Amalio FernÃ¡ndez-Pacheco

List of Publications by Year
in descending order

78 papers	2,973 citations	159585 30 h-index	161849 54 g-index
83 all docs	83 docs citations	83 times ranked	2897 citing authors

#	Article	IF	Citations
1	Complex free-space magnetic field textures induced by three-dimensional magnetic nanostructures. Nature Nanotechnology, 2022, 17, 136-142.	31.5	39
2	Domain Wall Automotion in Three-Dimensional Magnetic Helical Interconnectors. ACS Nano, 2022, 16, 8860-8868.	14.6	20
3	Non-Planar Geometrical Effects on the Magnetoelectrical Signal in a Three-Dimensional Nanomagnetic Circuit. ACS Nano, 2021, 15, 6765-6773.	14.6	16
4	Micromagnetic modeling of magnetic domain walls in curved cylindrical nanotubes and nanowires. Applied Physics Letters, 2021, 118, .	3.3	10
5	Fabrication of a 3D Nanomagnetic Circuit with Multi-Layered Materials for Applications in Spintronics. Micromachines, 2021, 12, 859.	2.9	10
6	Layer-by-Layer Growth of Complex-Shaped Three-Dimensional Nanostructures with Focused Electron Beams. Nano Letters, 2020, 20, 184-191.	9.1	65
7	Writing 3D Nanomagnets Using Focused Electron Beams. Materials, 2020, 13, 3774.	2.9	61
8	Artificial Double-Helix for Geometrical Control of Magnetic Chirality. ACS Nano, 2020, 14, 8084-8092.	14.6	58
9	Launching a new dimension with 3D magnetic nanostructures. APL Materials, 2020, 8, .	5.1	88
10	Fabrication and magneto-optical characterization of 3D-printed permalloy nanowires. , 2020, , 85-102.		1
11	Symmetry-breaking interlayer Dzyaloshinskiiâ€“Moriya interactions in synthetic antiferromagnets. Nature Materials, 2019, 18, 679-684.	27.5	100
12	High-Fidelity 3D-Nanoprinting via Focused Electron Beams: Computer-Aided Design (3BID). ACS Applied Nano Materials, 2018, 1, 1028-1041.	5.0	54
13	Sputter Grown Fe and Fe/Cr Multilayers With Fourfold Magnetic Anisotropy on GaAs. IEEE Transactions on Magnetics, 2018, 54, 1-5.	2.1	2
14	Fabrication of Scaffold-Based 3D Magnetic Nanowires for Domain Wall Applications. Nanomaterials, 2018, 8, 483.	4.1	26
15	Vector magnetometry of Fe/Cr/Fe trilayers with biquadratic coupling. Journal Physics D: Applied Physics, 2017, 50, 19LT02.	2.8	0
16	Three-dimensional nanomagnetism. Nature Communications, 2017, 8, 15756.	12.8	398
17	Tuning shape, composition and magnetization of 3D cobalt nanowires grown by focused electron beam induced deposition (FEBID). Journal Physics D: Applied Physics, 2017, 50, 18LT01.	2.8	43
18	Controlling the canted state in antiferromagnetically coupled magnetic bilayers close to the spin reorientation transition. Applied Physics Letters, 2017, 110, 102405.	3.3	5

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19	Fabrication, Detection, and Operation of a Three-Dimensional Nanomagnetic Conduit. ACS Nano, 2017, 11, 11066-11073.	14.6	54
20	Systematic tuning of segmented magnetic nanowires into three-dimensional arrays of â€˜bitsâ€™. RSC Advances, 2017, 7, 37627-37635.	3.6	23
21	A magnetic shift register with out-of-plane magnetized layers. Nanotechnology, 2017, 28, 385201.	2.6	0
22	Zigzag Domain Wall Mediated Reversal in Antiferromagnetically Coupled Layers. IEEE Magnetics Letters, 2017, 8, 1-4.	1.1	1
23	Modelling focused electron beam induced deposition beyond Langmuir adsorption. Beilstein Journal of Nanotechnology, 2017, 8, 2151-2161.	2.8	18
24	Systematic layer-by-layer characterization of multilayers for three-dimensional data storage and logic. Nanotechnology, 2016, 27, 155203.	2.6	4
25	Magnetic State of Multilayered Synthetic Antiferromagnets during Soliton Nucleation and Propagation for Vertical Data Transfer. Advanced Materials Interfaces, 2016, 3, 1600097.	3.7	8
26	Review of magnetic nanostructures grown by focused electron beam induced deposition (FEBID). Journal Physics D: Applied Physics, 2016, 49, 243003.	2.8	124
27	Toward Flexible Spintronics: Perpendicularly Magnetized Synthetic Antiferromagnetic Thin Films and Nanowires on Polyimide Substrates. Advanced Functional Materials, 2016, 26, 4704-4711.	14.9	50
28	Magnetic Solitons in Superlattices. Springer Series in Materials Science, 2016, , 219-238.	0.6	1
29	Vertical shift register using dipolar interaction in magnetic multilayers. Journal of Applied Physics, 2015, 118, 233905.	2.5	2
30	Controlling nucleation in perpendicularly magnetized nanowires through in-plane shape. Applied Physics Letters, 2015, 107, 092405.	3.3	14
31	A composite element bit design for magnetically encoded microcarriers for future combinatorial chemistry applications. RSC Advances, 2015, 5, 10211-10218.	3.6	10
32	Trapping of a magnetic soliton by modifying the boundary conditions of a synthetic ferrimagnetic superlattice. , 2015, , .		0
33	A robust soliton ratchet using combined antiferromagnetic and ferromagnetic interlayer couplings. Applied Physics Letters, 2015, 106, 092404.	3.3	5
34	Magnetic nanowires grown by focused electron beam-induced deposition. , 2015, , 147-171.		0
35	3D Magnetic Induction Maps of Nanoscale Materials Revealed by Electron Holographic Tomography. Chemistry of Materials, 2015, 27, 6771-6778.	6.7	64
36	Combining Micromanipulation, Kerr Magnetometry and Magnetic Force Microscopy for Characterization of Three-Dimensional Magnetic Nanostructures. , 2015, , 531-559.		0

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37	Present and future applications of magnetic nanostructures grown by FEBID. Applied Physics A: Materials Science and Processing, 2014, 117, 1645-1658.	2.3	34
38	Magnetic properties and interlayer coupling of epitaxial Co/Cu films on Si. Journal of Applied Physics, 2014, 116, 063906.	2.5	4
39	Multi-bit operations in vertical spintronic shift registers. Nanotechnology, 2014, 25, 105201.	2.6	20
40	Dynamic selective switching in antiferromagnetically-coupled bilayers close to the spin reorientation transition. Applied Physics Letters, 2014, 105, .	3.3	10
41	Soliton propagation in micron-sized magnetic ratchet elements. Applied Physics Letters, 2014, 104, .	3.3	9
42	Improvement of domain wall conduit properties in cobalt nanowires by global gallium irradiation. Nanotechnology, 2013, 24, 345703.	2.6	14
43	Modification of domain-wall propagation in Co nanowires via Ga+ irradiation. European Physical Journal B, 2013, 86, 1.	1.5	15
44	Magnetic ratchet for three-dimensional spintronic memory and logic. Nature, 2013, 493, 647-650.	27.8	180
45	DOMAIN IMAGING DURING SOLITON PROPAGATION IN A 3D MAGNETIC RATCHET. Spin, 2013, 03, 1340013.	1.3	17
46	Nanoscale Electrical Contacts Grown by Focused Ion Beam (FIB)-Induced Deposition. Lecture Notes in Nanoscale Science and Technology, 2013, , 95-122.	0.8	3
47	Three dimensional magnetic nanowires grown by focused electron-beam induced deposition. Scientific Reports, 2013, 3, 1492.	3.3	148
48	Magnetic domain wall induced, localized nanowire reversal. Applied Physics Letters, 2012, 101, 062415.	3.3	7
49	Giant anomalous Hall effect in Fe-based microwires grown by focused-electron-beam-induced deposition. Journal Physics D: Applied Physics, 2012, 45, 035001.	2.8	24
50	Controllable nucleation and propagation of topological magnetic solitons in CoFeB/Ru ferrimagnetic superlattices. Physical Review B, 2012, 86, .	3.2	20
51	Tuning the interlayer exchange coupling between single perpendicularly magnetized CoFeB layers. Applied Physics Letters, 2012, 100, .	3.3	51
52	Domain wall interactions at a cross-shaped vertex. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 5794-5805.	3.4	5
53	Correlation between the magnetic imaging of cobalt nanoconstrictions and their magnetoresistance response. Nanotechnology, 2012, 23, 105703.	2.6	9
54	Dynamic Oscillations of Coupled Domain Walls. Physical Review Letters, 2012, 108, 187202.	7.8	29

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55	Conduction in Atomic-Sized Magnetic Metallic Constrictions Created by FIB. , 2011, , 83-97.		0
56	Ptâ€“C Nanowires Created by FIBID and FEBID. , 2011, , 99-127.		0
57	Studies of Nanoconstrictions, Nanowires and Feâ‚ƒOâ‚„ Thin Films. , 2011, , .		4
58	Hysteresis loops of individual Co nanostripes measured by magnetic force microscopy. Nanoscale Research Letters, 2011, 6, 407.	5.7	47
59	Nanoscale chemical and structural study of Co-based FEBID structures by STEM-EELS and HRTEM. Nanoscale Research Letters, 2011, 6, 592.	5.7	48
60	Fast domain wall motion in magnetic combÂstructures. Nature Materials, 2010, 9, 980-983.	27.5	105
61	Fe₃O₄ Epitaxial Thin Films and Heterostructures: Magnetotransport and Magnetic Properties. Advances in Science and Technology, 2010, 67, 82-91.	0.2	6
62	High Conductivity in Hydrothermally Grown AgCuO₂ Single Crystals Verified Using Focused-Ion-Beam-Deposited Nanocontacts. Inorganic Chemistry, 2010, 49, 10977-10983.	4.0	22
63	Metal-insulator transition in Pt-C nanowires grown by focused-ion-beam-induced deposition. Physical Review B, 2009, 79, .	3.2	57
64	High-field Hall effect and magnetoresistance in Fe3O4 epitaxial thin films up to 30 Tesla. Applied Physics Letters, 2009, 95, .	3.3	26
65	Magnetotransport properties of high-quality cobalt nanowires grown by focused-electron-beam-induced deposition. Journal Physics D: Applied Physics, 2009, 42, 055005.	2.8	145
66	Magnetization reversal in individual cobalt micro- and nanowires grown by focused-electron-beam-induced-deposition. Nanotechnology, 2009, 20, 475704.	2.6	60
67	Origin of the Difference in the Resistivity of As-Grown Focused-Ion- and Focused-Electron-Beam-Induced Pt Nanodeposits. Journal of Nanomaterials, 2009, 2009, 1-11.	2.7	83
68	Tunneling and anisotropic-tunneling magnetoresistance in iron nanoconstrictions fabricated by focused-ion-beam. Materials Research Society Symposia Proceedings, 2009, 1181, 1.	0.1	1
69	Transport properties of superconducting amorphous W-based nanowires fabricated by focused-ion-beam-induced-deposition for applications in Nanotechnology. Materials Research Society Symposia Proceedings, 2009, 1180, 1.	0.1	13
70	Direct observation of melting in a two-dimensional superconducting vortex lattice. Nature Physics, 2009, 5, 651-655.	16.7	115
71	Magnetoresistance between oxidized Co-rich particles grown by high current electrochemical deposition. Solid State Communications, 2009, 149, 2043-2046.	1.9	0
72	Creation of stable nanoconstrictions in metallic thin films via progressive narrowing by focused-ion-beam technique and in situ control of resistance. Microelectronic Engineering, 2009, 86, 639-641.	2.4	5

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73	Domain wall conduit behavior in cobalt nanowires grown by focused electron beam induced deposition. Applied Physics Letters, 2009, 94, 192509.	3.3	63
74	Nanoscale superconducting properties of amorphous W-based deposits grown with a focused-ion-beam. New Journal of Physics, 2008, 10, 093005.	2.9	66
75	Exploring the conduction in atomic-sized metallic constrictions created by controlled ion etching. Nanotechnology, 2008, 19, 415302.	2.6	12
76	Giant planar Hall effect in epitaxial<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Fe</mml:mtext></mml:mrow><mml:mn>3</mml:mn></mml:msub> films and its temperature dependence. Physical Review B, 2008, 78, .	3.2	82
77	Universal scaling of the anomalous Hall effect in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi>Fe</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math>epitaxial thin films. Physical Review B, 2008, 77, .	3.2	67
78	Magnetotransport properties of Fe3O4 thin films for applications in spin electronics. Microelectronic Engineering, 2007, 84, 1660-1664.	2.4	32