Olivier Pierre-Louis

List of Publications by Year
in descending order

74	1,802	304602 22	276775 41
papers	citations	h-index	g-index

75	75	75	1382
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Crystal surfaces in and out of equilibrium: A modern view. Reviews of Modern Physics, 2010, 82, 981-1040.	16.4	199
2	Edge Diffusion during Growth: The Kink Ehrlich-Schwoebel Effect and Resulting Instabilities. Physical Review Letters, 1999, 82, 3661-3664.	2.9	169
3	New Nonlinear Evolution Equation for Steps during Molecular Beam Epitaxy on Vicinal Surfaces. Physical Review Letters, 1998, 80, 4221-4224.	2.9	102
4	Fully Reversible Transition from Wenzel to Cassieâ˜'Baxter States on Corrugated Superhydrophobic Surfaces. Langmuir, 2010, 26, 3335-3341.	1.6	102
5	Equilibrium step dynamics on vicinal surfaces revisited. Physical Review B, 1998, 58, 2289-2309.	1.1	82
6	Pressure-Mediated Doping in Graphene. Nano Letters, 2011, 11, 3564-3568.	4.5	77
7	Electromigration of single-layer clusters. Physical Review B, 2000, 62, 13697-13706.	1.1	51
8	Dewetting of Ultrathin Solid Films. Physical Review Letters, 2009, 103, 195501.	2.9	49
9	Unstable Step Meandering with Elastic Interactions. Physical Review Letters, 2001, 86, 5538-5541.	2.9	48
10	Pulses and disorder in a continuum version of step-bunching dynamics. Physical Review E, 1996, 53, R4318-R4321.	0.8	47
11	Implications of random-matrix theory for terrace-width distributions on vicinal surfaces: improved approximations and exact results. Surface Science, 1999, 424, L299-L308.	0.8	43
12	Step bunching with general step kinetics: stability analysis and macroscopic models. Surface Science, 2003, 529, 114-134.	0.8	43
13	Advacancy-induced step bunching on vicinal surfaces. Physical Review B, 1995, 51, 17283-17286.	1.1	42
14	Dynamics and fluctuations during MBE on vicinal surfaces. I. Formalism and results of linear theory. Physical Review B, 1998, 58, 2259-2275.	1.1	42
15	Anisotropy and Coarsening in the Instability of Solid Dewetting Fronts. Physical Review Letters, 2011, 106, 105506.	2.9	41
16	Continuum Model for Low Temperature Relaxation of Crystal Steps. Physical Review Letters, 2001, 87, 106104.	2.9	39
17	Out-of-Equilibrium Step Meandering on a Vicinal Surface. Physical Review Letters, 1996, 76, 4761-4764.	2.9	35
18	â€œThe Princess and the Peaâ€•at the Nanoscale: Wrinkling and Delamination of Graphene on Nanoparticles. Physical Review X, 2012, 2, .	2.8	35

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19	Dewetting of a Solid Monolayer. Physical Review Letters, 2007, 99, 136101.	2.9	33
20	Kinetic Step Pairing. Physical Review Letters, 2004, 93, 165901.	2.9	28
21	Terrace-width distributions and stepâ€“step repulsions on vicinal surfaces: symmetries, scaling, simplifications, subtleties, and SchrÃ¶dinger. Surface Science, 2001, 493, 460-474.	0.8	27
22	Dynamics and fluctuations during MBE on vicinal surfaces. II. Nonlinear analysis. Physical Review B, 1998, 58, 2276-2288.	1.1	23
23	Birth and Morphological Evolution of Step Bunches under Electromigration. Physical Review Letters, 2006, 96, 195901.	2.9	22
24	Nanoroughness Strongly Impacts Lipid Mobility in Supported Membranes. Langmuir, 2017, 33, 2444-2453.	1.6	22
25	Peculiar Effects of Anisotropic Diffusion on Dynamics of Vicinal Surfaces. Physical Review Letters, 2004, 93, 185504.	2.9	20
26	Solid-state wetting at the nanoscale. Progress in Crystal Growth and Characterization of Materials, 2016, 62, 177-202.	1.8	20
27	Dynamics of crystal steps. Comptes Rendus Physique, 2005, 6, 11-21.	0.3	19
28	2D nanostructure motion on anisotropic surfaces controlled by electromigration. Applied Surface Science, 2019, 469, 463-470.	3.1	19
29	Nonlinear dynamics of vicinal surfaces. Journal of Crystal Growth, 2005, 275, 56-64.	0.7	18
30	Local Electromigration Model for Crystal Surfaces. Physical Review Letters, 2006, 96, 135901.	2.9	18
31	Hollow Rims from Water Drop Evaporation on Salt Substrates. Physical Review Letters, 2018, 121, 214501.	2.9	18
32	Wetting of solid islands on parallel nano-grooves. Europhysics Letters, 2009, 86, 46004.	0.7	16
33	Giant Slip at Liquid-Liquid Interfaces Using Hydrophobic Ball Bearings. Physical Review Letters, 2013, 110, 104504.	2.9	16
34	Atomic step motion during the dewetting of ultra-thin films. European Physical Journal B, 2010, 77, 57-63.	0.6	14
35	Dewetting of patterned solid films: Towards a predictive modelling approach. Applied Physics Letters, 2017, 110, .	1.5	14
36	Shapes of Fe nanocrystals encapsulated at the graphite surface. New Journal of Physics, 2020, 22, 023016.	1.2	14

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37	Nonlinear Wavelength Selection in Surface Faceting under Electromigration. Physical Review Letters, 2012, 109, 056101.	2.9	13
38	Modeling dewetting of ultra-thin solid films. Comptes Rendus Physique, 2013, 14, 553-563.	0.3	12
39	Shape transition in nano-pits after solid-phase etching of SiO2 by Si islands. Applied Physics Letters, 2015, 106, .	1.5	12
40	Nonequilibrium Cluster Diffusion During Growth and Evaporation in Two Dimensions. Physical Review Letters, 2012, 108, 245504.	2.9	11
41	Controlling the Shape of Small Clusters with and without Macroscopic Fields. Physical Review Letters, 2022, 128, .	2.9	10
42	Imbibition of Solids in Nanopillar Arrays. Physical Review Letters, 2011, 106, 195501.	2.9	9
43	Frozen states and order-disorder transition in the dynamics of confined membranes. Physical Review E, 2014, 90, 032114.	0.8	9
44	Cavity Formation in Confined Growing Crystals. Physical Review Letters, 2018, 121, 096101.	2.9	9
45	Collapse of an adsorbate island on substrate pillars. Physical Review B, 2010, 82, .	1.1	8
46	Crystal growth in nano-confinement: subcritical cavity formation and viscosity effects. New Journal of Physics, 2018, 20, 073050.	1.2	8
47	Wetting of Elastic Solids on Nanopillars. Physical Review Letters, 2014, 112, 146102.	2.9	7
48	Behavior of size selected ironâ€“platinum clusters soft landed on carbon nanotubes. Applied Surface Science, 2014, 301, 564-567.	3.1	7
49	Thin film modeling of crystal dissolution and growth in confinement. Physical Review E, 2018, 97, 012802.	0.8	7
50	Dewetting of solid films with substrate-mediated evaporation. Physical Review E, 2012, 85, 011602.	0.8	6
51	Triple-line kinetics for solid films. Physical Review E, 2018, 97, 022801.	0.8	6
52	Hole opening from growing interfacial voids: A possible mechanism of solid state dewetting. Applied Physics Letters, 2022, 120, .	1.5	6
53	Weakly vs. highly nonlinear dynamics in 1D systems. Europhysics Letters, 2005, 72, 894-900.	0.7	5
54	Irreversible aggregation of interacting particles in one dimension. Physical Review E, 2005, 71, 041603.	0.8	4

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55	Surface fluctuations of liquids confined on flat and patterned solid substrates. Physical Review E, 2014, 89, 052403.	0.8	4
56	Disjoining-pressure-induced acceleration of mass shedding in solid-state dewetting. Physical Review E, 2020, 101, 042802.	0.8	4
57	Controlling anisotropy in 2D microscopic models of growth. Journal of Computational Physics, 2022, 452, 110936.	1.9	4
58	Dynamic correlations of macroscopic quantities. Physical Review E, 2007, 76, 062601.	0.8	3
59	Solid-state wetting on nanopatterned substrates. Comptes Rendus Physique, 2013, 14, 619-628.	0.3	3
60	Transition to coarsening for confined one-dimensional interfaces with bending rigidity. Physical Review E, 2015, 92, 022918.	0.8	3
61	Adhesion dynamics of confined membranes. Soft Matter, 2018, 14, 8552-8569.	1.2	3
62	Undulation of a moving fluid membrane pushed by filament growth. Scientific Reports, 2021, 11, 7985.	1.6	3
63	Orientation and morphology of solid-state dewetting holes. Physical Review Materials, 2020, 4, .	0.9	3
64	Stress-Induced Acceleration and Ordering in Solid-State Dewetting. Physical Review Letters, 2022, 128, 026101.	2.9	3
65	Kink dynamics with oscillating forces. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P08004.	0.9	2
66	Thermal fluctuations of a liquid film on a heterogeneous solid substrate. Physical Review E, 2016, 94, 032802.	0.8	2
67	The nonequilibrium crystallization force. Europhysics Letters, 2019, 127, 59002.	0.7	2
68	Interface collisions with diffusive mass transport. Physical Review E, 2022, 106, .	0.8	2
69	On the geometry of stiff knots. European Physical Journal B, 2009, 71, 281-288.	0.6	1
70	Solid-state dewetting with a magic thickness: Electronic dewetting. Physical Review B, 2014, 90, .	1.1	1
71	Thixotropy and shear thinning of lubricated contacts with confined membranes. European Physical Journal E, 2017, 40, 44.	0.7	1
72	Confined growth with slow surface kinetics: A thin film model approach. Journal of Crystal Growth, 2019, 514, 70-82.	0.7	1

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73	Shear dynamics of confined membranes. Soft Matter, 2021, 17, 5467-5485.	1.2	1
74	Controlling the wetting transitions of nanoparticles on nanopatterned substrates using an electric current. Physical Review E, 2015, 92, 012406.	0.8	0