Nitya Nand Gosvami

List of Publications by Year
in descending order

71 papers	2,072 citations	331670 21 h-index	254184 43 g-index
71 all docs	71 docs citations	71 times ranked	2274 citing authors

#	Article	IF	Citations
1	Texture weakening and enhanced recrystallization kinetics in a La containing Mgâ€"Dy alloy. Materials Chemistry and Physics, 2022, 277, 125537.	4.0	9
2	Macroscale to Nanoscale Tribology of Magnesium-Based Alloys: A Review. Tribology Letters, 2022, 70, 1.	2.6	16
3	ElucidatingÂthe influence of structure and Ag+-Na+Âion-exchange on crack-resistance and ionic conductivity of Na3Al1.8Si1.65P1.8O12Âglass electrolyte. Acta Materialia, 2022, 227, 117745.	7.9	6
4	Graphene Oxide Tribofilms Enhance the Scratch Resistance of Silica Glasses. ACS Applied Nano Materials, 2022, 5, 4812-4822.	5.0	4
5	Benefit of Coconutâ€Based Hair Oil via Hair Porosity Quantification. International Journal of Cosmetic Science, 2022, , .	2.6	0
6	Efficient friction and wear reduction of Al-Si alloy via tribofilms generated from synergistic interaction of ZDDP and chemically functionalized h-BN additives. Applied Surface Science, 2022, 595, 153520.	6.1	6
7	Frictional Behavior of Alumina-Coated Vertically Aligned Carbon Nanotube Forests: Implications for Micro and Nano Electromechanical Devices. ACS Applied Nano Materials, 2022, 5, 8484-8490.	5.0	1
8	Adsorption and decomposition of ZDDP on lightweight metallic substrates: Ab initio and experimental insights. Applied Surface Science, 2022, 600, 153947.	6.1	7
9	Natural language processing-guided meta-analysis and structure factor database extraction from glass literature. Journal of Non-Crystalline Solids: X, 2022, 15, 100103.	1.2	5
10	Frictional anisotropy of Ag nanocolumnar surfaces. Tribology International, 2021, 153, 106674.	5.9	0
11	Microscopic Tribology of ADC12 Alloy Under Lubricant Containing ZDDP and MoDTC Using In Situ AFM. Tribology Letters, 2021, 69, 1.	2.6	4
12	Reversal of favorable microstructure under plastic ploughing vs. interfacial shear induced wear in aged Co1.5CrFeNi1.5Ti0.5 high-entropy alloy. Wear, 2021, 468-469, 203595.	3.1	11
13	Towards understanding the scratchability in functional glasses. Ceramics International, 2021, 47, 20821-20843.	4.8	9
14	Looking through glass: Knowledge discovery from materials science literature using natural language processing. Patterns, 2021, 2, 100290.	5.9	25
15	Influence of temperature on crystallographic orientation induced anisotropy of microscopic wear in an AZ91 Mg alloy. Tribology International, 2021, 163, 107159.	5.9	8
16	Effect of minor La addition on wear behaviour of Mg-10Dy alloy. Wear, 2021, 486-487, 204121.	3.1	13
17	Nanoscale in situ study of ZDDP tribofilm growth at aluminum-based interfaces using atomic force microscopy. Tribology International, 2020, 143, 106075.	5.9	29
18	Nanometer-Thick Base Oil Tribofilms with Acrylamide Additive as Lubricants for AZ91 Mg Alloy. ACS Applied Nano Materials, 2020, 3, 10551-10559.	5.0	5

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19	Influence of Crystallographic Orientation on Nanoscale Friction and Wear Mechanisms of the AZ91 Alloy. Tribology Letters, 2020, 68, 1.	2.6	7
20	In Situ Study of Role of Microstructure on Antiwear Tribofilm Formation on AZ91 Magnesium Alloy under Zinc Dialkyldithiophosphate Containing Lubricant. Advanced Engineering Materials, 2020, 22, 2000335.	3.5	11
21	In situ microscopic study of tribology and growth of ZDDP antiwear tribofilms on an Alâ€“Si alloy. Tribology International, 2020, 151, 106419.	5.9	12
22	Nanowear Mechanisms of Mg Alloyed with Al and Y at Elevated Temperatures. Tribology Letters, 2020, 68, 1.	2.6	7
23	Cooling rate effects on the structure of 45S5 bioglass: Insights from experiments and simulations. Journal of Non-Crystalline Solids, 2020, 534, 119952.	3.1	31
24	Understanding the role of post-indentation recovery on the hardness of glasses: Case of silica, borate, and borosilicate glasses. Journal of Non-Crystalline Solids, 2020, 534, 119955.	3.1	21
25	Linear Aging Behavior at Short Timescales in Nanoscale Contacts. Physical Review Letters, 2020, 124, 026801.	7.8	12
26	Towards an improved understanding of plasticity, friction and wear mechanisms in precipitate containing AZ91 Mg alloy. Materialia, 2020, 10, 100640.	2.7	11
27	Switchable Friction across Insulatorâ€“Metal Transition in VO 2. Advanced Engineering Materials, 2019, 21, 1900616.	3.5	5
28	Predicting Young's modulus of oxide glasses with sparse datasets using machine learning. Journal of Non-Crystalline Solids, 2019, 524, 119643.	3.1	58
29	Memory Distance for Interfacial Chemical Bond-Induced Friction at the Nanoscale. ACS Nano, 2019, 13, 7425-7434.	14.6	12
30	Anisotropy in Nanoscale Friction and Wear of Precipitate Containing AZ91 Magnesium Alloy. Tribology Letters, 2019, 67, 1.	2.6	13
31	Stickâ€“Slip Instabilities for Interfacial Chemical Bond-Induced Friction at the Nanoscale. Journal of Physical Chemistry B, 2018, 122, 991-999.	2.6	14
32	An In Situ Method for Simultaneous Friction Measurements and Imaging of Interfacial Tribochemical Film Growth in Lubricated Contacts. Tribology Letters, 2018, 66, 1.	2.6	30
33	Nanotribological Printing: A Nanoscale Additive Manufacturing Method. Nano Letters, 2018, 18, 6756-6763.	9.1	18
34	Load and Time Dependence of Interfacial Chemical Bond-Induced Friction at the Nanoscale. Physical Review Letters, 2017, 118, 076103.	7.8	48
35	Dynamic shear force microscopy of viscosity in nanometer-confined hexadecane layers. Journal of Physics Condensed Matter, 2016, 28, 134004.	1.8	14
36	Nanoscale Trapping and Squeeze-Out of Confined Alkane Monolayers. Langmuir, 2015, 31, 12960-12967.	3.5	13

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37	Mechanisms of antiwear tribofilm growth revealed in situ by single-asperity sliding contacts. Science, 2015, 348, 102-106.	12.6	411
38	Nano-rheology of hydrogels using direct drive force modulation atomic force microscopy. Soft Matter, 2015, 11, 8165-8178.	2.7	78
39	Direct torsional actuation of microcantilevers using magnetic excitation. Applied Physics Letters, 2014, 105, .	3.3	13
40	Atomic force microscopy on plasma membranes from <i>Xenopus laevis</i> oocytes containing human aquaporin 4. Journal of Molecular Recognition, 2014, 27, 669-675.	2.1	1
41	Impact of van der Waals Interactions on Single Asperity Friction. Physical Review Letters, 2013, 111, 035502.	7.8	50
42	Quantized friction across ionic liquid thin films. Physical Chemistry Chemical Physics, 2013, 15, 15317.	2.8	135
43	Nanotribology of clean and modified gold surfaces. Journal of Materials Research, 2013, 28, 1279-1288.	2.6	14
44	Monolayer to Bilayer Structural Transition in Confined Pyrrolidinium-Based Ionic Liquids. Journal of Physical Chemistry Letters, 2013, 4, 378-382.	4.6	145
45	Enhanced quality factors and force sensitivity by attaching magnetic beads to cantilevers for atomic force microscopy in liquid. Journal of Applied Physics, 2012, 112, .	2.5	12
46	Resolving the structure of a model hydrophobic surface: DODAB monolayers on mica. RSC Advances, 2012, 2, 4181.	3.6	10
47	Molecular Order and Disorder in the Frictional Response of Alkanethiol Self-Assembled Monolayers. Journal of Physical Chemistry A, 2011, 115, 6942-6947.	2.5	19
48	Anion adsorption and atomic friction on Au(111). Electrochimica Acta, 2011, 56, 10694-10700.	5.2	33
49	Switching Atomic Friction by Electrochemical Oxidation. Langmuir, 2011, 27, 2561-2566.	3.5	45
50	Self-assembly in the electrical double layer of ionic liquids. Chemical Communications, 2011, 47, 6572.	4.1	245
51	Ageing of a Microscopic Sliding Gold Contact at Low Temperatures. Physical Review Letters, 2011, 107, 144303.	7.8	34
52	Microscopic Friction Studies on Metal Surfaces. Tribology Letters, 2010, 39, 19-24.	2.6	49
53	Atomic Friction Investigations on Ordered Superstructures. Tribology Letters, 2010, 39, 321-327.	2.6	24
54	Nanotribology â€“ Fundamental Studies of Friction and Plasticity. Advanced Engineering Materials, 2010, 12, 362-367.	3.5	3

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55	Conducting Atomic Force Microscopy in Liquids. , 2010, , 129-151.		0
56	Liquid Atomic Force Microscopy: Solvation Forces, Molecular Order, and Squeeze-Out. Japanese Journal of Applied Physics, 2010, 49, 08LA01.	1.5	28
57	Crystalline structure and squeeze-out dissipation of liquid solvation layers observed by small-amplitude dynamic AFM. Physical Review B, 2009, 80, .	3.2	49
58	Titania Nanofilm with Electrical Switching Effects upon Hydrogen/Air Exposure at Room Temperature. Journal of Physical Chemistry C, 2009, 113, 6381-6389.	3.1	18
59	Conduction-atomic force microscopy study of H2 sensing mechanism in Pd nanoparticles decorated TiO2 nanofilm. Journal of Applied Physics, 2009, 106, .	2.5	15
60	Effect of Surrounding Medium on Resistance of a Molecular Monolayer Junction. Journal of Physical Chemistry C, 2008, 112, 297-302.	3.1	8
61	Squeeze-Out of Branched Alkanes on Graphite. Physical Review Letters, 2008, 100, 076101.	7.8	17
62	Solvation and squeeze out of hexadecane on graphite. Journal of Chemical Physics, 2007, 126, 214708.	3.0	27
63	Structural modifications in InP nanostructures prepared by Ar+-ion irradiation. Journal of Applied Physics, 2007, 102, 074313.	2.5	3
64	Charge transport across metal molecule interfaces probed by BEEM. Journal of Physics: Conference Series, 2007, 61, 647-651.	0.4	3
65	Friction, adhesion and wear durability of an ultra-thin perfluoropolyether-coated 3-glycidoxypropyltrimethoxy silane self-assembled monolayer on a Si surface. Philosophical Magazine, 2007, 87, 3209-3227.	1.6	18
66	Morphological and micro-Raman investigations on Ar+-ion irradiated nanostructured GaAs surface. Applied Surface Science, 2007, 253, 4531-4536.	6.1	26
67	Template-Assisted Patterning of Nanoscale Self-assembled Monolayer Arrays on Surfaces. Langmuir, 2006, 22, 8078-8082.	3.5	20
68	Effect of end groups on contact resistance of alkanethiol based metalâ€"moleculeâ€"metal junctions using current sensing AFM. Applied Surface Science, 2006, 252, 3956-3960.	6.1	9
69	Cracking of low temperature solution deposited CeO2 thin films. Journal of Electroceramics, 2006, 16, 575-579.	2.0	8
70	Nanoscaled electrical homogeneity of indium zinc oxide films. Applied Physics Letters, 2006, 88, 093111.	3.3	7
71	Quantifying the Densification and Shear Flow under Indentation Deformation in Borosilicate Glasses. International Journal of Applied Glass Science, 0, , .	2.0	0