

# Jose I. MartÃ-n

## List of Publications by Year in descending order

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121  
papers

3,389  
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257450

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121  
all docs

121  
docs citations

121  
times ranked

2933  
citing authors

#	ARTICLE	IF	CITATIONS
1	Ordered magnetic nanostructures: fabrication and properties. Journal of Magnetism and Magnetic Materials, 2003, 256, 449-501.	2.3	856
2	Flux Pinning in a Superconductor by an Array of Submicrometer Magnetic Dots. Physical Review Letters, 1997, 79, 1929-1932.	7.8	477
3	Artificially Induced Reconfiguration of the Vortex Lattice by Arrays of Magnetic Dots. Physical Review Letters, 1999, 83, 1022-1025.	7.8	196
4	Superconducting vortex pinning with artificial magnetic nanostructures. Journal of Magnetism and Magnetic Materials, 2008, 320, 2547-2562.	2.3	192
5	Magnetic pinning of the vortex lattice by arrays of submicrometric dots. Physical Review B, 1998, 58, 8232-8235.	3.2	106
6	Infrared Permittivity of the Biaxial van der Waals Semiconductor $\text{In}_2\text{Se}_3$ from Near- and Far-Field Correlative Studies. Advanced Materials, 2020, 32, e1908176.	21.0	99
7	Fabrication of submicrometric magnetic structures by electron-beam lithography. Journal of Applied Physics, 1998, 84, 411-415.	2.5	73
8	Temperature dependence and mechanisms of vortex pinning by periodic arrays of Ni dots in Nb films. Physical Review B, 2000, 62, 9110-9116.	3.2	69
9	Nanoscale imaging of buried topological defects with quantitative X-ray magnetic microscopy. Nature Communications, 2015, 6, 8196.	12.8	61
10	Crossed-Ratchet Effects for Magnetic Domain Wall Motion. Physical Review Letters, 2008, 100, 037203.	7.8	55
11	Vortex lattice channeling effects in Nb films induced by anisotropic arrays of mesoscopic pinning centers. Physical Review B, 2002, 65, .	3.2	53
12	Inverted hysteresis loops in magnetically coupled bilayers with uniaxial competing anisotropies: Theory and experiments. Physical Review B, 2001, 64, .	3.2	51
13	Planar refraction and lensing of highly confined polaritons in anisotropic media. Nature Communications, 2021, 12, 4325.	12.8	48
14	CISNE: An accurate description of dose-effect and synergism in combination therapies. Scientific Reports, 2018, 8, 4964.	3.3	42
15	Magnetization reversal in long chains of submicrometric Co dots. Applied Physics Letters, 1998, 72, 255-257.	3.3	39
16	Fabrication and magnetic properties of arrays of amorphous and polycrystalline ferromagnetic nanowires obtained by electron beam lithography. Journal of Magnetism and Magnetic Materials, 2002, 249, 156-162.	2.3	39
17	Topological Defects and Misfit Strain in Magnetic Stripe Domains of Lateral Multilayers With Perpendicular Magnetic Anisotropy. Physical Review Letters, 2012, 109, 117202.	7.8	39
18	Order in driven vortex lattices in superconducting Nb films with nanostructured pinning potentials. Physical Review B, 2002, 65, .	3.2	32

#	ARTICLE	IF	CITATIONS
19	Anisotropic pinning enhancement in Nb films with arrays of submicrometric Ni lines. Applied Physics Letters, 2002, 81, 2851-2853.	3.3	30
20	Nanostructures and the proximity effect. Journal Physics D: Applied Physics, 2002, 35, 2398-2402.	2.8	29
21	Revealing 3D magnetization of thin films with soft X-ray tomography: magnetic singularities and topological charges. Nature Communications, 2020, 11, 6382.	12.8	29
22	Flux pinning and weak links in the behavior of the critical current of a-axis and c-axis EuBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> superconducting thin films. Applied Physics Letters, 1994, 65, 2099-2101.	3.3	27
23	Sign reversal of the flux-flow Hall effect in sputtered a-axis- and c-axis-oriented films of 1:2:3 superconducting cuprates. Physical Review B, 1994, 49, 3496-3501.	3.2	27
24	Epitaxial Fe (001) micro tiling: Size and interaction effects. Applied Physics Letters, 2000, 76, 3091-3093.	3.3	26
25	Antiferromagnetic coupling in amorphous Co <sub>x</sub> Si <sub>1-x</sub> multilayers. Physical Review B, 2005, 71, .	3.2	24
26	Direct chemical in-depth profile analysis and thickness quantification of nanometer multilayers using pulsed-rf-GD-TOFMS. Analytical and Bioanalytical Chemistry, 2010, 396, 2881-2887.	3.7	23
27	Controlled nucleation of topological defects in the stripe domain patterns of lateral multilayers with perpendicular magnetic anisotropy. Physical Review B, 2013, 88, .	3.2	23
28	Vortex ratchet reversal at fractional matching fields in kagomé-like array with symmetric pinning centers. Physical Review B, 2010, 82, .	3.2	20
29	Ni <sub>2</sub> Fe wall pinning on amorphous Co <sub>x</sub> Si <sub>1-x</sub> and Co <sub>y</sub> Zr <sub>1-y</sub> films with arrays of antidots in the diluted regime. Journal of Applied Physics, 2006, 99, 033902.	2.5	18
30	Nanopatterning effects on magnetic anisotropy of epitaxial Fe(001) micrometric squares. Journal of Applied Physics, 2002, 91, 382.	2.5	17
31	Simulations and experiments on magneto-optical diffraction by an array of epitaxial Fe(001) microsquares. Applied Physics Letters, 2002, 81, 3206-3208.	3.3	17
32	Deterministic propagation of vortex-antivortex pairs in magnetic trilayers. Applied Physics Letters, 2017, 110, .	3.3	17
33	3D reconstruction of magnetization from dichroic soft X-ray transmission tomography. Journal of Synchrotron Radiation, 2018, 25, 1144-1152.	2.4	17
34	Anisotropy measurements in mesoscopic magnets by magneto-optical torque. Applied Physics Letters, 2000, 77, 2039-2041.	3.3	16
35	Domain walls and macroscopic spin-flip-like metamagnetism in Gd <sub>x</sub> Co <sub>1-x</sub> /Gd <sub>y</sub> Co <sub>1-y</sub> exchange-coupled double layers. Physical Review B, 2004, 70, .	3.2	16
36	Observation of asymmetric distributions of magnetic singularities across magnetic multilayers. Physical Review B, 2017, 95, .	3.2	16

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37	Tunable ferromagnetic resonance in coupled trilayers with crossed in-plane and perpendicular magnetic anisotropies. Applied Physics Letters, 2019, 115, .	3.3	16
38	Tuning interfacial domain walls in GdCo/Gd/GdCo $\epsilon^2$ spring magnets. Physical Review B, 2015, 92, .	3.2	15
39	Mixed-state properties of superconducting Nb/Ni superlattices. Physica C: Superconductivity and Its Applications, 2002, 369, 213-216.	1.2	14
40	Coercive fields of amorphous Co $\epsilon$ Si films with diluted arrays of antidots. Nanotechnology, 2004, 15, S131-S136.	2.6	14
41	Pulsed rf-GD-TOFMS for depth profile analysis of ultrathin layers using the analyte prepeak region. Analytical and Bioanalytical Chemistry, 2012, 403, 2437-2448.	3.7	14
42	Polymer porous thin films obtained by direct spin coating. Polymer International, 2018, 67, 393-398.	3.1	13
43	Coercive and anisotropy fields in patterned amorphous FeSi submicrometric structures. Journal of Applied Physics, 2000, 87, 5654-5656.	2.5	12
44	MFM observations of domain wall creep and pinning effects in amorphous CoxSi1 $\epsilon$ films with diluted arrays of antidots. Journal Physics D: Applied Physics, 2007, 40, 3051-3055.	2.8	12
45	Resolving antiferromagnetic states in magnetically coupled amorphous Co-Si-Si multilayers by soft x-ray resonant magnetic scattering. Physical Review B, 2008, 78, .	3.2	12
46	Crossed-ratchet effects and domain wall geometrical pinning. Physical Review B, 2011, 83, .	3.2	12
47	Double percolation effects and fractal behavior in magnetic/superconducting hybrids. New Journal of Physics, 2013, 15, 103025.	2.9	12
48	Fabrication and magnetic properties of nanostructured amorphous Nd $\epsilon$ Co films with lateral modulation of magnetic stripe period. Journal Physics D: Applied Physics, 2013, 46, 345001.	2.8	12
49	Multilayer pinning in a-axis-oriented EuBa2Cu3O7/PrBa2Cu3O7 superconducting superlattices. Physical Review B, 1995, 52, R3872-R3875.	3.2	11
50	Fabrication and magnetic properties of long Ni wires of submicron width. Journal of Magnetism and Magnetic Materials, 2000, 221, 215-218.	2.3	11
51	Fabrication and magnetic properties of electron beam lithography patterned arrays of single crystals. IEEE Transactions on Magnetics, 2000, 36, 3002-3004.	2.1	11
52	Inverted hysteresis loops in annealed Co $\epsilon$ Nb $\epsilon$ Zr and Co $\epsilon$ Fe $\epsilon$ Mo $\epsilon$ Si $\epsilon$ B amorphous thin films. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 169-172.	2.3	11
53	Magnetization reversal measurements in mesoscopic amorphous magnets by magneto-optical Kerr effect. European Physical Journal B, 2004, 40, 463-470.	1.5	11
54	Interlayer coupling mechanisms in amorphous CoxSi1 $\epsilon$ Simultilayers. Physical Review B, 2006, 74, .	3.2	11

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55	Closure magnetization configuration around a single hole in a magnetic film. Physical Review B, 2008, 78, .	3.2	11
56	Angular dependence of the artificially induced anisotropy in a-axis-oriented EuBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> /PrBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> superconducting superlattices. Physical Review B, 1996, 54, 101-104.	3.2	10
57	Critical currents and pinning forces in a-axis oriented EuBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> /PrBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> superlattices. Applied Physics Letters, 1995, 67, 3186-3188.	3.3	9
58	Fabrication of ordered arrays of permalloy submicrometric dots. Journal of Magnetism and Magnetic Materials, 1999, 203, 156-158.	2.3	9
59	Temperature dependence of the magnetization reversal process in patterned Ni nanowires. Nanotechnology, 2003, 14, 294-298.	2.6	9
60	Ferromagnetic proximity effect in $a$ -axis oriented Nd-Co alloy films nanostructured by di-block copolymer templates. Physical Review B, 2010, 82, .	2.2	9
61	Perpendicular magnetic anisotropy in Nd-Co alloy films nanostructured by di-block copolymer templates. Journal of Applied Physics, 2012, 112, .	2.5	9
62	2D magnetic domain wall ratchet: The limit of submicrometric holes. Materials and Design, 2018, 138, 111-118.	7.0	9
63	Topologically protected superconducting ratchet effect generated by spin-ice nanomagnets. Nanotechnology, 2019, 30, 244003.	2.6	9
64	Domain wall energy landscapes in amorphous magnetic films with asymmetric arrays of holes. Journal Physics D: Applied Physics, 2009, 42, 045001.	2.8	8
65	Magnetic flux pinning and microstructure, a special case: a-axis oriented superconducting superlattices. Thin Solid Films, 1996, 275, 119-124.	1.8	7
66	Oxygen content influence in the superconducting and electronic properties of Nd <sub>1.85</sub> Ce <sub>0.15</sub> Cu <sub>1.01</sub> O <sub>y</sub> ceramics. Journal of Alloys and Compounds, 2001, 323-324, 580-583.	5.5	7
67	Magnetic coupling in epitaxial Fe/MgO/Fe microtunnel junction arrays. Nanotechnology, 2002, 13, 695-700.	2.6	7
68	Magnetotransport properties of patterned magnetic Ni wires of submicrometric dimensions. Journal of Magnetism and Magnetic Materials, 2002, 240, 14-16.	2.3	7
69	Interplay between the vortex lattice and arrays of submicrometric pinning centers. Physica C: Superconductivity and Its Applications, 2002, 369, 135-140.	1.2	6
70	Competing magnetic anisotropies in exchange coupled bilayers with growth-induced orthogonal uniaxial axes. Physical Review B, 2007, 76, .	3.2	6
71	Tunable exchange bias-like effect in patterned hard-soft two-dimensional lateral composites with perpendicular magnetic anisotropy. Applied Physics Letters, 2014, 105, 102412.	3.3	6
72	Critical currents and thermal activation in a-axis oriented EuBa <sub>2</sub> /Cu <sub>3</sub> O <sub>7</sub> thin films. IEEE Transactions on Applied Superconductivity, 1995, 5, 1537-1540.	1.7	5

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73	Thermomagnetic behaviour and compositional irreversibility on (Fe/Si) <sub>3</sub> multilayer films. Journal of Magnetism and Magnetic Materials, 2014, 364, 24-33.	2.3	5
74	Van der Waals Semiconductors: Infrared Permittivity of the Biaxial van der Waals Semiconductor $\text{In}_2\text{MoO}_7$ from Near- and Far-Field Correlative Studies (Adv. Mater. 29/2020). Advanced Materials, 2020, 32, 2070220.	21.0	5
75	Compensation temperatures and composition homogeneity in amorphous Gd Co <sup>1+</sup> films. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 1427-1429.	2.3	4
76	Absence of spin scattering of in-plane spring domain walls. Physical Review B, 2005, 71, .	3.2	4
77	Imaging magnetic domains in Ni nanostructures. Journal of Magnetism and Magnetic Materials, 2007, 310, e936-e938.	2.3	4
78	Magnetic order of Cr thin films in Nb/Cr/Fe-nanoisland hybrid: A comparative study between magnetic and superconducting properties. Journal of Applied Physics, 2009, 105, .	2.5	4
79	Submicrometric 2D ratchet effect in magnetic domain wall motion. Physica B: Condensed Matter, 2014, 455, 76-78.	2.7	4
80	Unravelling the tunable exchange bias-like effect in magnetostatically-coupled two dimensional hybrid (hard/soft) composites. Nanotechnology, 2015, 26, 225302.	2.6	4
81	Topological defects in weak perpendicular magnetic anisotropy NdCo honeycomb lattices. New Journal of Physics, 2018, 20, 113007.	2.9	4
82	Cycloidal Domains in the Magnetization Reversal Process of $\text{Ni}_{80}\text{Fe}_{20}$ . Physical Review Applied, 2018, 10, .	3.8	4
83	Tailoring block copolymer nanoporous thin films with acetic acid as a small guest molecule. Polymer International, 2019, 68, 1914-1920.	3.1	4
84	3D magnetic configuration of ferrimagnetic multilayers with competing interactions visualized by soft X-ray vector tomography. Communications Physics, 2022, 5, .	5.3	4
85	Hall effect and longitudinal resistivity of 123 superconducting thin films: Scaling relations. Solid State Communications, 1995, 94, 341-344.	1.9	3
86	Flux-flow resistivity and vortex viscosity of high-T <sub>c</sub> films nearT <sub>c</sub> . Physical Review B, 1997, 55, 5659-5662.	3.2	3
87	Hall effect in Nd <sub>1.85</sub> Ce <sub>0.15</sub> CuO <sub>y</sub> with controlled oxygen content. Physica C: Superconductivity and Its Applications, 2000, 341-348, 1943-1944.	1.2	3
88	Magnetization reversal processes in amorphous and polycrystalline Co-Si patterned nanowires. IEEE Transactions on Magnetics, 2002, 38, 2565-2567.	2.1	3
89	Enhancement of synchronized vortex lattice motion in hybrid magnetic/amorphous superconducting nanostructures. Applied Physics Letters, 2009, 94, 122506.	3.3	3
90	Crossed ratchet effects on magnetic domain walls: geometry and transverse field effects. Journal Physics D: Applied Physics, 2011, 44, 325002.	2.8	3

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91	Magnetization processes in rectangular versus rhombic planar superlattices of magnetic bars. <i>Physical Review B</i> , 2011, 84, .	3.2	3
92	Magnetic Behavior of High Density Arrays of Co Bars with Strong Magnetostatic Coupling. <i>Journal of Nanoscience and Nanotechnology</i> , 2012, 12, 7510-7515.	0.9	3
93	Imprinted labyrinths and percolation in Nd-Co/Nb magnetic/superconducting hybrids. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	3
94	Magnetic stripes and holes: Complex domain patterns in perforated films with weak perpendicular anisotropy. <i>AIP Advances</i> , 2017, 7, .	1.3	3
95	Chiral asymmetry detected in a 2D array of permalloy square nanomagnets using circularly polarized x-ray resonant magnetic scattering. <i>Nanotechnology</i> , 2020, 31, 025702.	2.6	3
96	Hall effect in the mixed state of a-axis oriented EuBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> films. <i>Physica C: Superconductivity and Its Applications</i> , 1994, 235-240, 3123-3124.	1.2	2
97	Relation between microstructure and superconducting properties in a-axis 123 films and superlattices. <i>Thin Solid Films</i> , 2000, 373, 113-116.	1.8	2
98	Interplay between size and shape in the magnetic behaviour of epitaxial microtunnel junction arrays. <i>Nanotechnology</i> , 2003, 14, 492-496.	2.6	2
99	Incomplete magnetization switching processes in exchange coupled double layers of Gd-Co alloys. <i>Journal of Magnetism and Magnetic Materials</i> , 2004, 272-276, E855-E857.	2.3	2
100	One-step fabrication of large area arrays of dots by electron beam lithography. <i>Microelectronic Engineering</i> , 2007, 84, 845-847.	2.4	2
101	Magnetic order and disorder in nanomagnets probed by superconducting vortices. <i>Scientific Reports</i> , 2018, 8, 12374.	3.3	2
102	Sign reversal of the flux flow Hall effect in oxygen deficient YBa <sub>2</sub> Cu <sub>3</sub> O <sub>x</sub> films. <i>Physica C: Superconductivity and Its Applications</i> , 1994, 235-240, 1451-1452.	1.2	1
103	Determination of magnetic axes distribution in epitaxial Fe (001) micrometric squares by magneto optical technique. <i>Journal of Magnetism and Magnetic Materials</i> , 2002, 240, 37-39.	2.3	1
104	Temperature effects on the magnetic properties of antiferromagnetically coupled amorphous Co <sub>0.74</sub> Si <sub>0.26</sub> /Si multilayers. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006, 203, 1420-1424.	1.8	1
105	Field and temperature dependence of Bloch walls across the thickness in Gd <sub>0.28</sub> Co <sub>0.72</sub> /Gd <sub>0.12</sub> Co <sub>0.88</sub> exchange coupled double layers. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006, 203, 1431-1436.	1.8	1
106	Influence of the number of periods on the magnetization reversal process of antiferromagnetically coupled amorphous Co <sub>x</sub> Si <sub>1-x</sub> /Si multilayers. <i>Journal of Non-Crystalline Solids</i> , 2007, 353, 959-961.	3.1	1
107	Depth dependence of Néel wall pinning on amorphous Co <sub>x</sub> Si <sub>1-x</sub> films with diluted arrays of elliptical antidots. <i>Journal of Magnetism and Magnetic Materials</i> , 2007, 316, e27-e30.	2.3	1
108	Vortex lattice motion in the flux creep regime on asymmetric pinning potentials. <i>Superconductor Science and Technology</i> , 2013, 26, 035016.	3.5	1

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109	Two-Step Resist Deposition of E-Beam Patterned Thick Py Nanostructures for X-ray Microscopy. <i>Micromachines</i> , 2022, 13, 204.	2.9	1
110	Normal-state Hall effect in c-axis and a-axis oriented EuBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> superconducting thin films. <i>Physica B: Condensed Matter</i> , 1994, 199-200, 246-247.	2.7	0
111	Critical scaling and vortex glass transition in a-axis oriented EuBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> thin films. <i>Physica C: Superconductivity and Its Applications</i> , 1994, 235-240, 3171-3172.	1.2	0
112	Dissipation mechanisms in EuBa <sub>2</sub> /Cu <sub>3</sub> /O <sub>7</sub> /SrTiO <sub>3</sub> and EuBa <sub>2</sub> /Cu <sub>3</sub> /O <sub>7</sub> /PrBa <sub>2</sub> /Cu <sub>3</sub> /O <sub>7</sub> multilayers. <i>IEEE Transactions on Applied Superconductivity</i> , 1997, 7, 2188-2191.	1.7	0
113	Phase diagram, vortex dynamics and dissipation in thin films and superlattices of 1:2:3 superconducting cuprates. , 1997, , 316-336.		0
114	Magnetic vortices and pinning in thin films and superlattices. <i>Thin Solid Films</i> , 1998, 317, 285-289.	1.8	0
115	Interplay between artificially induced and intrinsic anisotropies in 123 superconducting superlattices. , 1998, 3480, 44.		0
116	Angular Dependence of the Irreversibility Line in Irradiated a-Axis-Oriented EuBa <sub>2</sub> Cu <sub>3</sub> O <sub>7</sub> Films. , 2002, , 545-549.		0
117	Magnetic behavior of amorphous magnetic films with diluted arrays of antidots: induced vs. intrinsic anisotropy. <i>Journal of Magnetism and Magnetic Materials</i> , 2004, 272-276, E1335-E1337.	2.3	0
118	The role of material microstructure in the magnetic behavior of amorphous and polycrystalline Co <sub>x</sub> Si <sub>1-x</sub> lines. <i>European Physical Journal B</i> , 2005, 47, 337-340.	1.5	0
119	Influence of boundary geometry in domain wall propagation in magnetic films with asymmetric holes: Micromagnetic calculations. <i>Journal of Physics: Conference Series</i> , 2010, 200, 042001.	0.4	0
120	Magnetic properties of amorphous Co <sub>0.74</sub> Si <sub>0.26</sub> ~Si multilayers with different numbers of periods. <i>Low Temperature Physics</i> , 2010, 36, 821-825.	0.6	0
121	Amorphous and Crystalline Magnetic/Superconducting Hybrids: Interplay Between Periodic Defects and Random Defects. <i>IEEE Transactions on Applied Superconductivity</i> , 2011, 21, 2597-2600.	1.7	0