Koo-Hyun Chung

List of Publications by Year
in descending order

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72 papers	1,758 citations	279487 23 h-index	288905 40 g-index
73 all docs	73 docs citations	73 times ranked	2445 citing authors

#	Article	IF	Citations
1	The Stiffness of Collagen Fibrils Influences Vascular Smooth Muscle Cell Phenotype. Biophysical Journal, 2007, 92, 1759-1769.	0.2	141
2	Characteristics of fracture during the approach process and wear mechanism of a silicon AFM tip. Ultramicroscopy, 2005, 102, 161-171.	0.8	126
3	Strong optical nonlinearity of CVD-grown<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></ as probed by wavelength-dependent second-harmonic generation. Physical Review B, 2014, 90, .	1.1	96
4	Fundamental Investigation of Micro Wear Rate Using an Atomic Force Microscope. Tribology Letters, 2003, 15, 135-144.	1.2	95
5	Nanoscale water capillary bridges under deeply negative pressure. Chemical Physics Letters, 2008, 451, 88-92.	1.2	75
6	Impact of Selenium Doping on Resonant Second-Harmonic Generation in Monolayer MoS₂. ACS Photonics, 2017, 4, 38-44.	3.2	75
7	Nonlinear optical characteristics of monolayer MoSe₂. Annalen Der Physik, 2016, 528, 551-559.	0.9	59
8	Growth and Simultaneous Valleys Manipulation of Two-Dimensional MoSe₂-WSe₂ Lateral Heterostructure. ACS Nano, 2017, 11, 8822-8829.	7.3	54
9	The treatment of collagen fibrils by tissue transglutaminase to promote vascular smooth muscle cell contractile signaling. Biomaterials, 2009, 30, 5486-5496.	5.7	48
10	Friction characteristics of mechanically exfoliated and CVD-grown single-layer MoS2. Friction, 2018, 6, 395-406.	3.4	48
11	The relative roles of collagen adhesive receptor DDR2 activation and matrix stiffness on the downregulation of focal adhesion kinase in vascular smooth muscle cells. Biomaterials, 2009, 30, 6687-6694.	5.7	46
12	Nanomechanical Properties of Thin Films of Type I Collagen Fibrils. Langmuir, 2010, 26, 3629-3636.	1.6	45
13	Interfacial Strength and Surface Damage Characteristics of Atomically Thin h-BN, MoS₂, and Graphene. ACS Applied Materials & Interfaces, 2018, 10, 9164-9177.	4.0	45
14	Wear characteristics of diamond-coated atomic force microscope probe. Ultramicroscopy, 2007, 108, 1-10.	0.8	43
15	Effects of Contact Geometry on Pull-Off Force Measurements with a Colloidal Probe. Langmuir, 2008, 24, 743-748.	1.6	43
16	Wear characteristics of atomic force microscopy tips: A review. International Journal of Precision Engineering and Manufacturing, 2014, 15, 2219-2230.	1.1	41
17	Multi-resistive Reduced Graphene Oxide Diode with Reversible Surface Electrochemical Reaction induced Carrier Control. Scientific Reports, 2014, 4, 5642.	1.6	37
18	Near bandgap second-order nonlinear optical characteristics of MoS2 monolayer transferred on transparent substrates. Applied Physics Letters, 2015, 107, .	1.5	36

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19	Accurate noncontact calibration of colloidal probe sensitivities in atomic force microscopy. Review of Scientific Instruments, 2009, 80, 065107.	0.6	30
20	Operational and environmental conditions regulate the frictional behavior of two-dimensional materials. Applied Surface Science, 2019, 483, 34-44.	3.1	29
21	Effects of Interlayer Coupling and Band Offset on Second Harmonic Generation in Vertical MoS₂/MoS_{2(1â€“x)}Se_{2x} Structures. ACS Nano, 2020, 14, 4366-4373.	7.3	29
22	Tribological characteristics of probe tip and PZT media for AFM-based recording technology. IEEE Transactions on Magnetics, 2005, 41, 849-854.	1.2	28
23	Laser-Induced Particle Adsorption on Atomically Thin MoS₂. ACS Applied Materials & Interfaces, 2016, 8, 2974-2984.	4.0	27
24	Lateral Force Calibration: Accurate Procedures for Colloidal Probe Friction Measurements in Atomic Force Microscopy. Langmuir, 2010, 26, 1386-1394.	1.6	25
25	Assessment of Tribological Properties of Ti3C2 as a Water-Based Lubricant Additive. Materials, 2020, 13, 5545.	1.3	25
26	Simultaneous Measurement of Elastic Properties and Friction Characteristics of Nanowires Using Atomic Force Microscopy. Experimental Mechanics, 2015, 55, 903-915.	1.1	24
27	Nano-tribological characteristics of PZT thin film investigated by atomic force microscopy. Surface and Coatings Technology, 2007, 201, 7983-7991.	2.2	23
28	Surface Properties of Laser-Treated Molybdenum Disulfide Nanosheets for Optoelectronic Applications. ACS Applied Materials & Interfaces, 2018, 10, 18104-18112.	4.0	23
29	Effect of tip shape on nanomechanical properties measurements using AFM. Ultramicroscopy, 2019, 202, 1-9.	0.8	22
30	Cell spreading and proliferation in response to the composition and mechanics of engineered fibrillar extracellular matrices. Biotechnology and Bioengineering, 2013, 110, 2731-2741.	1.7	19
31	Layer-by-layer thinning of MoS₂ via laser irradiation. Nanotechnology, 2019, 30, 275302.	1.3	19
32	Fundamental Investigation of the Wear Progression of Silicon Atomic Force Microscope Probes. Tribology Letters, 2013, 52, 315-325.	1.2	18
33	Static and kinetic friction characteristics of nanowire on different substrates. Applied Surface Science, 2016, 379, 452-461.	3.1	18
34	Quantitative assessment of contact and non-contact lateral force calibration methods for atomic force microscopy. Ultramicroscopy, 2016, 161, 41-50.	0.8	18
35	Effect of test parameters on degradation of polyurethane elastomer for accelerated life testing. Polymer Testing, 2014, 40, 13-23.	2.3	17
36	Particle monitoring method using acoustic emission signal for analysis of slider/disk/particle interaction. Tribology International, 2004, 37, 849-857.	3.0	15

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37	SI traceable calibration of an instrumented indentation sensor spring constant using electrostatic force. Review of Scientific Instruments, 2008, 79, 095105.	0.6	15
38	Nanomechanical properties of polymer binders for Li-ion batteries probed with colloidal probe atomic force microscopy. Polymer Testing, 2019, 76, 245-253.	2.3	15
39	Tribological design methods for minimum surface damage of HDD slider. Tribology International, 2003, 36, 467-473.	3.0	13
40	Tribological characteristics of ZnO nanowires investigated by atomic force microscope. Applied Physics A: Materials Science and Processing, 2008, 92, 267-274.	1.1	13
41	Accelerated wear testing of polyurethane hydraulic seal. Polymer Testing, 2017, 63, 110-117.	2.3	13
42	Wear characteristics of microscopic bushings for MEMS applications investigated by an AFM. Journal of Micromechanics and Microengineering, 2007, 17, 1877-1887.	1.5	12
43	Assessment of Wear Characteristics of Paper-Based Wet Friction Materials. International Journal of Precision Engineering and Manufacturing, 2018, 19, 705-711.	1.1	12
44	Assessment of surface damage mechanisms of head/disk interface using CSS and drag tests. IEEE Transactions on Magnetics, 1998, 34, 1714-1716.	1.2	11
45	Note: Lateral force microscope calibration using multiple location pivot loading of rectangular cantilevers. Review of Scientific Instruments, 2010, 81, 026104.	0.6	11
46	Effect of slider load on the wear debris contamination tendency of head/slider. IEEE Transactions on Magnetics, 1999, 35, 2355-2357.	1.2	10
47	Bundling of Collagen Fibrils Using Sodium Sulfate for Biomimetic Cell Culturing. ACS Omega, 2020, 5, 3444-3452.	1.6	10
48	Effect of substrate and protective coating on the tribological characteristics of optical recording media. Wear, 2003, 255, 1306-1313.	1.5	9
49	Quantitative Assessment of Friction Characteristics of Single-Layer MoS₂ and Graphene Using Atomic Force Microscopy. Journal of Nanoscience and Nanotechnology, 2016, 16, 4428-4433.	0.9	9
50	Strategies for improvement of tribological characteristics at the head/disk interface. IEEE Transactions on Magnetics, 2001, 37, 912-917.	1.2	6
51	Frictional properties of polymer binders for Li-ion batteries. Applied Physics Letters, 2020, 116, .	1.5	6
52	Atomistic investigation of the effect of contact condition on frictional properties of nanowire. Applied Surface Science, 2020, 534, 147629.	3.1	5
53	Microstructure, mechanical, and tribological properties of pressureless sintered and spark plasma sintered Fe TiB2 nanocomposites. Tribology International, 2019, 131, 83-93.	3.0	4
54	Nano-mechanical and tribological characteristics of ultra-thin amorphous carbon film investigated by afm. Journal of Mechanical Science and Technology, 2004, 18, 1772-1781.	0.4	3

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55	Response to the comment on â€˜Nanoscale water capillary bridges under deeply negative pressureâ€™ by Caupin et al.. Chemical Physics Letters, 2008, 463, 286-287.	1.2	3
56	Frictional properties of native and functionalized type I collagen thin films. Applied Physics Letters, 2013, 103, 143703.	1.5	3
57	Tribological Characteristics of Single-Layer h-BN Measured by Colloidal Probe Atomic Force Microscopy. Coatings, 2020, 10, 530.	1.2	3
58	Component and Bench Tests of Polyurethane Hydraulic Reciprocating Seal for Accelerated Life Testing. Journal of the Korean Society of Tribologists and Lubrication Engineers, 2014, 30, 271-277.	0.1	2
59	Vascular Smooth Muscle Cell Response to Transglutaminase 2 Cross-linked Collagen Fibril Thin Films. Biophysical Journal, 2009, 96, 297a.	0.2	1
60	In SituMeasurement of Elastic and Frictional Properties Using Atomic Force Microscopy. Microscopy and Microanalysis, 2021, 27, 1488-1497.	0.2	1
61	Wear Characteristics of Atomic Force Microscope Probe Tips. , 2005, , .		1
62	Effect of slider load on the wear debris contamination tendency of head/slider. , 1999, , .		0
63	Micro-tribological characteristics of PFPE Zdol lubricant coated on silicon. , 0, , .		0
64	Tribological characteristics of probe tip and PZT media for AFM-based recording technology. , 0, , .		0
65	Development of flying type head/slider for optical recording technology. Tribology International, 2005, 38, 578-587.	3.0	0
66	Time-dependent adhesion of a polydimethylsiloxane (PDMS) elastomer film to a flat indenter tip characterized using a cohesive-zone law. Philosophical Magazine Letters, 2014, 94, 242-250.	0.5	0
67	Design of Optical Flying Head for Near-Field Recording. Transactions of the Magnetics Society of Japan, 2002, 2, 341-344.	0.5	0
68	Effect of Contact Stiffness on Lateral Force Calibration of Atomic Force Microscopy Cantilever. Journal of the Korean Society of Tribologists and Lubrication Engineers, 2012, 28, 289-296.	0.1	0
69	Degradation Progression of Polyurethane Hydraulic Reciprocating Seal. Journal of the Korean Society for Precision Engineering, 2018, 35, 701-706.	0.1	0
70	Assessment of Wear Characteristics of Fe-TiB2 Sintered from Nanocomposite Mixtures. Journal of the Korean Society for Precision Engineering, 2018, 35, 1001-1006.	0.1	0
71	Assessment of Effect of Test Parameters on Drag Torque Characteristics for Wet Clutch Design. Journal of the Korean Society for Precision Engineering, 2019, 36, 653-658.	0.1	0
72	Effect of Counter Material on Tribological Properties of CoCrMoSi Alloy. Tribology Letters, 2022, 70, 1.	1.2	0