Juan de la Figuera

List of Publications by Year
in descending order

120	3,123	147801	197818
papers	citations	31 h-index	49 g-index

122	122	122	2803
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Scanning-tunneling-microscopy study of the growth of cobalt on Cu(111). Physical Review B, 1993, 47, 13043-13046.	3.2	237
2	Identifying the forces responsible for self-organization of nanostructures at crystal surfaces. Nature, 1999, 397, 238-241.	27.8	169
3	Dislocation Emission around Nanoindentations on a (001) fcc Metal Surface Studied by Scanning Tunneling Microscopy and Atomistic Simulations. Physical Review Letters, 2002, 88, 036101.	7.8	158
4	Fabrication of magnetic quantum wires by stepâ€flow growth of cobalt on copper surfaces. Applied Physics Letters, 1995, 66, 1006-1008.	3.3	87
5	Initial stages of the growth of Fe on Si(111)7Ã—7. Physical Review B, 1993, 47, 16048-16051.	3.2	84
6	Real-Space Imaging of the First Stages of FeSi ₂ Epitaxially Grown on Si(111): Nucleation and Atomic Structure. Europhysics Letters, 1992, 18, 595-600.	2.0	74
7	Surface etching and enhanced diffusion during the early stages of the growth of Co on Cu(111). Surface Science, 1994, 307-309, 538-543.	1.9	72
8	Magnetism in nanometer-thick magnetite. Physical Review B, 2012, 85, .	3.2	71
9	Imaging Spin-Reorientation Transitions in Consecutive Atomic Co Layers on Ru(0001). Physical Review Letters, 2006, 96, 147202.	7.8	68
10	Herringbone and triangular patterns of dislocations in Ag, Au, and AgAu alloy films on Ru(0001). Surface Science, 2006, 600, 1735-1757.	1.9	60
11	Enhanced Self-Diffusion on Cu(111) by Trace Amounts of S: Chemical-Reaction-Limited Kinetics. Physical Review Letters, 2004, 93, 166101.	7.8	54
12	Insight into Magnetiteâ€™s Redox Catalysis from Observing Surface Morphology during Oxidation. Journal of the American Chemical Society, 2013, 135, 10091-10098.	13.7	53
13	Determining the structure of Ru(0001) from low-energy electron diffraction of a single terrace. Surface Science, 2006, 600, L105-L109.	1.9	50
14	STM characterization of extended dislocation configurations in Au(001). Physical Review B, 1998, 58, 1169-1172.	3.2	49
15	Surface energetics in a heteroepitaxial model system: Co/Cu(111). Physical Review B, 2000, 62, 2126-2133.	3.2	48
16	Growth, structure and magnetism of Îµ-Fe₂O₃in nanoparticle form. RSC Advances, 2016, 6, 46380-46387.	3.6	47
17	Surface characterization of epitaxial, semiconducting, FeSi2grown on Si(100). Applied Physics Letters, 1991, 59, 99-101.	3.3	45
18	Oxidation Pathways in Bicomponent Ultrathin Iron Oxide Films. Journal of Physical Chemistry C, 2012, 116, 11539-11547.	3.1	44

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19	Crystallography and morphology of the early stages of the growth of by LEED and STM. Surface Science, 1996, 349, L139-L145.	1.9	43
20	Creation and motion of vacancy islands on solid surfaces: A direct view. Solid State Communications, 1994, 89, 815-818.	1.9	40
21	Structure and morphology of ultrathinCo/Ru(0001) films. New Journal of Physics, 2007, 9, 80-80.	2.9	40
22	Oxidation of Magnetite(100) to Hematite Observed by in Situ Spectroscopy and Microscopy. Journal of Physical Chemistry C, 2014, 118, 19768-19777.	3.1	39
23	Tailoring surface electronic states via strain to control adsorption: O/Cu/Ru(0001). Surface Science, 2004, 550, 65-72.	1.9	37
24	Room temperature in-plane âŸ¨100âŸ© magnetic easy axis for Fe3O4/SrTiO3(001):Nb grown by infrared pulsed laser deposition. Journal of Applied Physics, 2013, 114, .	2.5	37
25	Direct Observation of Misfit Dislocation Glide on Surfaces. Physical Review Letters, 2001, 86, 3819-3822.	7.8	36
26	Observation of a topologically protected state in a magnetic domain wall stabilized by a ferromagnetic chemical barrier. Scientific Reports, 2018, 8, 16695.	3.3	35
27	Strontium hexaferrite platelets: a comprehensive soft X-ray absorption and MÃ¶ssbauer spectroscopy study. Scientific Reports, 2019, 9, 11777.	3.3	35
28	Noble metal capping effects on the spin-reorientation transitions of Co/Ru(0001). New Journal of Physics, 2008, 10, 073024.	2.9	34
29	Spectral green cathodoluminescence emission from surfaces of insulators with metal-hydroxyl bonds. Journal of Luminescence, 2017, 190, 128-135.	3.1	34
30	Novel Microscopic Mechanism of Intermixing during Growth on Soft Metallic Substrates. Physical Review Letters, 2000, 84, 4397-4400.	7.8	32
31	The structure of Co films on Cu(111) up to 15 ML. Surface Science, 1996, 352-354, 46-49.	1.9	31
32	A new metastable epitaxial silicide: FeSi2/Si(111). Ultramicroscopy, 1992, 42-44, 845-850.	1.9	29
33	A Prelude to Surface Chemical Reaction:â€‰ Imaging the Induction Period of Sulfur Interaction with a Strained Cu Layer. Journal of Physical Chemistry B, 1999, 103, 10557-10561.	2.6	29
34	In-situ STM studies of strain-stabilized thin-film dislocation networks under applied stress. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 319-321, 914-918.	5.6	29
35	Structure and magnetism in ultrathin iron oxides characterized by low energy electron microscopy. Journal of Physics Condensed Matter, 2009, 21, 314011.	1.8	29
36	How metal films de-wet substratesâ€”identifying the kinetic pathways and energetic driving forces. New Journal of Physics, 2009, 11, 043001.	2.9	29

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37	Effect of wavelength, deposition temperature and substrate type on cobalt ferrite thin films grown by pulsed laser deposition. Applied Surface Science, 2018, 452, 19-31.	6.1	29
38	Geometric and electronic structure of epitaxial iron silicides. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1993, 11, 929-933.	2.1	28
39	Co on Fe3O4(001): Towards precise control of surface properties. Journal of Chemical Physics, 2016, 144, 094704.	3.0	28
40	Highly oriented (111) CoO and Co3O4 thin films grown by ion beam sputtering. Journal of Alloys and Compounds, 2019, 810, 151912.	5.5	28
41	Crystallography and morphology of the early stages of the growth of by LEED and STM. Surface Science, 1996, 349, L139-L145.	1.9	27
42	Electron reflectivity measurements of Ag adatom concentrations on W(110). Surface Science, 2006, 600, 4062-4066.	1.9	27
43	Structure and magnetism of ultrathin nickel-iron oxides grown on Ru(0001) by high-temperature oxygen-assisted molecular beam epitaxy. Scientific Reports, 2018, 8, 17980.	3.3	27
44	Topical Review: Progress and Prospects of Hard Hexaferrites for Permanent Magnet Applications. Journal Physics D: Applied Physics, 0, , .	2.8	27
45	Structural characterisation and homoepitaxial growth on Cu(111). Surface Science, 2000, 459, 191-205.	1.9	26
46	Atomically Flat Ultrathin Cobalt Ferrite Islands. Advanced Materials, 2015, 27, 5955-5960.	21.0	26
47	Determination of buried dislocation structures by scanning tunneling microscopy. Physical Review B, 2001, 63, .	3.2	24
48	Structure and magnetism of ultra-thin chromium layers on W(110). New Journal of Physics, 2008, 10, 013005.	2.9	24
49	Unconventional properties of nanometric FeO(111) films on Ru(0001): stoichiometry and surface structure. Journal of Materials Chemistry C, 2016, 4, 1850-1859.	5.5	24
50	Labyrinthine Island Growth duringPd/Ru(0001)Heteroepitaxy. Physical Review Letters, 2007, 99, 106101.	7.8	22
51	Order-disorder phase transition on the (100) surface of magnetite. Physical Review B, 2013, 88, .	3.2	22
52	Self-assembly of iron oxide precursor micelles driven by magnetic stirring time in solâ€“gel coatings. RSC Advances, 2019, 9, 17571-17580.	3.6	22
53	Real-space imaging of the Verwey transition at the (100) surface of magnetite. Physical Review B, 2013, 88, .	3.2	21
54	Geometrically defined spin structures in ultrathin Fe₃O₄with bulk like magnetic properties. Nanoscale, 2018, 10, 5566-5573.	5.6	21

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55	The Importance of Threading Dislocations on the Motion of Domain Boundaries in Thin Films. Science, 2005, 308, 1303-1305.	12.6	20
56	Synthesis and characterisation of the n=2 Ruddlesdenâ€“Popper phases Ln2Sr(Ba)Fe2O7 (Ln=La, Nd, Eu). Materials Research Bulletin, 2013, 48, 3537-3544.	5.2	20
57	Micromagnetism in (001) magnetite by spin-polarized low-energy electron microscopy. Ultramicroscopy, 2013, 130, 77-81.	1.9	20
58	Strain Relief through Heterophase Interface Reconstruction:Ag(111)/Ru(0001). Physical Review Letters, 2004, 92, 116102.	7.8	19
59	Nanoscale Periodicity in Stripe Forming Systems at High Temperature<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Au</mml:mi><mml:mo>/</mml:mo><mml:mi mathvariant="normal">W</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mn>110</mml:mn><mml:mo) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 562 Td (stretchy="fals	7.8	18
60	Stoichiometric magnetite grown by infrared nanosecond pulsed laser deposition. Applied Surface Science, 2013, 282, 642-651.	6.1	17
61	Initial stages of FeO growth on Ru(0001). Journal of Physics Condensed Matter, 2013, 25, 484001.	1.8	17
62	CO-Assisted Subsurface Hydrogen Trapping in Pd(111) Films. Journal of Physical Chemistry Letters, 2012, 3, 87-91.	4.6	16
63	Spin and orbital magnetic moment of reconstructed<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msqrt><mml:mn>2</mml:mn></mml:msqrt><mml:mo>Ã—</mml:mo> Physical Review B, 2015, 91, .	3.8	16
64	Surface structure of ?-FeSi2(101) epitaxially grown on Si(111). Applied Physics A: Solids and Surfaces, 1993, 57, 477-482.	1.4	15
65	Linking dislocation dynamics and chemical reactivity on strained metal films. Surface Science, 1998, 415, L993-L999.	1.9	15
66	Structure of ultrathin Pd films determined by low-energy electron microscopy and diffraction. New Journal of Physics, 2010, 12, 023023.	2.9	15
67	Epitaxial integration of CoFe2O4 thin films on Si (001) surfaces using TiN buffer layers. Applied Surface Science, 2018, 436, 1067-1074.	6.1	15
68	Tuning the NÃ©el temperature in an antiferromagnet: the case of NixCo1â^'xO microstructures. Scientific Reports, 2019, 9, 13584.	3.3	15
69	Surface morphology of semiconducting iron silicides grown on Si(111). Surface Science, 1992, 264, 45-54.	1.9	14
70	Interplay between gas adsorption and dislocation structure on a metal surface. Surface Science, 2003, 531, 29-38.	1.9	14
71	Hydrogen-induced reversible spin-reorientation transition and magnetic stripe domain phase in bilayer Co on Ru(0001). Physical Review B, 2012, 85, .	3.2	14
72	Bulk and surface characterisation of micrometer-thick cobalt ferrite films grown by IR PLD. Applied Surface Science, 2019, 470, 917-922.	6.1	14

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73	Growth of epitaxial iron disilicide on Si(100). Surface Science, 1992, 269-270, 1016-1021.	1.9	13
74	An ultrahigh vacuum fast-scanning and variable temperature scanning tunneling microscope for large scale imaging. Review of Scientific Instruments, 2007, 78, 103701.	1.3	13
75	Exchange-spring behavior below the exchange length in hard-soft bilayers in multidomain configurations. Physical Review B, 2018, 98, .	3.2	13
76	Origin of the magnetic transition at 100â€‰K inÎµ-Fe₂O₃nanoparticles studied by x-ray absorption fine structure spectroscopy. Journal of Physics Condensed Matter, 2017, 29, 485701.	1.8	13
77	Surface defects and reconstruction instabilities in Au(001). Surface Science, 1999, 429, L486-L491.	1.9	12
78	Determination of the surface structure of CeO2(111) by low-energy electron diffraction. Journal of Chemical Physics, 2013, 139, 114703.	3.0	12
79	MÃ¶ssbauer and Magnetic Properties of Coherently Mixed Magnetite-Cobalt Ferrite Grown by Infrared Pulsed-Laser Deposition. Croatica Chemica Acta, 2015, 88, 453-460.	0.4	12
80	Spin reorientation transition of magnetite (001). Physical Review B, 2016, 93, .	3.2	12
81	Role of the substrate on the magnetic anisotropy of magnetite thin films grown by ion-assisted deposition. Applied Surface Science, 2015, 359, 742-748.	6.1	11
82	Self-organized single crystal mixed magnetite/cobalt ferrite films grown by infrared pulsed-laser deposition. Applied Surface Science, 2015, 359, 480-485.	6.1	11
83	Thermal vibrations of a two-dimensional vacancy island crystal in a strained metal film. Surface Science, 1999, 433-435, 506-511.	1.9	10
84	Multiplication of threading dislocations in strained metal films under sulfur exposure. Surface Science, 1999, 433-435, 93-98.	1.9	9
85	Effects of low energy ion bombardment on the formation of cubic iron mononitride thin films. Thin Solid Films, 2013, 539, 35-40.	1.8	9
86	Structural phase transition during heteroepitaxial growth of iron silicides on Si(111). Applied Surface Science, 1993, 70-71, 578-582.	6.1	8
87	Real-space study of the growth of magnesium on ruthenium. Surface Science, 2011, 605, 903-911.	1.9	8
88	Initial Stages of the Growth of Mixed Iron-cobalt Oxides on Ru(0001). Physics Procedia, 2016, 85, 12-19.	1.2	7
89	Fourfold in-plane magnetic anisotropy of magnetite thin films grown on TiN buffered Si(001) by ion-assisted sputtering. Journal of Materials Chemistry C, 2016, 4, 7632-7639.	5.5	7
90	Memory effect and magnetocrystalline anisotropy impact on the surface magnetic domains of magnetite(001). Scientific Reports, 2018, 8, 5991.	3.3	7

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91	Different spin axis orientation and large antiferromagnetic domains in Fe-doped NiO/Ru(0001) epitaxial films. Nanoscale, 2020, 12, 21225-21233.	5.6	7
92	Nanocrystalline magnetite thin films grown by dual ion-beam sputtering. Journal of Alloys and Compounds, 2015, 636, 150-155.	5.5	6
93	Structure and stability of ultrathin Fe films on W(110). Physical Review B, 2016, 93, .	3.2	6
94	Influence of the growth conditions on the magnetism of SrFe₁₂O₁₉ thin films and the behavior of Co/SrFe₁₂O₁₉ bilayers. Journal Physics D: Applied Physics, 2020, 53, 344002.	2.8	6
95	Magnetic domain wall pinning in cobalt ferrite microstructures. Applied Surface Science, 2022, , 154045.	6.1	6
96	Atomic Scale Engineering of Superlattices and Magnetic Wires. Materials Research Society Symposia Proceedings, 1995, 384, 49.	0.1	5
97	Real Space Observations of Magnesium Hydride Formation and Decomposition. Chemistry of Materials, 2010, 22, 1291-1293.	6.7	5
98	Measuring the magnetization of three monolayer thick Co islands and films by x-ray dichroism. Physical Review B, 2009, 80, .	3.2	4
99	Valence band circular dichroism in non-magnetic Ag/Ru(0001) at normal emission. Journal of Physics Condensed Matter, 2011, 23, 305006.	1.8	4
100	Reversible temperature-driven domain transition in bistable Fe magnetic nanostrips grown on Ru(0001). Physical Review B, 2015, 92, .	3.2	4
101	Magnetism of epitaxial Tb films on W(110) studied by spin-polarized low-energy electron microscopy. Physical Review B, 2016, 94, .	3.2	4
102	The Verwey transition observed by spin-resolved photoemission electron microscopy. Applied Surface Science, 2017, 391, 66-69.	6.1	4
103	Metastable misfit dislocations during thin-film growth: The case of Cu on Ru(0001). Surface Science, 2019, 682, 43-50.	1.9	4
104	A real-time XAS PEEM study of the growth of cobalt iron oxide on Ru(0001). Journal of Chemical Physics, 2020, 152, 074704.	3.0	4
105	Combining high temperature sample preparation and in-situ magnetic fields in XPEEM. Ultramicroscopy, 2020, 214, 113010.	1.9	4
106	Growth and characterization of ultrathin cobalt ferrite films on Pt(111). Applied Surface Science, 2022, 586, 152672.	6.1	4
107	Glide and Climb of Dislocations in Ultra-Thin Metal Films. Materials Science Forum, 2003, 426-432, 3421-3426.	0.3	3
108	Magnetite and the Verwey transition, from Î³-rays to low-energy electrons. Hyperfine Interactions, 2019, 240, 1.	0.5	3

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109	Influence of the manganese substitution on the cation distribution and magnetic structure of the spinel-related LiFe1-xMn1â€‰+â€‰xO4 (xâ€‰=â€‰0.00, 0.25, 0.50, 0.75) system. Hyperfine Interactions, 2019, 240, 1.	0.5	3
110	Evidence of anomalous switching of the in-plane magnetic easy axis with temperature in Fe₃O₄ film on SrTiO₃:Nb by v-MOKE and ferromagnetic resonance. Nanoscale, 2019, 11, 19870-19876.	5.6	3
111	Uncorrelated magnetic domains in decoupled SrFe₁₂O₁₉/Co hard/soft bilayers. Journal Physics D: Applied Physics, 2021, 54, 054003.	2.8	3
112	Properties of dislocation half loops inAu(100): Structure, formation energy, and diffusion barrier. Physical Review B, 2004, 70, .	3.2	2
113	RBS/Channeling characterization of Ru(0001) and thin epitaxial Ru/Al<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e354" altimg="si44.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:math>O<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e362" altimg="si45.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:math>	6.1	2
114	A structural characterization of the buffer layer for growth of magnetically coupled Co/Cu superlattices. Journal of Magnetism and Magnetic Materials, 1993, 121, 20-23.	2.3	1
115	Unaltered reversible magnetic transition in Fe nanostructures upon ambient exposure. Ultramicroscopy, 2017, 181, 70-73.	1.9	1
116	Dynamics of Li deposition on epitaxial graphene/Ru(0001) islands. Applied Surface Science, 2022, 593, 153274.	6.1	1
117	MÃ¶ssbauer spectroscopic study of ironâ€“nickel nitrides thin films prepared by ion beam assisted deposition. Hyperfine Interactions, 2011, 202, 47-55.	0.5	0
118	Reprint of Unaltered reversible magnetic transition in Fe nanostructures upon ambient exposure. Ultramicroscopy, 2017, 183, 15-18.	1.9	0
119	On the Structural Quality of Co/Cu Trilayers and Superlattices: The Influence of the Template Layer. NATO ASI Series Series B: Physics, 1993, , 439-451.	0.2	0
120	The Growth of Cobalt/Copper Epitaxial Layers and its Relationship to the Oscillatory Magnetic Coupling. , 1994, , 141-149.		0