Advances in Functional Materials through Cellulose Nanofiber Templating (Adv. Mater. 12/2021). Advanced Materials, 2021, 33, 2170094.	11.1	1
134	10.1063/1.3479050.1. , 2010, , .		1
135	Suitably Patterned Thin Stiff Films as General Platforms for Flexible Electronics. , 2007, , .		0
136	Buckling of Microtubules in Living Cells Modulated by Surrounding Cytoplasm and Filament Network. Materials Research Society Symposia Proceedings, 2007, 1063, 1.	0.1	0
137	Graphene Morphology Modulated by Nanowires Patterned on a Substrate Surface. , 2009, , .		0
138	Science underpinning the quality of transfer printing. , 2009, , .		0
139	Snap-Through Instability of Graphene Morphology on Substrates. , 2009, , .		0
140	Concomitant Channel Cracking and Interfacial Delamination in Polymer/Oxide Nano Hybrid Permeation Barriers in Flexible Electronics. Materials Research Society Symposia Proceedings, 2011, 1312, 1.	0.1	0
141	Transportation of Hydrogen Molecules Enabled by Tortional Buckling Instability of Carbon Nanoscrolls. Materials Research Society Symposia Proceedings, 2013, 1505, 1.	0.1	0
142	STRESS-MODULATED DRIVING FORCE FOR LITHIATION REACTION IN HOLLOW NANO-SPHERICAL ANODES. Materials Research Society Symposia Proceedings, 2014, 1643, 1.	0.1	0
143	Machine Learning Accelerated, High Throughput, Multiâ€Objective Optimization of Multiprincipal Element Alloys (Small 42/2021). Small, 2021, 17, 2170222.	5.2	0
144	ELASTOMERIC INTERCONNECTS. , 2006, , .		0