Rodolfo Cuerno

List of Publications by Year
in descending order

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106 papers	4,074 citations	136950 32 h-index	118850 62 g-index
107 all docs	107 docs citations	107 times ranked	1603 citing authors

#	Article	IF	Citations
1	Nanopatterning of rotating highly oriented pyrolytic graphite (0001) surfaces by ion beam irradiation: Experiments and modeling. Physical Review B, 2022, 105, .	3.2	4
2	Spreading fronts of wetting liquid droplets: Microscopic simulations and universal fluctuations. Physical Review E, 2022, 105, .	2.1	3
3	Surface nanopatterning by ion beam irradiation: compositional effects. Journal of Physics Condensed Matter, 2022, 34, 333002.	1.8	8
4	Transition between chaotic and stochastic universality classes of kinetic roughening. Physical Review Research, 2021, 3, .	3.6	7
5	A perspective on nanoscale pattern formation at surfaces by ion-beam irradiation. Journal of Applied Physics, 2020, 128, .	2.5	43
6	Order improvement of surface nanopatterns via substrate rocking under ion bombardment: Experiments and nonlinear models. Physical Review B, 2020, 102, .	3.2	10
7	Morphological impact of low-energy Xe⁺ irradiation on polycrystalline titanium targets. Journal of Physics: Conference Series, 2020, 1593, 012041.	0.4	1
8	Non-KPZ fluctuations in the derivative of the Kardar-Parisi-Zhang equation or noisy Burgers equation. Physical Review E, 2020, 101, 052126.	2.1	7
9	Kardarâ€“Parisiâ€“Zhang universality class for the critical dynamics of reactionâ€“diffusion fronts. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 023203.	2.3	7
10	Gaussian statistics as an emergent symmetry of the stochastic scalar Burgers equation. Physical Review E, 2019, 99, 042108.	2.1	4
11	Stress-driven nonlinear dynamics of ion-induced surface nanopatterns. Physical Review B, 2019, 100, .	3.2	21
12	Special issue on surfaces patterned by ion sputtering. Journal of Physics Condensed Matter, 2018, 30, 450301.	1.8	1
13	Kardarâ€“Parisiâ€“Zhang universality in first-passage percolation: the role of geodesic degeneracy. Journal of Statistical Mechanics: Theory and Experiment, 2018, 2018, 063212.	2.3	6
14	Nonuniversality of front fluctuations for compact colonies of nonmotile bacteria. Physical Review E, 2018, 98, 012407.	2.1	14
15	Concurrent segregation and erosion effects in medium-energy iron beam patterning of silicon surfaces. Journal of Physics Condensed Matter, 2018, 30, 274001.	1.8	7
16	Topology and the Kardarâ€“Parisiâ€“Zhang universality class. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 023201.	2.3	17
17	Collective evolution of submicron hillocks during the early stages of anisotropic alkaline wet chemical etching of Si(1â€‰0â€‰0) surfaces. Journal Physics D: Applied Physics, 2017, 50, 435306.	2.8	8
18	Surface Morphologies of Ti and Ti-Al-V Bombarded by 1.0-MeV <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>Au</mml:mi><mml:mo>+</mml:mo></mml:msup></mml:math> Ions. Physical Review Applied, 2017, 8, .	3.8	6

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19	Morphological stabilization and KPZ scaling by electrochemically induced co-deposition of nanostructured NiW alloy films. Scientific Reports, 2017, 7, 17997.	3.3	22
20	Anomalous behavior in temporal evolution of ripple wavelength under medium energy Ar+-ion bombardment on Si: A case of initial wavelength selection. Journal of Applied Physics, 2016, 119, 225301.	2.5	3
21	Symmetry of surface nanopatterns induced by ion-beam sputtering: Role of anisotropic surface diffusion. Physical Review B, 2016, 93, .	3.2	9
22	Ion-beam nanopatterning of silicon surfaces under codeposition of non-silicide-forming impurities. Physical Review B, 2016, 93, .	3.2	16
23	Universal behavior of crystalline membranes: Crumpling transition and Poisson ratio of the flat phase. Physical Review E, 2016, 93, 022111.	2.1	11
24	Nonuniversality due to inhomogeneous stress in semiconductor surface nanopatterning by low-energy ion-beam irradiation. Physical Review B, 2015, 91, .	3.2	44
25	Fully nonlinear dynamics of stochastic thin-film dewetting. Physical Review E, 2015, 92, 061002.	2.1	22
26	Ion damage overrides structural disorder in silicon surface nanopatterning by low-energy ion beam sputtering. Europhysics Letters, 2015, 109, 48003.	2.0	13
27	Stress vs sputtering effects in the propagation of surface ripples produced by ion-beam sputtering. Nuclear Instruments & Methods in Physics Research B, 2015, 365, 13-16.	1.4	7
28	Random geometry and the Kardarâ€“Parisiâ€“Zhang universality class. New Journal of Physics, 2015, 17, 033018.	2.9	16
29	Dynamics of thin fluid films controlled by thermal fluctuations. European Physical Journal: Special Topics, 2015, 224, 379-387.	2.6	12
30	Circular Kardar-Parisi-Zhang equation as an inflating, self-avoiding ring polymer. Physical Review E, 2014, 89, 010401.	2.1	10
31	Pattern-Wavelength Coarsening from Topological Dynamics in Silicon Nanofoams. Physical Review Letters, 2014, 112, 094103.	7.8	18
32	Macroscopic Response to Microscopic Intrinsic Noise in Three-Dimensional Fisher Fronts. Physical Review Letters, 2014, 113, 180602.	7.8	10
33	Self-organized nanopatterning of silicon surfaces by ion beam sputtering. Materials Science and Engineering Reports, 2014, 86, 1-44.	31.8	142
34	Strong anisotropy in two-dimensional surfaces with generic scale invariance: Nonlinear effects. Physical Review E, 2014, 89, 042407.	2.1	7
35	Role of nonlinearities and initial prepatterned surfaces in nanobead formation by ion-beam bombardment of Au(001): Experiments and theory. Physical Review B, 2013, 87, .	3.2	19
36	Energy dependence of the ripple wavelength for ion-beam sputtering of silicon: Experiments and theory. , 2013, , .		1

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37	Comment on â€œEffects of Particle Shape on Growth Dynamics at Edges of Evaporating Drops of Colloidal Suspensionsâ€• Physical Review Letters, 2013, 111, 209601.	7.8	19
38	Dimensional fragility of the Kardarâ€“Parisiâ€“Zhang universality class. Journal of Statistical Mechanics: Theory and Experiment, 2013, 2013, P11001.	2.3	8
39	Pattern formation in stromatolites: insights from mathematical modelling. Journal of the Royal Society Interface, 2012, 9, 1051-1062.	3.4	13
40	Independence of interrupted coarsening on initial system order: ion-beam nanopatterning of amorphous versus crystalline silicon targets. Journal of Physics Condensed Matter, 2012, 24, 375302.	1.8	22
41	Strong anisotropy in two-dimensional surfaces with generic scale invariance: Gaussian and related models. Physical Review E, 2012, 86, 051611.	2.1	11
42	Strong anisotropy in surface kinetic roughening: Analysis and experiments. Physical Review B, 2012, 86, .	3.2	21
43	Hydrodynamic approach to surface pattern formation by ion beams. Applied Surface Science, 2012, 258, 4171-4178.	6.1	102
44	Universality of cauliflower-like fronts: from nanoscale thin films to macroscopic plants. New Journal of Physics, 2012, 14, 103039.	2.9	33
45	Stress-induced solid flow drives surface nanopatterning of silicon by ion-beam irradiation. Physical Review B, 2012, 86, .	3.2	92
46	Dynamical renormalization group study for a class of non-local interface equations. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P10030.	2.3	5
47	Nanoscale pattern formation at surfaces under ion-beam sputtering: A perspective from continuum models. Nuclear Instruments & Methods in Physics Research B, 2011, 269, 894-900.	1.4	49
48	Intrinsic geometry approach to surface kinetic roughening. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P05032.	2.3	9
49	Dynamic effects induced by renormalization in anisotropic pattern forming systems. Physical Review E, 2011, 84, 015202.	2.1	11
50	One-dimensional pattern of Au nanodots by ion-beam sputtering: formation and mechanism. Nanotechnology, 2011, 22, 285301.	2.6	26
51	Roughness evolution of Si surfaces upon Ar ion erosion. Applied Surface Science, 2010, 256, 5011-5014.	6.1	10
52	Kardar-Parisi-Zhang asymptotics for the two-dimensional noisy Kuramoto-Sivashinsky equation. Physical Review E, 2010, 82, 045202.	2.1	14
53	Observation and Modeling of Interrupted Pattern Coarsening: Surface Nanostructuring by Ion Erosion. Physical Review Letters, 2010, 104, 026101.	7.8	54
54	Kinetic roughening in a realistic model of non-conserved interface growth. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P02036.	2.3	15

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55	Single-phase-field model of stepped surfaces. Physical Review E, 2009, 79, 021601.	2.1	2
56	Anisotropic scaling of ripple morphologies on high-fluence sputtered silicon. Physical Review B, 2009, 79, .	3.2	37
57	Unstable Nonlocal Interface Dynamics. Physical Review Letters, 2009, 102, 256102.	7.8	31
58	Coupling of morphology to surface transport in ion-beam-irradiated surfaces: normal incidence and rotating targets. Journal of Physics Condensed Matter, 2009, 21, 224020.	1.8	32
59	Self-Organized Surface Nanopatterning by Ion Beam Sputtering. , 2009, , 323-398.		46
60	Surface nanopatterns induced by ion-beam sputtering. Journal of Physics Condensed Matter, 2009, 21, 220301.	1.8	28
61	Unified moving-boundary model with fluctuations for unstable diffusive growth. Physical Review E, 2008, 78, 021601.	2.1	21
62	Coupling of morphology to surface transport in ion-beam irradiated surfaces: Oblique incidence. Physical Review B, 2008, 78, .	3.2	74
63	Interplay between Morphology and Surface Transport in Nanopatterns Produced by Ion-Beam Sputtering. Materials Research Society Symposia Proceedings, 2007, 1059, 1.	0.1	2
64	Generic equations for pattern formation in evolving interfaces. New Journal of Physics, 2007, 9, 102-102.	2.9	18
65	Universal non-equilibrium phenomena at submicrometric surfaces and interfaces. European Physical Journal: Special Topics, 2007, 146, 427-441.	2.6	28
66	Nonlinear Ripple Dynamics on Amorphous Surfaces Patterned by Ion Beam Sputtering. Physical Review Letters, 2006, 96, 086101.	7.8	140
67	Order enhancement and coarsening of self-organized silicon nanodot patterns induced by ion-beam sputtering. Applied Physics Letters, 2006, 89, 233101.	3.3	53
68	Short-range stationary patterns and long-range disorder in an evolution equation for one-dimensional interfaces. Physical Review E, 2006, 74, 050103.	2.1	36
69	Single tensionless transition in the Laplacian roughening model. Physical Review E, 2006, 73, 015103.	2.1	4
70	Intrinsic anomalous surface roughening of TiN films deposited by reactive sputtering. Physical Review B, 2006, 73, .	3.2	54
71	Phase transition in tensionless surfaces. Biophysical Chemistry, 2005, 115, 187-193.	2.8	5
72	Self-Organized Ordering of Nanostructures Produced by Ion-Beam Sputtering. Physical Review Letters, 2005, 94, 016102.	7.8	212

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73	Comment on â€œKinetic Roughening of Ion-Sputtered Pd(001) Surface: Beyond the Kuramoto-Sivashinsky Modelâ€• Physical Review Letters, 2005, 94, 139601; author reply 139602.	7.8	22
74	Influence of collision cascade statistics on pattern formation of ion-sputtered surfaces. Physical Review B, 2005, 71, .	3.2	44
75	Growth dynamics of reactive-sputtering-deposited AlN films. Journal of Applied Physics, 2005, 97, 123528.	2.5	35
76	Modeling heterogeneity and memory effects on the kinetic roughening of silica films grown by chemical vapor deposition. Physical Review B, 2003, 67, .	3.2	8
77	Microscopic Model for Thin Film Spreading. Physical Review Letters, 2002, 88, 206101.	7.8	33
78	Nanopatterning of silicon surfaces by low-energy ion-beam sputtering: dependence on the angle of ion incidence. Nanotechnology, 2002, 13, 304-308.	2.6	61
79	Morphology of ion-sputtered surfaces. Nuclear Instruments & Methods in Physics Research B, 2002, 197, 185-227.	1.4	446
80	Possible origin for the experimental scarcity of KPZ scaling in non-conserved surface growth. Physica A: Statistical Mechanics and Its Applications, 2002, 314, 192-199.	2.6	9
81	Transients due to Instabilities Hinder Kardar-Parisi-Zhang Scaling: A Unified Derivation for Surface Growth by Electrochemical and Chemical Vapor Deposition. Physical Review Letters, 2001, 87, 236103.	7.8	33
82	Morphological and Structural Aspects of Thin Films Prepared by Vapor Deposition. , 2001, , 229-280.		3
83	Dynamic renormalization group study of a generalized continuum model of crystalline surfaces. Physical Review E, 2001, 65, 016110.	2.1	6
84	Variational mean-field study of a continuum model of crystalline tensionless surfaces. Physical Review E, 2001, 63, 036104.	2.1	5
85	Production of ordered silicon nanocrystals by low-energy ion sputtering. Applied Physics Letters, 2001, 78, 3316-3318.	3.3	226
86	Modelling of silica film growth by chemical vapour deposition : Influence of the interface properties. European Physical Journal Special Topics, 2001, 11, Pr3-129-Pr3-140.	0.2	0
87	Multiparticle biased diffusion-limited aggregation with surface diffusion: A comprehensive model of electrodeposition. Physical Review E, 2000, 62, 161-173.	2.1	42
88	Dynamics of Rough Interfaces in Chemical Vapor Deposition: Experiments and a Model for Silica Films. Physical Review Letters, 2000, 84, 3125-3128.	7.8	72
89	Study of the growth mechanisms of low-pressure chemically vapour deposited silica films. European Physical Journal Special Topics, 1999, 09, Pr8-265-Pr8-271.	0.2	2
90	Crystalline lattice effects on tensionless surface dynamics. Microelectronic Engineering, 1998, 43-44, 497-505.	2.4	0

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91	Anomalous scaling in a nonlocal growth model in the Kardar-Parisi-Zhang universality class. Physical Review E, 1998, 57, R2491-R2494.	2.1	43
92	Growth Dynamics of Crystalline Tensionless Surfaces. Physical Review Letters, 1997, 78, 4982-4985.	7.8	6
93	Superroughening versus intrinsic anomalous scaling of surfaces. Physical Review E, 1997, 56, 3993-3998.	2.1	159
94	Power spectrum scaling in anomalous kinetic roughening of surfaces. Physica A: Statistical Mechanics and Its Applications, 1997, 246, 329-347.	2.6	74
95	Noisy Kuramoto-Sivashinsky equation for an erosion model. Physical Review E, 1996, 54, 3577-3580.	2.1	71
96	Fractal and Non-Fractal Surfaces in Ion Sputtering. Materials Research Society Symposia Proceedings, 1995, 407, 259.	0.1	0
97	Renormalization-group analysis of a noisy Kuramoto-Sivashinsky equation. Physical Review E, 1995, 52, 4853-4859.	2.1	48
98	Stochastic Model for Surface Erosion via Ion Sputtering: Dynamical Evolution from Ripple Morphology to Rough Morphology. Physical Review Letters, 1995, 75, 4464-4467.	7.8	179
99	A Model for Ion-Sputtering: from Pattern Formation to Rough Surfaces. Materials Research Society Symposia Proceedings, 1995, 407, 307.	0.1	0
100	Dynamic Scaling of Ion-Sputtered Surfaces. Physical Review Letters, 1995, 74, 4746-4749.	7.8	476
101	Roughening by Ion Bombardment: A Stochastic Continuum Equation. Materials Research Society Symposia Proceedings, 1994, 367, 299.	0.1	0
102	The hidden quantum group of the eight-vertex free fermion model: q-Clifford algebras. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1993, 307, 56-60.	4.1	12
103	On integrable quantum group invariant antiferromagnets. Journal of Geometry and Physics, 1993, 11, 453-462.	1.4	4
104	Free fermionic elliptic reflection matrices and quantum group invariance. Journal of Physics A, 1993, 26, L605-L610.	1.6	16
105	Deterministic chaos in the elastic pendulum: A simple laboratory for nonlinear dynamics. American Journal of Physics, 1992, 60, 73-79.	0.7	43
106	Quantum symmetries in the free field realization of Wn algebras. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1991, 271, 314-320.	4.1	1