Andrea Vanossi

List of Publications by Year
in descending order

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48	1,669	304743	289244
papers	citations	22 h-index	40 g-index

49	49	49	1403
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Colloquium: Modeling friction: From nanoscale to mesoscale. Reviews of Modern Physics, 2013, 85, 529-552.	45.6	436
2	Ballistic nanofriction. Nature Materials, 2010, 9, 634-637.	27.5	98
3	Static and dynamic friction in sliding colloidal monolayers. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16429-16433.	7.1	81
4	Nanofriction in cold ion traps. Nature Communications, 2011, 2, 236.	12.8	76
5	Suppression of Friction by Mechanical Vibrations. Physical Review Letters, 2009, 103, 085502.	7.8	68
6	Structural lubricity in soft and hard matter systems. Nature Communications, 2020, 11, 4657.	12.8	62
7	Critical Length Limiting Superlow Friction. Physical Review Letters, 2015, 114, 055501.	7.8	51
8	Driven dynamics of simplified tribological models. Journal of Physics Condensed Matter, 2007, 19, 305017.	1.8	48
9	Static friction scaling of physisorbed islands: the key is in the edge. Nanoscale, 2015, 7, 2093-2101.	5.6	48
10	Multiwalled nanotube faceting unravelled. Nature Nanotechnology, 2016, 11, 1082-1086.	31.5	47
11	Graphene nanoribbons on gold: understanding superlubricity and edge effects. 2D Materials, 2017, 4, 045003.	4.4	43
12	Squeezout phenomena and boundary layer formation of a model ionic liquid under confinement and charging. Journal of Chemical Physics, 2015, 142, 064707.	3.0	38
13	Parameter-free dissipation in simulated sliding friction. Physical Review B, 2010, 82, .	3.2	34
14	Frictional transition from superlubric islands to pinned monolayers. Nature Nanotechnology, 2015, 10, 714-718.	31.5	33
15	Experimental Observation of the Aubry Transition in Two-Dimensional Colloidal Monolayers. Physical Review X, 2018, 8, .	8.9	33
16	Origin of Friction Anisotropy on a Quasicrystal Surface. Physical Review Letters, 2010, 104, 074302.	7.8	29
17	Orientational and directional locking of colloidal clusters driven across periodic surfaces. Nature Physics, 2019, 15, 776-780.	16.7	29
18	Current trends in the physics of nanoscale friction. Advances in Physics: X, 2017, 2, 569-590.	4.1	27

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19	Recent highlights in nanoscale and mesoscale friction. Beilstein Journal of Nanotechnology, 2018, 9, 1995-2014.	2.8	27
20	Superlubric-pinned transition in sliding incommensurate colloidal monolayers. Physical Review B, 2015, 92, .	3.2	26
21	Controlling microscopic friction through mechanical oscillations. Physical Review E, 2008, 78, 036110.	2.1	25
22	Friction Boosted by Equilibrium Misalignment of Incommensurate Two-Dimensional Colloid Monolayers. Physical Review Letters, 2015, 114, 108302.	7.8	25
23	Slider thickness promotes lubricity: from 2D islands to 3D clusters. Nanoscale, 2016, 8, 11108-11113.	5.6	23
24	Graphene on h-BN: to align or not to align?. Nanoscale, 2017, 9, 8799-8804.	5.6	23
25	Stick-slip nanofriction in trapped cold ion chains. Physical Review B, 2013, 87, .	3.2	21
26	Kinks in motion. Nature Materials, 2012, 11, 97-98.	27.5	20
27	Friction and nonlinear dynamics. Journal of Physics Condensed Matter, 2016, 28, 293001.	1.8	19
28	Triggering Frictional Slip by Mechanical Vibrations. Tribology Letters, 2012, 48, 95-102.	2.6	18
29	The breakdown of superlubricity by driving-induced commensurate dislocations. Scientific Reports, 2015, 5, 16134.	3.3	17
30	Lifted graphene nanoribbons on gold: from smooth sliding to multiple stick-slip regimes. Nanoscale, 2018, 10, 2073-2080.	5.6	17
31	Smallest Archimedean Screw: Facet Dynamics and Friction in Multiwalled Nanotubes. Nano Letters, 2017, 17, 5321-5328.	9.1	16
32	Detachment Dynamics of Graphene Nanoribbons on Gold. ACS Nano, 2019, 13, 689-697.	14.6	14
33	Nonlinear mobility of a driven system: Temperature and disorder effects. Surface Science, 2007, 601, 3676-3681.	1.9	11
34	Subharmonic Shapiro steps of sliding colloidal monolayers in optical lattices. Journal of Physics Condensed Matter, 2016, 28, 134006.	1.8	11
35	Friction and adhesion mediated by supramolecular hostâ€“guest complexes. Physical Chemistry Chemical Physics, 2016, 18, 9248-9254.	2.8	11
36	Adhesion detachment and movement of gold nanoclusters induced by dynamic atomic force microscopy. Journal of Physics Condensed Matter, 2008, 20, 354011.	1.8	10

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37	Finite-temperature phase diagram and critical point of the Aubry pinned-sliding transition in a two-dimensional monolayer. Physical Review B, 2017, 95, .	3.2	8
38	Graphite superlubricity enabled by triboinduced nanocontacts. Carbon, 2021, 184, 875-890.	10.3	7
39	Static friction boost in edge-driven incommensurate contacts. Physical Review Materials, 2018, 2, .	2.4	7
40	Modeling nanoribbon peeling. Nanoscale, 2019, 11, 17396-17400.	5.6	6
41	Pile-up transmission and reflection of topological defects at grain boundaries in colloidal crystals. Nature Communications, 2020, 11, 3079.	12.8	6
42	MoirÃ©-Pattern Evolution Couples Rotational and Translational Friction at Crystalline Interfaces. Physical Review X, 2022, 12, .	8.9	5
43	Nanotribology: Nonlinear Mechanisms of Friction. Nanoscience and Technology, 2015, , 175-208.	1.5	4
44	Thermal Friction Enhancement in Zwitterionic Monolayers. Journal of Physical Chemistry C, 2022, 126, 2797-2805.	3.1	4
45	Pervasive orientational and directional locking at geometrically heterogeneous sliding interfaces. Physical Review E, 2021, 103, 012606.	2.1	3
46	Amplitude nanofriction spectroscopy. Nanoscale, 2021, 13, 1955-1960.	5.6	2
47	Critical Peeling of Tethered Nanoribbons. Nanoscale, 2022, , .	5.6	1
48	Understanding the rheology of nanocontacts. Nature Communications, 2022, 13, 2428.	12.8	1