

Tobin Filleter

List of Publications by Year in descending order

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103
papers

5,994
citations

87888

38
h-index

74163

75
g-index

106
all docs

106
docs citations

106
times ranked

8178
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhanced electrocatalytic CO ₂ reduction via field-induced reagent concentration. <i>Nature</i> , 2016, 537, 382-386.	27.8	1,429
2	Friction and Dissipation in Epitaxial Graphene Films. <i>Physical Review Letters</i> , 2009, 102, 086102.	7.8	482
3	Quantum-size-tuned heterostructures enable efficient and stable inverted perovskite solar cells. <i>Nature Photonics</i> , 2022, 16, 352-358.	31.4	233
4	Ultrahigh Strength and Stiffness in Cross-Linked Hierarchical Carbon Nanotube Bundles. <i>Advanced Materials</i> , 2011, 23, 2855-2860.	21.0	213
5	Local work function measurements of epitaxial graphene. <i>Applied Physics Letters</i> , 2008, 93, .	3.3	211
6	Enhanced Electrical and Electromagnetic Interference Shielding Properties of Polymer-Graphene Nanoplatelet Composites Fabricated via Supercritical-Fluid Treatment and Physical Foaming. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 30752-30761.	8.0	156
7	Structural and frictional properties of graphene films on SiC(0001) studied by atomic force microscopy. <i>Physical Review B</i> , 2010, 81, .	3.2	143
8	High strength measurement of monolayer graphene oxide. <i>Carbon</i> , 2015, 81, 497-504.	10.3	138
9	A Multiscale Study of High Performance Double-Walled Nanotube-Polymer Fibers. <i>ACS Nano</i> , 2010, 4, 6463-6476.	14.6	120
10	Natural SEI-Inspired Dual-Protective Layers via Atomic/Molecular Layer Deposition for Long-Life Metallic Lithium Anode. <i>Matter</i> , 2019, 1, 1215-1231.	10.0	120
11	Fluctuations and jump dynamics in atomic friction experiments. <i>Physical Review B</i> , 2005, 72, .	3.2	115
12	Enhanced Thermal Conductivity of Graphene Nanoplatelet-Polymer Nanocomposites Fabricated via Supercritical Fluid-Assisted in Situ Exfoliation. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 1225-1236.	8.0	114
13	Fatigue of graphene. <i>Nature Materials</i> , 2020, 19, 405-411.	27.5	110
14	Nucleation-Controlled Distributed Plasticity in Penta-twinned Silver Nanowires. <i>Small</i> , 2012, 8, 2986-2993.	10.0	101
15	Multi-scale mechanical improvement produced in carbon nanotube fibers by irradiation cross-linking. <i>Carbon</i> , 2013, 56, 1-11.	10.3	99
16	Multication perovskite 2D/3D interfaces form via progressive dimensional reduction. <i>Nature Communications</i> , 2021, 12, 3472.	12.8	89
17	Effect of Humidity and Water Intercalation on the Tribological Behavior of Graphene and Graphene Oxide. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 22537-22544.	8.0	84
18	In Situ TEM Electromechanical Testing of Nanowires and Nanotubes. <i>Small</i> , 2012, 8, 3233-3252.	10.0	79

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19	Ultralight Microcellular Polymerâ€“Graphene Nanoplatelet Foams with Enhanced Dielectric Performance. ACS Applied Materials & Interfaces, 2018, 10, 19987-19998.	8.0	79
20	Nonlinear fracture toughness measurement and crack propagation resistance of functionalized graphene multilayers. Science Advances, 2018, 4, eaao7202.	10.3	72
21	Enhanced electromagnetic wave absorption performance of polymer/SiC-nanowire/MXene (Ti ₃ C ₂ T _x) composites. Carbon, 2021, 179, 408-416.	10.3	66
22	Interfacial Shear Strength of Multilayer Graphene Oxide Films. ACS Nano, 2016, 10, 1939-1947.	14.6	64
23	Mechanical stability of the cell nucleus: roles played by the cytoskeleton in nuclear deformation and strain recovery. Journal of Cell Science, 2018, 131, .	2.0	64
24	Strengthening in Graphene Oxide Nanosheets: Bridging the Gap between Interplanar and Intraplanar Fracture. Nano Letters, 2015, 15, 6528-6534.	9.1	61
25	Hexagonal Boron Nitride for Sulfur Corrosion Inhibition. ACS Nano, 2020, 14, 14809-14819.	14.6	56
26	Experimental-Computational Study of Shear Interactions within Double-Walled Carbon Nanotube Bundles. Nano Letters, 2012, 12, 732-742.	9.1	53
27	Conductive network formation and destruction in polypropylene/carbon nanotube composites via crystal control using supercritical carbon dioxide. Polymer, 2017, 129, 179-188.	3.8	53
28	Multiscale Experimental Mechanics of Hierarchical Carbonâ€“Based Materials. Advanced Materials, 2012, 24, 2805-2823.	21.0	52
29	Microscopic Friction Studies on Metal Surfaces. Tribology Letters, 2010, 39, 19-24.	2.6	49
30	Atomistic Investigation of Load Transfer Between DWNT Bundles â€“Crosslinkedâ€“by PMMA Oligomers. Advanced Functional Materials, 2013, 23, 1883-1892.	14.9	48
31	Highly stretchable conductive thermoplastic vulcanizate/carbon nanotube nanocomposites with segregated structure, low percolation threshold and improved cyclic electromechanical performance. Journal of Materials Chemistry C, 2018, 6, 350-359.	5.5	48
32	Atomic structure and friction of ultrathin films of KBr on Cu(100). Physical Review B, 2008, 77, .	3.2	47
33	Effect of structure on the tribology of ultrathin graphene and graphene oxide films. Nanotechnology, 2015, 26, 135702.	2.6	46
34	Friction of Ti ₃ C ₂ T _x MXenes. Nano Letters, 2022, 22, 3356-3363.	9.1	46
35	Toughening of graphene-based polymer nanocomposites via tuning chemical functionalization. Composites Science and Technology, 2020, 194, 108140.	7.8	44
36	Electrically and thermally graded microcellular polymer/graphene nanoplatelet composite foams and their EMI shielding properties. Carbon, 2022, 187, 153-164.	10.3	42

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37	In Situ Electron Microscopy Four-Point Electromechanical Characterization of Freestanding Metallic and Semiconducting Nanowires. <i>Small</i> , 2014, 10, 725-733.	10.0	40
38	Effects of polymer-filler interactions on controlling the conductive network formation in polyamide 6/multi-Walled carbon nanotube composites. <i>Polymer</i> , 2019, 178, 121684.	3.8	40
39	Statistical shear lag model – Unraveling the size effect in hierarchical composites. <i>Acta Biomaterialia</i> , 2015, 18, 206-212.	8.3	39
40	Improvements in the mechanical properties of carbon nanotube fibers through graphene oxide interlocking. <i>Carbon</i> , 2016, 98, 291-299.	10.3	38
41	Tailoring the Mechanical and Electrochemical Properties of an Artificial Interphase for High-Performance Metallic Lithium Anode. <i>Advanced Energy Materials</i> , 2020, 10, 2001139.	19.5	36
42	An NDT guided wave technique for the identification of corrosion defects at support locations. <i>NDT and E International</i> , 2015, 75, 72-79.	3.7	35
43	Atomic-scale yield and dislocation nucleation in KBr. <i>Physical Review B</i> , 2006, 73, .	3.2	34
44	Characterizing mechanical behavior of atomically thin films: A review. <i>Journal of Materials Research</i> , 2014, 29, 338-347.	2.6	34
45	Insight into the Directional Thermal Transport of Hexagonal Boron Nitride Composites. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 41726-41735.	8.0	33
46	Damage-tolerant 3D-printed ceramics via conformal coating. <i>Science Advances</i> , 2021, 7, .	10.3	32
47	Surface and Mechanical Characterization of Dental Yttria-Stabilized Tetragonal Zirconia Polycrystals (3Y-TZP) After Different Aging Processes. <i>Microscopy and Microanalysis</i> , 2016, 22, 1179-1188.	0.4	26
48	An Insight into the Phase Transformation of WS_2 upon Fluorination. <i>Advanced Materials</i> , 2018, 30, e1803366.	21.0	26
49	Understanding the Independent and Interdependent Role of Water and Oxidation on the Tribology of Ultrathin Molybdenum Disulfide (MoS_2). <i>Advanced Materials Interfaces</i> , 2019, 6, 1901246.	3.7	26
50	High Temperature Microtribological Studies of MoS_2 Lubrication for Low Earth Orbit. <i>Lubricants</i> , 2020, 8, 49.	2.9	25
51	Atomic Friction Investigations on Ordered Superstructures. <i>Tribology Letters</i> , 2010, 39, 321-327.	2.6	24
52	A kelvin probe force microscopy of charged indentation-induced dislocation structures in KBr. <i>Nanotechnology</i> , 2009, 20, 264005.	2.6	22
53	Role of graphene in enhancing the mechanical properties of TiO_2 /graphene heterostructures. <i>Nanoscale</i> , 2017, 9, 11678-11684.	5.6	22
54	Graphene fatigue through van der Waals interactions. <i>Science Advances</i> , 2020, 6, .	10.3	22

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55	Effect of lattice stacking orientation and local thickness variation on the mechanical behavior of few layer graphene oxide. Carbon, 2018, 136, 168-175.	10.3	21
56	Corrosion Resistance of Sulfurâ€“Selenium Alloy Coatings. Advanced Materials, 2021, 33, e2104467.	21.0	21
57	Friction of magnetene, a nonâ€“van der Waals 2D material. Science Advances, 2021, 7, eabk2041.	10.3	21
58	Nanometre-scale plasticity of Cu(100). Nanotechnology, 2007, 18, 044004.	2.6	20
59	<i>In situ</i> TEM tensile testing of carbon-linked graphene oxide nanosheets using a MEMS device. Nanotechnology, 2016, 27, 28LT01.	2.6	20
60	Asymmetry in the reciprocal epitaxy of NaCl and KBr. Physical Review B, 2007, 75, .	3.2	18
61	Evaluation of a Magnetic Dipole Model in a DC Magnetic Flux Leakage System. IEEE Transactions on Magnetics, 2019, 55, 1-7.	2.1	18
62	High Performance Space Lubrication of MoS ₂ with Tantalum. Advanced Functional Materials, 2022, 32, .	14.9	18
63	Mechanical Size Effect of Freestanding Nanoconfined Polymer Films. Macromolecules, 2022, 55, 1248-1259.	4.8	18
64	Nanomechanical elasticity and fracture studies of lithium phosphate (LPO) and lithium tantalate (LTO) solid-state electrolytes. Nanoscale, 2019, 11, 18730-18738.	5.6	17
65	A Carbon-Based Biosensing Platform for Simultaneously Measuring the Contraction and Electrophysiology of iPSC-Cardiomyocyte Monolayers. ACS Nano, 2022, 16, 11278-11290.	14.6	15
66	Fatigue resistance of atomically thin graphene oxide. Carbon, 2021, 183, 780-788.	10.3	14
67	Interpretation of atomic friction experiments based on atomistic simulations. Journal of Vacuum Science & Technology B, 2007, 25, 1547.	1.3	13
68	Inherent carbonaceous impurities on arc-discharge multiwalled carbon nanotubes and their implications for nanoscale interfaces. Carbon, 2014, 80, 1-11.	10.3	13
69	Structureâ€“Dependent Wear and Shear Mechanics of Nanostructured MoS ₂ Coatings. Advanced Materials Interfaces, 2020, 7, 1901870.	3.7	13
70	Influence of different design parameters on a coplanar capacitive sensor performance. NDT and E International, 2022, 126, 102588.	3.7	12
71	Optimization of Periodic Permanent Magnet Configuration in Lorentz-Force EMATs. Research in Nondestructive Evaluation, 2018, 29, 95-108.	1.1	11
72	Investigating the detection limit of subsurface holes under graphite with atomic force acoustic microscopy. Nanoscale, 2019, 11, 10961-10967.	5.6	11

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73	Low energy proton irradiation tolerance of molybdenum disulfide lubricants. Applied Surface Science, 2021, 567, 150677.	6.1	10
74	Gas-Phase Fluorination of Hexagonal Boron Nitride. Advanced Materials, 2021, 33, e2106084.	21.0	10
75	Fracture and Fatigue of Al ₂ O ₃ -Graphene Nanolayers. Nano Letters, 2021, 21, 437-444.	9.1	9
76	Experimental Analysis of Friction and Wear of Self-Lubricating Composites Used for Dry Lubrication of Ball Bearing for Space Applications. Lubricants, 2021, 9, 38.	2.9	8
77	Interfacial Interactions and Tribological Behavior of Metal-Oxide/2D-Material Contacts. Tribology Letters, 2021, 69, 1.	2.6	8
78	Role of chemical vs. physical interfacial interaction and adsorbed water on the tribology of ultrathin 2D-material/steel interfaces. Tribology International, 2021, 163, 107194.	5.9	8
79	Local strain mapping of GO nanosheets under in situ TEM tensile testing. Applied Materials Today, 2019, 14, 102-107.	4.3	6
80	Mechanical characterization of thin films using a MEMS device inside SEM. , 2015, , .		5
81	Work of Adhesion Measurements of MoS ₂ Dry Lubricated 440C Stainless Steel Tribological Contacts. Advanced Engineering Materials, 2017, 19, 1700423.	3.5	5
82	Mechanical Characterization of Graphene. , 2014, , 121-135.		5
83	Scalable Characterization of 2D Gallium-Intercalated Epitaxial Graphene. ACS Applied Materials & Interfaces, 2021, 13, 55428-55439.	8.0	5
84	Multi-Electrode Coplanar Capacitive Probe With Various Arrangements for Non-Destructive Testing of Materials. IEEE Sensors Journal, 2022, 22, 8134-8146.	4.7	5
85	Mechanical reliability of monolayer MoS ₂ and WSe ₂ . Matter, 2022, 5, 2975-2989.	10.0	5
86	Static and dynamic calibration of torsional spring constants of cantilevers. Review of Scientific Instruments, 2018, 89, 093701.	1.3	4
87	Numerical Simulation and Experimental Study of Capacitive Imaging Technique as a Nondestructive Testing Method. Applied Sciences (Switzerland), 2021, 11, 3804.	2.5	4
88	Influence of Magnetostriction Induced by the Periodic Permanent Magnet Electromagnetic Acoustic Transducer (PPM EMAT) on Steel. Sensors, 2021, 21, 7700.	3.8	4
89	Nano-meter scale plasticity in KBr studied by nanoindenter and force microscopy. Materials Research Society Symposia Proceedings, 2009, 1185, 90.	0.1	3
90	Enhanced sensitivity of nanoscale subsurface imaging by photothermal excitation in atomic force microscopy. Review of Scientific Instruments, 2020, 91, 063703.	1.3	3

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91	Clean manufacturing of nanocellulose-reinforced hydrophobic flexible substrates. Journal of Cleaner Production, 2021, 293, 126141.	9.3	2
92	Divisions in a Fibrillar Adhesive Increase the Adhesive Strength. ACS Applied Materials & Interfaces, 2021, 13, 59478-59486.	8.0	2
93	Coplanar Capacitive Sensing as a New Electromagnetic Technique for Non-Destructive Evaluation. , 2021, , .		2
94	Enhancement of Defect Characterization With AC Magnetic Flux Leakage: Far-Side Defect Shape Estimation and Sensor Lift-Off Compensation. IEEE Transactions on Magnetics, 2022, 58, 1-11.	2.1	2
95	Thermally conductive polymer-graphene nanoplatelet composite foams. AIP Conference Proceedings, 2019, , .	0.4	1
96	Carbon Nanotubes: Atomistic Investigation of Load Transfer Between DWNT Bundles “Crosslinked” by PMMA Oligomers (Adv. Funct. Mater. 15/2013). Advanced Functional Materials, 2013, 23, 1976-1976.	14.9	0
97	Reference Specimen for Nondestructive Evaluation: Characterization of the Oxide Layer of a Cold Shot in Inconel 600. Journal of Materials Engineering and Performance, 2015, 24, 875-884.	2.5	0
98	Nanoscale Mechanical Characterization of 1D and 2D Materials with Application to Nanocomposites. , 2016, , 77-95.		0
99	A MEMS device for fracture toughness measurement of 2D nano films under TEM imaging. , 2017, , .		0
100	In Situ Transmission Electron Microscopy: Mechanical Testing. , 2015, , 1-12.		0
101	In Situ Transmission Electron Microscopy: Mechanical Testing. , 2016, , 1543-1554.		0
102	Sectorization of Macromolecular Single Crystals Unveiled by Probing Shear Anisotropy. ACS Macro Letters, 2022, 11, 53-59.	4.8	0
103	High Performance Space Lubrication of MoS ₂ with Tantalum (Adv. Funct. Mater. 20/2022). Advanced Functional Materials, 2022, 32, .	14.9	0