

JÃ©rÃ©me Colin

List of Publications by Year in descending order

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114
papers

928
citations

566801

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580395

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114
all docs

114
docs citations

114
times ranked

595
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of substrate compliance on the global unilateral post-buckling of coatings: AFM observations and finite element calculations. <i>Acta Materialia</i> , 2005, 53, 441-447.	3.8	75
2	Stability diagram of unilateral buckling patterns of strip-delaminated films. <i>Physical Review E</i> , 2006, 74, 066601.	0.8	58
3	Buckling and post-buckling of stressed straight-sided wrinkles: experimental AFM observations of bubbles formation and finite element simulations. <i>Acta Materialia</i> , 2004, 52, 3959-3966.	3.8	45
4	Plastic Folding of Buckling Structures. <i>Physical Review Letters</i> , 2007, 99, 046101.	2.9	45
5	Worm-like delamination patterns of thin stainless steel films on polycarbonate substrates. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 2000, 80, 2559-2565.	0.8	33
6	Mechanical behaviour of metallic thin films on polymeric substrates and the effect of ion beam assistance on crack propagation. <i>Acta Materialia</i> , 2005, 53, 411-417.	3.8	32
7	How Does Crystalline Substrate Plasticity Modify Thin Film Buckling?. <i>Physical Review Letters</i> , 2006, 97, 096101.	2.9	29
8	Pop-in phenomenon during nanoindentation in MgO. <i>EPJ Applied Physics</i> , 1999, 8, 123-128.	0.3	27
9	Interface instability in the drawing process of copper/tantalum conductors. <i>Acta Materialia</i> , 1999, 47, 853-857.	3.8	27
10	Delamination of metal thin films on polymer substrates: From straight-sided blisters to varicose structures. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 2002, 82, 633-641.	0.8	24
11	Prismatic dislocation loops in strained core-shell nanowire heterostructures. <i>Physical Review B</i> , 2010, 82, .	1.1	24
12	Atomic force microscopy observations of successive damaging mechanisms of thin films on substrates under tensile stress. <i>Thin Solid Films</i> , 2003, 429, 267-272.	0.8	22
13	Evidence of plastic damage in thin films around buckling structures. <i>Thin Solid Films</i> , 2004, 469-470, 221-226.	0.8	18
14	Morphological instabilities of a stressed pore channel. <i>Acta Materialia</i> , 1997, 45, 3835-3841.	3.8	17
15	Interactive study of straight-sided buckling patterns in thin films under compressive stress. <i>EPJ Applied Physics</i> , 2000, 10, 3-7.	0.3	16
16	Molecular dynamics simulations of buckling-induced plasticity. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	16
17	Effect of plasticity and atmospheric pressure on the formation of donut- and croissantlike buckles. <i>Physical Review E</i> , 2015, 91, 012410.	0.8	16
18	Surface instabilities of a stressed cylindrical whisker. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1997, 76, 793-805.	0.8	15

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19	Dipole of misfit dislocations in axially symmetric structures. Philosophical Magazine Letters, 2002, 82, 125-132.	0.5	15
20	Gliding at interface during thin film buckling: A coupled atomistic/elastic approach. Acta Materialia, 2012, 60, 1259-1267.	3.8	15
21	Effects of sliding on interface delamination during thin film buckling. Scripta Materialia, 2012, 67, 157-160.	2.6	15
22	Effect of pressure and stress on blistering induced by hydrogen implantation in silicon. Europhysics Letters, 2010, 92, 16001.	0.7	14
23	Snapthrough occurring in the postbuckling of thin films. Applied Physics Letters, 2005, 86, 081905.	1.5	13
24	Kinetic evolution of blistering in hydrogen-implanted silicon. Applied Physics Letters, 2013, 103, .	1.5	13
25	Adhesion increase by interface mixing. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1997, 75, 369-377.	0.8	12
26	Pinch off of nanopipes under electron irradiation in GaN. Applied Physics Letters, 2005, 86, 131908.	1.5	12
27	Evidence of vacuum between buckled films and their substrates. Thin Solid Films, 2010, 518, 5233-5236.	0.8	12
28	Morphological instabilities of stressed axi-symmetrical structures embedded in a matrix: volume diffusion approach. Acta Materialia, 2004, 52, 4985-4995.	3.8	11
29	Interface step-induced thin-film delamination and buckling. Acta Materialia, 2013, 61, 4429-4438.	3.8	11
30	Buckling and cracking of Y_2O_3 films at grain boundaries. Physical Review B, 2008, 78, .	1.1	9
31	Free-surface deformation of irradiated solids. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2001, 81, 857-866.	0.8	9
32	Buckling of Stressed and Pressurized Thin Films on Substrates. Journal of Applied Mechanics, Transactions ASME, 2010, 77, .	1.1	9
33	About the internal pressure in cavities derived from implantation-induced blistering in semi-conductors. Journal of Applied Physics, 2011, 110, .	1.1	9
34	On the Dissolution of the δ Phase at the Dendritic Scale in a Rhenium-Containing Nickel-Based Single Crystal Superalloy After High Temperature Exposure. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 2031-2040.	1.1	9
35	Transformation of a cubic precipitate to a butterfly shape due to localized instabilities. Acta Materialia, 1998, 46, 1249-1255.	3.8	8
36	Axial and radial interface instabilities of copper/tantalum cylindrical conductors. Acta Materialia, 1999, 47, 2761-2768.	3.8	7

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37	Morphological instability of two stressed spherical shells. <i>International Journal of Solids and Structures</i> , 2007, 44, 3218-3230.	1.3	7
38	Buckling patterns of gold thin films on silicon substrates: Formation of superimposed blisters. <i>Europhysics Letters</i> , 2009, 86, 54002.	0.7	7
39	Buckling-induced dislocation emission in thin films on substrates. <i>International Journal of Solids and Structures</i> , 2013, 50, 3717-3722.	1.3	7
40	Circular dislocation loop in a three-layer nanowire. <i>International Journal of Solids and Structures</i> , 2015, 63, 114-120.	1.3	7
41	Morphological instability of a solid sphere of dilute ternary alloy growing by diffusion from its melt. <i>Journal of Crystal Growth</i> , 2016, 448, 17-20.	0.7	7
42	Layer wrinkling in an inhomogeneous matrix. <i>International Journal of Solids and Structures</i> , 2019, 156-157, 119-125.	1.3	7
43	High-speed photorefractive joint transform correlator using nonlinear filters. <i>Journal of Optics</i> , 1999, 1, 283-285.	1.5	6
44	Electromigration in Al thin films induced by surface acoustic waves: application to imaging. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 1999, 46, 856-860.	1.7	6
45	Stability of wrinkling patterns: from straight-sided to worm-like structures. <i>EPJ Applied Physics</i> , 2002, 17, 173-178.	0.3	6
46	Morphological instability of stressed spherical particles growing by diffusion in a matrix. <i>Physical Review B</i> , 2005, 71, .	1.1	6
47	Atomic reconstruction of niobium (111) surfaces. <i>Surface Science</i> , 2015, 632, 60-63.	0.8	6
48	Influence of interface steps on the buckle delamination of thin films. <i>Journal of the Mechanics and Physics of Solids</i> , 2019, 132, 103698.	2.3	6
49	Stiffness Contrast and Separation Influence Wrinkling of Adjacent Layers in a Homogeneous Matrix. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2019, 86, .	1.1	6
50	Localized surface instability of a non-homogeneously stressed solid. <i>Europhysics Letters</i> , 1997, 38, 307-312.	0.7	5
51	Stress heterogeneity of thermally grown polycrystalline nickel oxide layers. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2005, 395, 22-26.	2.6	5
52	Redeposition of a straight-sided buckle under pressure. <i>Physical Review E</i> , 2014, 89, 032410.	0.8	5
53	Effect of interface plasticity on circular blisters. <i>Scripta Materialia</i> , 2016, 113, 222-225.	2.6	5
54	Nonlinear Effects of the Stress Driven Rearrangement Instability of Solid Free Surfaces. <i>Journal of Elasticity</i> , 2004, 77, 177-185.	0.9	4

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55	A stress relaxation mechanism through buckling-induced dislocations in thin films. Journal of Applied Physics, 2010, 108, 026104.	1.1	4
56	Slip-trace-induced vicinal step destabilization. Physical Review B, 2016, 93, .	1.1	4
57	Grain boundary-induced plasticity during thin film buckling. Mechanics of Materials, 2021, 155, 103761.	1.7	4
58	Buckling pattern with rings: Evidence of plastic damage in thin films. Philosophical Magazine Letters, 2003, 83, 453-457.	0.5	3
59	Damaging of a soft substrate by cracks propagation through its hard coating: AFM observations and finite element simulation. EPJ Applied Physics, 2003, 22, 15-19.	0.3	3
60	On the Surface Stability of a Spherical Void Embedded in a Stressed Matrix. Journal of Applied Mechanics, Transactions ASME, 2007, 74, 8-12.	1.1	3
61	Non-linear elastic effects in plasticity: {100} dislocation gliding in aluminum-based alloy. Europhysics Letters, 2007, 78, 16002.	0.7	3
62	Island formation on a sawtooth patterned substrate. Europhysics Letters, 2014, 107, 26002.	0.7	3
63	Formation of a Prismatic Dislocation Loop in the Interface of a Circular Cylindrical Inclusion Embedded in a Thin Slab. Journal of Applied Mechanics, Transactions ASME, 2016, 83, .	1.1	3
64	Generation of a dipole of misfit dislocations in an axisymmetrical precipitate embedded in a semi-infinite matrix. International Journal of Solids and Structures, 2016, 82, 9-15.	1.3	3
65	Dislocation emission and crack propagation during thin film buckling on substrate. International Journal of Solids and Structures, 2020, 185-186, 202-211.	1.3	3
66	Investigating the secondary buckling of thin films with a model based on elastic rods with hinges. Journal of Mechanics of Materials and Structures, 2009, 4, 121-138.	0.4	3
67	Nano-undulations of nickel thin films on a substrate under compressive stress. Philosophical Magazine Letters, 1999, 79, 497-501.	0.5	2
68	Surface instability and delamination of epitaxially stressed bilayers. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 2609-2621.	0.8	2
69	Strain mapping on gold thin film buckling and silicon blistering. Materials Research Society Symposia Proceedings, 2005, 875, 1.	0.1	2
70	Stress-induced destabilization of solidification and melting fronts. Acta Materialia, 2009, 57, 1454-1458.	3.8	2
71	Delamination of strained multilayered nanowires. Applied Physics Letters, 2012, 101, 121911.	1.5	2
72	Morphological instability of a stressed solid cylinder in the solidification and melting regimes. Journal of Crystal Growth, 2014, 402, 113-118.	0.7	2

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73	Dislocation formation in the partially coherent interfaces of an embedded layer in a semi-infinite matrix. Philosophical Magazine Letters, 2015, 95, 152-160.	0.5	2
74	Dynamic Instability of Two Elastic Half-Spaces Sliding With a Rate-and-State Friction Constitutive Law. Journal of Applied Mechanics, Transactions ASME, 2016, 83, .	1.1	2
75	Equilibrium positions of misfit dislocations in a nanolayer embedded in a matrix. International Journal of Solids and Structures, 2016, 81, 393-398.	1.3	2
76	Effect of stress and interface kinetics on the growth of a cylinder of ternary alloy in contact with its melt. Journal of Crystal Growth, 2018, 493, 76-83.	0.7	2
77	Dislocation-based description of the sliding of a free-surface emerging grain boundary. Acta Mechanica, 2018, 229, 3215-3222.	1.1	2
78	Dislocation Formation From a Polycrystal Free-Surface. Journal of Applied Mechanics, Transactions ASME, 2019, 86, .	1.1	2
79	Spatially localized instability of a biaxially stressed solid and formation of island patterns. Europhysics Letters, 2007, 77, 26002.	0.7	1
80	Meandering of monolayer stripes under electromigration. Physical Review E, 2009, 79, 012601.	0.8	1
81	Morphological instability of epitaxially stressed quantum rings. Europhysics Letters, 2009, 88, 56002.	0.7	1
82	A new peeling mechanism of blisters involving surface diffusion. Scripta Materialia, 2011, 65, 672-674.	2.6	1
83	Effect of misfit stress on the equilibrium shape of a bilayer island. Physical Review B, 2011, 83, .	1.1	1
84	Formation of strained ring-shaped islands around square notches. Journal of Physics Condensed Matter, 2012, 24, 225007.	0.7	1
85	Shape evolution of a core-shell spherical particle under hydrostatic pressure. Physical Review E, 2012, 85, 032601.	0.8	1
86	Bistability of bilayer islands under anisotropic misfit stress. Surface Science, 2012, 606, 825-829.	0.8	1
87	Validation by asymptotic development of the empirical bulge test formula. Surface and Coatings Technology, 2012, 207, 218-220.	2.2	1
88	Misfit dislocation formation in stressed nanofilms. Philosophical Magazine Letters, 2014, 94, 189-197.	0.5	1
89	Equilibrium shapes of coherent precipitates near a surface. Mechanics of Materials, 2018, 117, 22-31.	1.7	1
90	Elastic interaction between dislocations and a cavity embedded in a biaxially stressed solid. Acta Mechanica, 2018, 229, 4945-4952.	1.1	1

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91	Dislocation formation from the free-surface of a two-phase solid. <i>Mechanics of Materials</i> , 2019, 137, 103094.	1.7	1
92	Motion of crystalline inclusions by interface diffusion in the proximity of free surfaces. <i>Journal of Nanoparticle Research</i> , 2019, 21, 1.	0.8	1
93	Localized Surface Instabilities of Stressed Solids. <i>Materials Research Society Symposia Proceedings</i> , 1998, 529, 27.	0.1	0
94	Thermodynamic approach of surface instability under irradiation. <i>Acta Materialia</i> , 2001, 49, 3711-3718.	3.8	0
95	Buckling of Thin Films on Substrates: From Straight-Sided Wrinkles to Both Worm-Like and Varicose Structures. <i>Materials Research Society Symposia Proceedings</i> , 2002, 749, 1.	0.1	0
96	Free surface deformation of irradiated thin slabs. <i>EPJ Applied Physics</i> , 2002, 20, 15-21.	0.3	0
97	How would nanostructures emerge in stressed multilayers?. <i>Europhysics Letters</i> , 2006, 75, 455-460.	0.7	0
98	Effect of stress on the diffusion-controlled dissolution of a spherical particle. <i>Physical Review E</i> , 2007, 75, 020601.	0.8	0
99	Post-flambage unilatéral des films minces sur substrat. <i>European Journal of Computational Mechanics</i> , 2007, 16, 941-955.	0.6	0
100	Effect of stress on the growth of concentric grains and pores embedded in a binary alloy matrix. <i>Physical Review B</i> , 2009, 79, .	1.1	0
101	Size selection of strained islands during Stranski-Krastanov growth. <i>Thin Solid Films</i> , 2013, 536, 187-190.	0.8	0
102	Understanding the buckling phenomenon of thin films and coatings. , 2013, , .		0
103	Morphological Instability of a Transversally Isotropic Solid Cylinder Under Stress. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2015, 82, .	1.1	0
104	Fracture Formation in Axisymmetrical Layered Materials. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2016, 83, .	1.1	0
105	Circular-to-elliptical-to-circular shape transitions of strained islands. <i>Thin Solid Films</i> , 2017, 631, 189-192.	0.8	0
106	Cuboidal-to-pyramidal shape transition of a strained island on a substrate. <i>Surface Science</i> , 2017, 664, 168-171.	0.8	0
107	Dislocation formation from one inclined free-surface of a buried layer in a matrix. <i>International Journal of Solids and Structures</i> , 2018, 144-145, 213-217.	1.3	0
108	Dislocation emission from a cylindrical circular void separating two disclination dipoles in a high-angle grain boundary. <i>Acta Mechanica</i> , 2019, 230, 2645-2654.	1.1	0

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109	Slip trace-induced terrace erosion. Applied Surface Science, 2019, 466, 454-458.	3.1	0
110	Formation of prismatic dislocation loops in a spherical particle embedded in a semi-infinite matrix. International Journal of Solids and Structures, 2020, 203, 17-22.	1.3	0
111	Formation of Two Edge Dislocations in a Grain Due to Interface Disclination Dipoles. Journal of Applied Mechanics, Transactions ASME, 2021, 88, .	1.1	0
112	Island formation by stress induced diffusion on the surface of a very thin layer epitaxially stressed on a substrate. European Physical Journal Special Topics, 2000, 10, Pr6-65-Pr6-69.	0.2	0
113	Mechanical behaviour of thin films on substrates : Debonding and buckling. European Physical Journal Special Topics, 2000, 10, Pr6-47-Pr6-52.	0.2	0
114	Morphological instability and contraction of a rectangular plate under stress. EPJ Applied Physics, 2005, 29, 143-151.	0.3	0