Kathryn J Wahl

List of Publications by Year
in descending order

71	3,243	117625	149698
papers	citations	34 h-index	56 g-index

73	73	73	2804
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Quantitative imaging of nanoscale mechanical properties using hybrid nanoindentation and force modulation. Journal of Applied Physics, 2001, 90, 1192-1200.	2.5	242
2	Superlow friction behavior of diamond-like carbon coatings: Time and speed effects. Applied Physics Letters, 2001, 78, 2449-2451.	3.3	230
3	Characterization of the Adhesive Plaque of the Barnacle Balanus amphitrite: Amyloid-Like Nanofibrils Are a Major Component. Langmuir, 2010, 26, 6549-6556.	3.5	178
4	A comparison of JKR-based methods to analyze quasi-static and dynamic indentation force curves. Journal of Colloid and Interface Science, 2006, 298, 652-662.	9.4	134
5	Barnacle cement: a polymerization model based on evolutionary concepts. Journal of Experimental Biology, 2009, 212, 3499-3510.	1.7	131
6	Wear behavior of Pbâ€“Moâ€“S solid lubricating coatings. Wear, 1999, 230, 175-183.	3.1	116
7	Below the Hallâ€“Petch Limit in Nanocrystalline Ceramics. ACS Nano, 2018, 12, 3083-3094.	14.6	105
8	Quantification of a lubricant transfer process that enhances the sliding life of a MoS2 coating. Tribology Letters, 1995, 1, 59-66.	2.6	100
9	Oscillating adhesive contacts between micron-scale tips and compliant polymers. Journal of Colloid and Interface Science, 2006, 296, 178-188.	9.4	99
10	Low-friction, high-endurance, ion-beam-deposited Pbî—¸Moî—¸S coatings. Surface and Coatings Technology, 1995, 73, 152-159.	4.8	94
11	Sequence basis of Barnacle Cement Nanostructure is Defined by Proteins with Silk Homology. Scientific Reports, 2016, 6, 36219.	3.3	79
12	Measurement of Contractile Stress Generated by Cultured Rat Muscle on Silicon Cantilevers for Toxin Detection and Muscle Performance Enhancement. PLoS ONE, 2010, 5, e11042.	2.5	74
13	Preparation of chameleon coatings for space and ambient environments. Thin Solid Films, 2007, 515, 6737-6743.	1.8	73
14	Run-in behavior of nanocrystalline diamond coatings studied by in situ tribometry. Wear, 2008, 265, 477-489.	3.1	71
15	Accessing Inaccessible Interfaces: In Situ Approaches to Materials Tribology. MRS Bulletin, 2008, 33, 1145-1150.	3.5	71
16	Measuring nanomechanical properties of a dynamic contact using an indenter probe and quartz crystal microbalance. Journal of Applied Physics, 2001, 90, 6391-6396.	2.5	69
17	In situ tribometry of solid lubricant nanocomposite coatings. Wear, 2007, 262, 1239-1252.	3.1	66
18	Oxidase Activity of the Barnacle Adhesive Interface Involves Peroxide-Dependent Catechol Oxidase and Lysyl Oxidase Enzymes. ACS Applied Materials & Interfaces, 2017, 9, 11493-11505.	8.0	61

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19	In situATRâ€“FTIR characterization of primary cement interfaces of the barnacleBalanus amphitrite. Biofouling, 2009, 25, 359-366.	2.2	60
20	Growth and development of the barnacleAmphibalanus amphitrite: time and spatially resolved structure and chemistry of the base plate. Biofouling, 2014, 30, 799-812.	2.2	55
21	Barnacle Balanus amphitrite Adheres by a Stepwise Cementing Process. Langmuir, 2012, 28, 13364-13372.	3.5	54
22	In Situ Analysis of Third Body Contributions to Sliding Friction of a Pbâ€“Moâ€“S Coating in Dry and Humid Air. Tribology Letters, 2007, 28, 263-274.	2.6	53
23	Quantitative in situ measurement of transfer film thickness by a Newton's rings method. Wear, 2008, 264, 731-736.	3.1	52
24	Acorn Barnacles Secrete Phaseâ€Separating Fluid to Clear Surfaces Ahead of Cement Deposition. Advanced Science, 2018, 5, 1700762.	11.2	52
25	Design and calibration of a scanning force microscope for friction, adhesion, and contact potential studies. Review of Scientific Instruments, 1995, 66, 4566-4574.	1.3	51
26	Effects of ion implantation on microstructure, endurance and wear behavior of IBAD MoS2. Wear, 2000, 237, 1-11.	3.1	46
27	Divalentâ€“Anion Salt Effects in Polyelectrolyte Multilayer Depositions. Langmuir, 2012, 28, 15831-15843.	3.5	46
28	Molt-dependent transcriptomic analysis of cement proteins in the barnacle Amphibalanus amphitrite. BMC Genomics, 2015, 16, 859.	2.8	46
29	Observing Interfacial Sliding Processes in Solidâ€“Solid Contacts. MRS Bulletin, 2008, 33, 1159-1167.	3.5	45
30	Silica aerogels with enhanced durability, 30-nm mean pore-size, and improved immersibility in liquids. Journal of Non-Crystalline Solids, 2004, 350, 244-252.	3.1	44
31	Analysis of rail surfaces from a multishot railgun. IEEE Transactions on Magnetics, 2005, 41, 211-213.	2.1	44
32	Base plate mechanics of the barnacleBalanus amphitrite(=Amphibalanus amphitrite). Biofouling, 2008, 24, 109-118.	2.2	43
33	Electron Enhanced Growth of Crystalline Gallium Nitride Thin Films at Room Temperature and 100 Â°C Using Sequential Surface Reactions. Chemistry of Materials, 2016, 28, 5282-5294.	6.7	41
34	Barnacle biology before, during and after settlement and metamorphosis: a study of the interface. Journal of Experimental Biology, 2017, 220, 194-207.	1.7	39
35	Insights into tribology from in situ nanoscale experiments. MRS Bulletin, 2019, 44, 478-486.	3.5	34
36	Molecular Recognition of Structures Is Key in the Polymerization of Patterned Barnacle Adhesive Sequences. ACS Nano, 2019, 13, 5172-5183.	14.6	32

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37	Imaging Active Surface Processes in Barnacle Adhesive Interfaces. Langmuir, 2016, 32, 541-550.	3.5	31
38	Mechanical anisotropy of nanostructured parylene films during sliding contact. Journal Physics D: Applied Physics, 2010, 43, 045403.	2.8	27
39	Self-Assembly of Protein Nanofibrils Orchestrates Calcite Step Movement through Selective Nonchiral Interactions. ACS Nano, 2015, 9, 5782-5791.	14.6	27
40	Barnacles resist removal by crack trapping. Journal of the Royal Society Interface, 2011, 8, 868-879.	3.4	25
41	Anisotropic nanomechanical properties of Nephila clavipes dragline silk. Journal of Materials Research, 2006, 21, 2035-2044.	2.6	21
42	Effect of aging of 2507 super duplex stainless steel on sliding tribocorrosion in chloride solution. Wear, 2017, 380-381, 251-259.	3.1	21
43	Nanocrystalline soft magnetic ribbons with high relative strain at fracture. Applied Physics Letters, 2007, 90, 212508.	3.3	20
44	In Situ Studies of TiC1â^'x N x Hard Coating Tribology. Tribology Letters, 2010, 40, 365-373.	2.6	20
45	Pressure cycling technology for challenging proteomic sample processing: application to barnacle adhesive. Integrative Biology (United Kingdom), 2019, 11, 235-247.	1.3	20
46	Role of Surfactant in the Stability of Liquid Crystal-Based Nanocolloids. Langmuir, 2009, 25, 2419-2426.	3.5	18
47	Optical Spectroscopy of Marine Bioadhesive Interfaces. Annual Review of Analytical Chemistry, 2012, 5, 229-251.	5.4	17
48	A Nano- to Macroscale Tribological Study of PFTS and TCP Lubricants for Si MEMS Applications. Tribology Letters, 2010, 38, 69-78.	2.6	16
49	High-performance nanomaterials formed by rigid yet extensible cyclic Î²-peptide polymers. Nature Communications, 2018, 9, 4090.	12.8	15
50	Fabrication and Response of Laser-Printed Cavity-Sealing Membranes. Journal of Microelectromechanical Systems, 2011, 20, 436-440.	2.5	13
51	Comparative analysis of stalked and acorn barnacle adhesive proteomes. Open Biology, 2021, 11, 210142.	3.6	13
52	Characterization of longitudinal canal tissue in the acorn barnacle Amphibalanus amphitrite. PLoS ONE, 2018, 13, e0208352.	2.5	12
53	Electron Backscatter Diffraction (EBSD) Study of the Structure and Crystallography of the Barnacle Balanus amphitrite. Jom, 2014, 66, 143-148.	1.9	11
54	Adhesion of acorn barnacles on surface-active borate glasses. Philosophical Transactions of the Royal Society B: Biological Sciences, 2019, 374, 20190203.	4.0	11

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55	Computational design of thin-film nanocomposite coatings for optimized stress and velocity accommodation response. Wear, 2009, 267, 1137-1145.	3.1	10
56	Shell Structure and Growth in the Base Plate of the Barnacle Amphibalanus amphitrite. ACS Biomaterials Science and Engineering, 2015, 1, 1085-1095.	5.2	10
57	Microstructural modeling of adaptive nanocomposite coatings for durability and wear. Wear, 2009, 266, 1003-1012.	3.1	8
58	Coating/substrate interaction in elastomer-steel bilayer armor. Journal of Composite Materials, 2016, 50, 2853-2859.	2.4	8
59	Distribution of Select Cement Proteins in the Acorn Barnacle Amphibalanus amphitrite. Frontiers in Marine Science, 2020, 7, .	2.5	8
60	Processing and mechanical performance of liquid crystalline polymer/nanofiber monofilaments. Scripta Materialia, 2008, 58, 25-28.	5.2	7
61	Direct Observation of Corrosive Wear byIn SituScanning Probe Microscopy. ACS Applied Materials & Interfaces, 2020, 12, 23543-23553.	8.0	6
62	Nanomechanical and Microstructural Properties of Bombyx mori Silk Films. Materials Research Society Symposia Proceedings, 2004, 841, R2.2.1/Y2.2.1.	0.1	3
63	Tribocorrosion Behavior of 2205 Duplex Stainless Steel in Sodium Chloride and Sodium Sulfate Environments. Tribology Letters, 2022, 70, .	2.6	3
64	Positively 'negative' friction. Nature Materials, 2012, 11, 1004-1005.	27.5	2
65	Surfaceâ€Active Borate Glasses as Antifouling Materials. Advanced Materials Interfaces, 2015, 2, 1500370.	3.7	2
66	Mild Solvothermal Growth of Robust Carbon Phosphonitride Films. Chemistry of Materials, 2018, 30, 6082-6090.	6.7	2
67	Comparison of seven methods for DNA extraction from prosomata of the acorn barnacle, Amphibalanus amphitrite. Analytical Biochemistry, 2019, 586, 113441.	2.4	2
68	Macroscale to Microscale Tribology. , 2011, , 5-22.		2
69	Nanomechanical and Microstructural Properties of Bombyx mori Silk Films. Materials Research Society Symposia Proceedings, 2004, 844, 1.	0.1	1
70	Predicting the corrosion-wear response of an isolated austenite phase under anodic polarization. Wear, 2022, 494-495, 204249.	3.1	1
71	Marine Biofouling: Acorn Barnacles Secrete Phase-Separating Fluid to Clear Surfaces Ahead of Cement Deposition (Adv. Sci. 6/2018). Advanced Science, 2018, 5, 1870038.	11.2	0