

# Frederic Leroy

## List of Publications by Year in descending order

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64  
papers

2,498  
citations

304743

22  
h-index

197818

49  
g-index

64  
all docs

64  
docs citations

64  
times ranked

2779  
citing authors

#	ARTICLE	IF	CITATIONS
1	Probing surface and interface morphology with Grazing Incidence Small Angle X-Ray Scattering. Surface Science Reports, 2009, 64, 255-380.	7.2	686
2	Real-Time Monitoring of Growing Nanoparticles. Science, 2003, 300, 1416-1419.	12.6	347
3	How to control solid state dewetting: A short review. Surface Science Reports, 2016, 71, 391-409.	7.2	161
4	Quantitative analysis of grazing incidence small-angle x-ray scattering: $\text{Pd/MgO}(001)$ growth. Physical Review B, 2004, 69, .	3.2	109
5	Grazing-incidence small-angle x-ray scattering from dense packing of islands on surfaces: Development of distorted wave Born approximation and correlation between particle sizes and spacing. Physical Review B, 2007, 76, .	3.2	73
6	Ordering of Ge quantum dots with buried Si dislocation networks. Applied Physics Letters, 2002, 80, 3078-3080.	3.3	69
7	Dynamics of solid thin-film dewetting in the silicon-on-insulator system. New Journal of Physics, 2011, 13, 043017.	2.9	64
8	Dewetting dynamics of silicon-on-insulator thin films. Physical Review B, 2011, 84, .	3.2	62
9	Rational Design of Two-Dimensional Nanoscale Networks by Electrostatic Interactions at Surfaces. ACS Nano, 2010, 4, 1813-1820.	14.6	58
10	Self-similarity during growth of the $\text{Au/TiO}_2$ catalyst as seen by the scattering of x-rays at grazing-angle incidence. Physical Review B, 2007, 76, .	3.2	52
11	Transition from Molecule to Solid State: Reactivity of Supported Metal Clusters. Nano Letters, 2013, 13, 1977-1982.	9.1	49
12	Self-Organized Growth of Nanoparticles on a Surface Patterned by a Buried Dislocation Network. Physical Review Letters, 2005, 95, 185501.	7.8	44
13	Growth of Si ultrathin films on silver surfaces: Evidence of an $\text{Ag}(110)$ reconstruction induced by Si. Physical Review B, 2013, 88, .	3.2	44
14	Dynamics, anisotropy, and stability of silicon-on-insulator dewetting fronts. Physical Review B, 2012, 85, .	3.2	39
15	Vicinal silicon surfaces: From step density wave to faceting. Physical Review B, 2007, 76, .	3.2	34
16	Self-propelled motion of $\text{Au/Si}$ droplets on $\text{Si}(111)$ mediated by monoatomic step dissolution. Surface Science, 2015, 632, 1-8.	1.9	33
17	Dynamics and instability of solid-state dewetting. Comptes Rendus Physique, 2013, 14, 578-589.	0.9	28
18	Step bunching to step-meandering transition induced by electromigration on $\text{Si}(111)$ vicinal surface. Surface Science, 2009, 603, 507-512.	1.9	27

#	ARTICLE	IF	CITATIONS
19	Multiple scaled disorder in the photonic structure of Morpho rhetenor butterfly. Applied Physics A: Materials Science and Processing, 2012, 106, 1005-1011.	2.3	26
20	Simple views on surface stress and surface energy concepts. Advances in Natural Sciences: Nanoscience and Nanotechnology, 2014, 5, 013002.	1.5	26
21	Effects of near-neighbor correlations on the diffuse scattering from a one-dimensional paracrystal. Acta Crystallographica Section A: Foundations and Advances, 2004, 60, 565-581.	0.3	25
22	Influence of facets on solid state dewetting mechanisms: Comparison between Ge and Si on $\text{SiO}_2$ . Physical Review B, 2013, 88, .	3.2	24
23	Growth of Co on Au(111) studied by multiwavelength anomalous grazing-incidence small-angle x-ray scattering: From ordered nanostructures to percolated thin films and nanopillars. Physical Review B, 2008, 77, .	3.2	23
24	Structural and morphological evolution of Co on faceted Pt/W(111) surface upon thermal annealing. Surface Science, 2007, 601, 3431-3449.	1.9	21
25	In-Plane Si Nanowire Growth Mechanism in Absence of External Si Flux. Nano Letters, 2015, 15, 4788-4792.	9.1	21
26	Surface-dependent scenarios for dissolution-driven motion of growing droplets. Scientific Reports, 2017, 7, 902.	3.3	21
27	Agglomeration dynamics of germanium islands on a silicon oxide substrate: A grazing incidence small-angle x-ray scattering study. Applied Physics Letters, 2013, 102, .	3.3	20
28	2D nanostructure motion on anisotropic surfaces controlled by electromigration. Applied Surface Science, 2019, 469, 463-470.	6.1	19
29	Kink ordering and organized growth of Co clusters on a stepped Au(111) surface: A combined grazing-incidence x-ray scattering and STM study. Physical Review B, 2008, 77, .	3.2	17
30	Thermal instability of silicon-on-insulator thin films measured by low-energy electron microscopy. IOP Conference Series: Materials Science and Engineering, 2010, 12, 012016.	0.6	17
31	Dynamics of Gold Droplet Formation on $\text{SiO}_2/\text{Si}(111)$ Surface. Journal of Physical Chemistry C, 2020, 124, 11946-11951.	3.1	17
32	Stress effects on solid-state dewetting of nano-thin films. International Journal of Nanotechnology, 2012, 9, 396.	0.2	16
33	In situ GISAXS study of the growth of Pd on MgO(001). Applied Surface Science, 2004, 238, 233-237.	6.1	14
34	Dewetting of patterned solid films: Towards a predictive modelling approach. Applied Physics Letters, 2017, 110, .	3.3	14
35	Growth of Ge on Si(001) studied in situ by grazing incidence small angle X-ray scattering. Journal of Crystal Growth, 2005, 275, e2195-e2200.	1.5	12
36	Combining low-energy electron microscopy and scanning probe microscopy techniques for surface science: Development of a novel sample-holder. Review of Scientific Instruments, 2014, 85, 043705.	1.3	12

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37	Shape transition in nano-pits after solid-phase etching of SiO <sub>2</sub> by Si islands. Applied Physics Letters, 2015, 106, .	3.3	12
38	Catalytically enhanced thermal decomposition of chemically grown silicon oxide layers on Si(001). Applied Physics Letters, 2016, 108, .	3.3	12
39	Surface diffusion of Au on $\sqrt{3} \times \sqrt{3}$ Si(111)-Au studied by nucleation-rate and Ostwald-ripening analysis. Surface Science, 2016, 647, 8-11.	1.9	12
40	Atomic Transport in Au-Ge Droplets: Brownian and Electromigration Dynamics. Physical Review Letters, 2019, 123, 176101.	7.8	12
41	Step-induced elastic relaxation and surface structure of the Si(7710) surface. Surface Science, 2012, 606, 209-216.	1.9	11
42	Nonequilibrium diffusion of reactive solid islands. Physical Review B, 2014, 89, .	3.2	11
43	X-ray scattering from stepped and kinked surfaces: An approach with the paracrystal model. Surface Science, 2007, 601, 1915-1929.	1.9	10
44	X-Ray Diffraction and Raman Spectroscopy Study of Strain in Graphene Films Grown on 6H-SiC(0001) Using Propane-Hydrogen-Argon CVD. Materials Science Forum, 0, 740-742, 117-120.	0.3	10
45	Grazing incidence x-ray scattering investigation of Si surface patterned with buried dislocation networks. Applied Physics Letters, 2003, 82, 2598-2600.	3.3	9
46	Oxygen-induced inhibition of silicon-on-insulator dewetting. Applied Physics Letters, 2014, 104, .	3.3	9
47	Ferroelectric nanodomains in epitaxial GeTe thin films. Physical Review Materials, 2021, 5, .	2.4	8
48	Influence of Palladium on the Ordering, Final Size, and Composition of Pd-Au Nanoparticle Arrays. Journal of Physical Chemistry C, 2017, 121, 25864-25874.	3.1	7
49	Dynamics of Au-Ge liquid droplets on Ge(111) terraces: Nucleation, growth and dynamic coalescence. Applied Surface Science, 2020, 509, 144667.	6.1	7
50	Magnetic properties of self-organized Co dimer nanolines on Si/Ag(110). Beilstein Journal of Nanotechnology, 2015, 6, 777-784.	2.8	6
51	Interplay between deoxidation and dewetting for ultrathin SOI films. Applied Physics Letters, 2017, 110, .	3.3	6
52	Shape changes of two-dimensional atomic islands and vacancy clusters diffusing on epitaxial (111) interfaces under the impact of an external force. Journal of Crystal Growth, 2019, 520, 42-45.	1.5	6
53	2D Manipulation of Nanoobjects by Perpendicular Electric Fields: Implications for Nanofabrication. ACS Applied Nano Materials, 2020, 3, 1118-1122.	5.0	6
54	Electric forces on a confined advacancy island. Physical Review B, 2020, 102, .	3.2	5

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55	Kinetic Monte Carlo simulations of the diffusion and shape evolution of single-layer clusters on a hexagonal lattice with and without external force. <i>Applied Surface Science</i> , 2021, 552, 149454.	6.1	4
56	Polar surface of ferroelectric nanodomains in GeTe thin films. <i>Physical Review Materials</i> , 2022, 6, .	2.4	4
57	Reflections on the effect of an external flux in surface physics. <i>Surface Science</i> , 2022, 725, 122158.	1.9	2
58	Is it possible to use external stress to tune silicon surface morphology?. <i>Materials Science in Semiconductor Processing</i> , 2009, 12, 12-15.	4.0	1
59	Elastic cost of silicon step rebonding. <i>Physical Review B</i> , 2016, 93, .	3.2	1
60	Spatial inhomogeneity and temporal dynamics of a 2D electron gas in interaction with a 2D adatom gas. <i>Scientific Reports</i> , 2017, 7, 10642.	3.3	1
61	Kinetics and coupled dynamics of dewetting and chemical reaction in Si/ $\text{SiO}_2$ /Si system. <i>Journal of Materials Science</i> , 2020, 55, 16074-16082.	3.7	1
62	Mechanism of droplet motion and in-plane nanowire formation with and without electromigration. <i>Applied Surface Science</i> , 2022, 579, 152015.	6.1	1
63	External field as a tool for measuring absolute values of step-step interaction. <i>Surface Science</i> , 2008, 602, 126-132.	1.9	0
64	Publisher's Note: Dynamics, anisotropy, and stability of silicon-on-insulator dewetting fronts [Phys. Rev. B, 195414 (2012)]. <i>Physical Review B</i> , 2012, 85, .	3.2	0