Alfredo GarcÃ-a Arribas

List of Publications by Year
in descending order

147 papers	2,340 citations	172386 29 h-index	289141 40 g-index
147 all docs	147 docs citations	147 times ranked	1809 citing authors

#	Article	IF	Citations
1	Structure and Magnetic Properties of Thin Permalloy Films Near the â€œTranscriticalâ€•State. IEEE Transactions on Magnetics, 2010, 46, 333-336.	1.2	114
2	Giant magnetoimpedance biosensor for ferrogel detection: Model system to evaluate properties of natural tissue. Applied Physics Letters, 2015, 106, .	1.5	71
3	Transition from quasistatic to ferromagnetic resonance regime in giant magnetoimpedance. Journal of Applied Physics, 2006, 99, 103904.	1.1	57
4	Thin-film magneto-impedance structures with very large sensitivity. Journal of Magnetism and Magnetic Materials, 2016, 400, 321-326.	1.0	56
5	GMI detection of magnetic-particle concentration in continuous flow. Sensors and Actuators A: Physical, 2011, 172, 103-108.	2.0	53
6	Motor current signature analysis for gearbox condition monitoring under transient speeds using wavelet analysis and dual-level time synchronous averaging. Mechanical Systems and Signal Processing, 2017, 94, 73-84.	4.4	51
7	Sensor Applications of Soft Magnetic Materials Based on Magneto-Impedance, Magneto-Elastic Resonance and Magneto-Electricity. Sensors, 2014, 14, 7602-7624.	2.1	49
8	Analysis of magnetoimpedance measurements at high frequency using a microstrip transmission line. Sensors and Actuators A: Physical, 2004, 115, 368-375.	2.0	48
9	FeNi-based magnetoimpedance multilayers: Tailoring of the softness by magnetic spacers. Applied Physics Letters, 2012, 100, .	1.5	47
10	Configuration of the magnetosome chain: a natural magnetic nanoarchitecture. Nanoscale, 2018, 10, 7407-7419.	2.8	47
11	Neural network-based micropositioning control of smart shape memory alloy actuators. Engineering Applications of Artificial Intelligence, 2008, 21, 796-804.	4.3	43
12	Influence of magnetization processes and device geometry on the GMI effect. IEEE Transactions on Magnetics, 2002, 38, 3051-3056.	1.2	42
13	Advantages of nonlinear giant magnetoimpedance for sensor applications. Sensors and Actuators A: Physical, 2003, 106, 234-239.	2.0	42
14	Giant magnetoimpedance in CoP electrodeposited microtubes. Journal of Materials Research, 2000, 15, 751-755.	1.2	41
15	Tailoring the magnetic anisotropy of thin film permalloy microstrips by combined shape and induced anisotropies. European Physical Journal B, 2013, 86, 1.	0.6	41
16	Flexible thin film magnetoimpedance sensors. Journal of Magnetism and Magnetic Materials, 2016, 415, 91-96.	1.0	41
17	Very large magnetoimpedance (MI) in FeNi/Au multilayer film systems. Sensors and Actuators A: Physical, 2006, 129, 256-259.	2.0	40
18	Magnetotactic bacteria for cancer therapy. Journal of Applied Physics, 2020, 128, .	1.1	37

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19	Local structure and ferromagnetic character of Fe-B and Fe-P amorphous alloys. Physical Review B, 2000, 62, 5746-5750.	1.1	36
20	Giant magnetoimpedance strip and coil sensors. Sensors and Actuators A: Physical, 2001, 91, 116-119.	2.0	36
21	Preparation and characterisation of Cuâ€“Co heterogeneous alloys by potentiostatic electrodeposition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 335, 94-100.	2.6	36
22	Magnetoimpedance of sandwiched films: experimental results and numerical calculations. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 291-293.	1.0	36
23	Microstructural and magnetic evolution upon annealing of giant magnetoresistance melt-spun Co-Cu granular alloys. Physical Review B, 2003, 67, .	1.1	35
24	Nanostructured giant magneto-impedance multilayers deposited onto flexible substrates for low pressure sensing. Nanoscale Research Letters, 2012, 7, 230.	3.1	34
25	High-yield fabrication of 60 nm Permalloy nanodiscs in well-defined magnetic vortex state for biomedical applications. Nanotechnology, 2016, 27, 175302.	1.3	34
26	Anisotropy field distribution in amorphous ferromagnetic alloys from second harmonic response. Journal of Applied Physics, 1992, 71, 3047-3049.	1.1	32
27	FeNi-based magnetic layered nanostructures: Magnetic properties and giant magnetoimpedance. Journal of Applied Physics, 2010, 107, .	1.1	32
28	Disk-shaped magnetic particles for cancer therapy. Applied Physics Reviews, 2020, 7, .	5.5	32
29	Magnetic Properties and Giant Magnetoimpedance of FeNi-Based Nanostructured Multilayers With Variable Thickness of the Central Cu Lead. IEEE Transactions on Magnetics, 2011, 47, 3328-3331.	1.2	31
30	Ferromagnetic shape memory alloy actuator enabled for nanometric position control using hysteresis compensation. Sensors and Actuators A: Physical, 2012, 182, 122-129.	2.0	30
31	Influence of induced anisotropy on magneto-impedance in Co-rich metallic glasses. Journal of Magnetism and Magnetic Materials, 1996, 157-158, 141-142.	1.0	29
32	Nanostructured Magnetoimpedance Multilayers. IEEE Transactions on Magnetics, 2012, 48, 1375-1380.	1.2	29
33	Magnetization reversal in circular vortex dots of small radius. Nanoscale, 2017, 9, 11269-11278.	2.8	29
34	Correlation between structure and magnetic behavior of Fe-P amorphous alloys. Physical Review B, 1995, 52, 12805-12812.	1.1	25
35	High Performance Magnetoimpedance in FeNi/Ti Nanostructured Multilayers with Opened Magnetic Flux. Journal of Nanoscience and Nanotechnology, 2012, 12, 7496-7500.	0.9	24
36	GMI in Nanostructured FeNi/Ti Multilayers With Different Thicknesses of the Magnetic Layers. IEEE Transactions on Magnetics, 2013, 49, 18-21.	1.2	24

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37	Magnetic Study of Co-Doped Magnetosome Chains. Journal of Physical Chemistry C, 2018, 122, 7541-7550.	1.5	24
38	Magnetic Nanoparticles, Synthesis, Properties, and Applications. , 2018, , 1-40.		23
39	Sensorless Control of SMA-based Actuators Using Neural Networks. Journal of Intelligent Material Systems and Structures, 2010, 21, 1809-1818.	1.4	22
40	Magnetoâ€elasticity in amorphous ferromagnets: Basic principles and applications. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 2258-2264.	0.8	21
41	Magnetoimpedance of thin film meander with composite coating layer containing Ni nanoparticles. Journal of Applied Physics, 2014, 115, .	1.1	21
42	Differences in the Magneto-Impedance of FeNi/Cu/FeNi Multilayers With Open and Closed Magnetic Path. IEEE Transactions on Magnetics, 2010, 46, 658-661.	1.2	20
43	Finite element method calculations of GMI in thin films and sandwiched structures: Size and edge effects. Journal of Magnetism and Magnetic Materials, 2008, 320, e4-e7.	1.0	19
44	Ferromagnetic shape memory alloys for positioning with nanometric resolution. Applied Physics Letters, 2009, 95, .	1.5	19
45	Equivalent Magnetic Noise of Micro-Patterned Multilayer Thin Films Based GMI Microsensor. IEEE Sensors Journal, 2015, 15, 6707-6714.	2.4	19
46	Structural evolution of Co clusters in Co15Cu85 granular alloys by EXAFS spectroscopy. Journal of Magnetism and Magnetic Materials, 2000, 221, 80-86.	1.0	18
47	Magnetoimpedance in narrow NiFe/Au/NiFe multilayer film systems. IEEE Transactions on Magnetics, 2005, 41, 3697-3699.	1.2	18
48	Comparative study of magnetic and magnetoimpedance properties of CoFeSiB-based amorphous ribbons of the same geometry with Mo or W additions. Journal of Alloys and Compounds, 2017, 693, 767-776.	2.8	18
49	High-frequency magnetoimpedance in multilayer thin films with longitudinal and transverse anisotropy. Journal of Magnetism and Magnetic Materials, 2008, 320, e954-e957.	1.0	17
50	Selectable temperature sensitivity of the magnetoelastic resonance. Sensors and Actuators A: Physical, 2003, 106, 111-116.	2.0	16
51	Exchange biased FeNi/FeMn bilayers with coercivity and switching field enhanced by FeMn surface oxidation. AIP Advances, 2013, 3, .	0.6	16
52	Thin-Film Magnetoimpedance Structures Onto Flexible Substrates as Deformation Sensors. IEEE Transactions on Magnetics, 2017, 53, 1-5.	1.2	16
53	Experimental and theoretical correlation between low-field power absorption and magnetoimpedance in amorphous materials. Journal of Non-Crystalline Solids, 2007, 353, 902-904.	1.5	15
54	Magnetoelastic Viscosity Sensor for On-Line Status Assessment of Lubricant Oils. IEEE Transactions on Magnetics, 2013, 49, 113-116.	1.2	15

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55	Half-hedgehog spin textures in sub-100 nm soft magnetic nanodots. Nanoscale, 2020, 12, 18646-18653.	2.8	15
56	Elucidating the role of shape anisotropy in faceted magnetic nanoparticles using biogenic magnetosomes as a model. Nanoscale, 2020, 12, 16081-16090.	2.8	15
57	Preparation of Feî—¸Coî—¸P amorphous alloys by electrodeposition. Journal of Non-Crystalline Solids, 1996, 201, 102-109.	1.5	14
58	Direct experimental evidence of an anomalous Co segregation in Co-Cu granular alloys and its influence on magnetoresistance. Europhysics Letters, 2002, 59, 855-861.	0.7	14
59	High-Frequency Magnetoimpedance Response of Thin-Film Microstructures Using Coplanar Waveguides. IEEE Transactions on Magnetics, 2015, 51, 1-4.	1.2	14
60	Comparison of magnetoelastic resonance and vibrating reed measurements of the large Î”E effect in amorphous alloys. Journal of Magnetism and Magnetic Materials, 1995, 140-144, 273-274.	1.0	13
61	Comparative study of the structure and magnetic properties of Co-P and Fe-P amorphous alloys. Physical Review B, 2000, 61, 6238-6245.	1.1	13
62	Domain wall permeability limit for the giant magnetoimpedance effect. Journal of Applied Physics, 2002, 91, 7451.	1.1	13
63	Pulsed-mode operation and performance of a ferromagnetic shape memory alloy actuator. Smart Materials and Structures, 2014, 23, 025023.	1.8	13
64	Medium-range order as an intrinsic property of Co-rich amorphous alloys. Europhysics Letters, 1997, 40, 43-48.	0.7	12
65	Multilayer Magnetoimpedance Sensor for Nondestructive Testing. Sensor Letters, 2009, 7, 374-377.	0.4	12
66	Low field magnetoimpedance in the GHz range. Sensors and Actuators A: Physical, 2008, 142, 485-490.	2.0	11
67	Micropositioning using shape memory alloy actuators. European Physical Journal: Special Topics, 2008, 158, 231-236.	1.2	11
68	Î”E effect and anisotropy distribution in metallic glasses with oblique easy axis induced by field annealing. Journal of Magnetism and Magnetic Materials, 1996, 157-158, 543-544.	1.0	10
69	Experimental evidence of ferromagnetic resonance in magnetoimpedance measurements. IEEE Transactions on Magnetics, 2005, 41, 3649-3651.	1.2	10
70	Longitudinal and Transverse Magnetoimpedance in FeNi/Cu/FeNi Multilayers With Longitudinal and Transverse Anisotropy. IEEE Transactions on Magnetics, 2008, 44, 3863-3866.	1.2	10
71	Comparative study of magnetic, microwave properties and giant magnetoimpedance of FeNi-based multilayers with different structure. Journal of Alloys and Compounds, 2014, 615, S296-S299.	2.8	10
72	Broadband ferromagnetic resonance measurements in thin-film structures for magnetoimpedance sensors. Measurement: Journal of the International Measurement Confederation, 2018, 126, 215-222.	2.5	10

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73	Real Time Monitoring of Calcium Oxalate Precipitation Reaction by Using Corrosion Resistant Magnetoelastic Resonance Sensors. Sensors, 2020, 20, 2802.	2.1	10
74	Non-linear magnetoimpedance in amorphous ribbons: Large asymmetries and angular dependence. Sensors and Actuators A: Physical, 2006, 129, 275-278.	2.0	9
75	Determination of the intrinsic high-frequency magnetoimpedance spectra of multilayer systems. Journal of Applied Physics, 2006, 99, 08C507.	1.1	9
76	Comparison of Micro-Fabrication Routes for Magneto-Impedance Elements: Lift-Off and Wet-Etching. IEEE Transactions on Magnetics, 2012, 48, 1601-1604.	1.2	9
77	Damping of Magnetoelastic Resonance for Oil Viscosity Sensing. IEEE Transactions on Magnetics, 2019, 55, 1-5.	1.2	9
78	The Performance of the Magneto-Impedance Effect for the Detection of Superparamagnetic Particles. Sensors, 2020, 20, 1961.	2.1	9
79	Comparative study of alternative circuit configurations for inductive sensors. Sensors and Actuators A: Physical, 2001, 91, 226-229.	2.0	8
80	Improved Determination of Q Quality Factor and Resonance Frequency in Sensors Based on the Magnetoelastic Resonance Through the Fitting to Analytical Expressions. Materials, 2020, 13, 4708.	1.3	8
81	Ferromagnetic Shape Memory Alloy Actuator for Micro- and Nano-Positioning. Sensor Letters, 2009, 7, 348-350.	0.4	8
82	Magnetoelastic behaviour of stress-annealed Co73.5Fe1.5Si15B10 amorphous ribbon. Journal of Magnetism and Magnetic Materials, 1992, 104-107, 107-108.	1.0	7
83	Structure and magnetic properties of Feî—¸Coî—¸P amorphous alloys. Journal of Magnetism and Magnetic Materials, 1999, 196-197, 164-165.	1.0	7
84	Influence of the preparation method on the properties of Cuâ€“Co heterogeneous alloys. Journal of Non-Crystalline Solids, 2001, 287, 26-30.	1.5	7
85	Frequency dependence of the ferromagnetic resonance width in magneto-impedance measurements. Journal of Magnetism and Magnetic Materials, 2008, 320, 2513-2516.	1.0	7
86	Angular dependence of microwave absorption in multilayer films. Journal of Non-Crystalline Solids, 2008, 354, 5195-5197.	1.5	7
87	Micropositioning control of smart shapeâ€memory alloyâ€based actuators. Assembly Automation, 2009, 29, 272-278.	1.0	7
88	Preface [Selected Papers from the 9th European Magnetic Sensors and Actuators Conference (EMSA) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.2	7
89	The magnetoelastic properties of as-quenched and annealed Fe73.5â^'xAlxSi13.5B9Cu1Mo3 (x=0,2,4,6) alloys. Journal of Non-Crystalline Solids, 2001, 287, 428-431.	1.5	6
90	Magnetoimpedance simulations in wires and tubes. Journal of Magnetism and Magnetic Materials, 2002, 249, 319-323.	1.0	6

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91	Simplified electronic interfaces for sensors based on inductance changes. Sensors and Actuators A: Physical, 2004, 112, 302-307.	2.0	6
92	Magnetostrictive delay line improvement for long range position detection. Sensors and Actuators A: Physical, 2006, 129, 138-141.	2.0	6
93	Ferromagnetic resonance in gigahertz magneto-impedance of multilayer systems. Journal of Magnetism and Magnetic Materials, 2006, 304, 218-221.	1.0	6
94	FeNi-Based Film Nanostructures for High Frequency Applications: Design and Characterization. Solid State Phenomena, 2010, 168-169, 257-260.	0.3	6
95	Low Field Sensitivity for Gigahertz Magneto-Impedance Sensors. Sensor Letters, 2007, 5, 73-76.	0.4	6
96	Magnetic anisotropy distribution in transverse and obliquely field annealed amorphous ribbons. Journal of Magnetism and Magnetic Materials, 1994, 133, 46-48.	1.0	5
97	Correlation among the structural and magnetic properties of CoCu granular alloys. Journal of Applied Physics, 2002, 91, 8596.	1.1	5
98	Impedance matching networks for power transfer and sensitivity enhancement in GMI sensors. IEEE Transactions on Magnetics, 2005, 41, 3655-3657.	1.2	5
99	Transverse magnetization and giant magnetoimpedance in amorphous ribbons. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 1081-1084.	1.0	5
100	FEM simulation of the Nitinol wire. European Physical Journal: Special Topics, 2008, 158, 39-44.	1.2	5
101	Domain structure, magnetic properties, and giant magnetoimpedance of FeNi/Tiâ€based multilayers. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 2269-2272.	0.8	5
102	Tailoring the Exchange Bias in FeNi/FeMn Bilayers by Heat Treatment and FeMn Surface Oxidation. IEEE Transactions on Magnetics, 2014, 50, 1-4.	1.2	5
103	Co/Cu/Co Pseudo Spin-Valve System Prepared by Magnetron Sputtering with Different Argon Pressure. Key Engineering Materials, 0, 644, 211-214.	0.4	5
104	Thin-Film Magneto-Impedance Sensors. , 2017, , .		5
105	Evolution of the magnetic anisotropy distribution of Co-P amorphous alloys during crystallization. Journal of Magnetism and Magnetic Materials, 1994, 131, 129-134.	1.0	4
106	EXAFS study of compositional dependence of short range order in amorphous FeP electrodeposited alloys. Physica B: Condensed Matter, 1995, 208-209, 363-364.	1.3	4
107	Synthesis and characterisation of electrodeposited Cu90Co10 thin film. Journal of Magnetism and Magnetic Materials, 2003, 254-255, 85-87.	1.0	4
108	FEM analysis of an eddy current water flow meter. Journal of Magnetism and Magnetic Materials, 2006, 304, e838-e840.	1.0	4

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109	Nano-Positioning with Ferromagnetic Shape Memory Alloy Actuators. Materials Science Forum, 0, 635, 201-205.	0.3	4
110	Determination of the distribution of transverse magnetic anisotropy in thin films from the second harmonic of Kerr signal. Applied Physics Letters, 2013, 103, 142411.	1.5	4
111	Surfactant-assisted production of TbCu2 nanoparticles. Journal of Nanoparticle Research, 2017, 19, 1.	0.8	4
112	Magnetoelastic Resonance Detection of Calcium Oxalate Precipitation in Low Concentration Solutions. IEEE Transactions on Magnetics, 2022, 58, 1-5.	1.2	4
113	Micropositioning Control Using Shape Memory Alloys. , 2006, , .		4
114	Magnetic Anisotropy of Individual Nanomagnets Embedded in Biological Systems Determined by Axi-asymmetric X-ray Transmission Microscopy. ACS Nano, 2022, 16, 7398-7408.	7.3	4
115	On the origin of the nonlinear and chaotic behavior of the magnetoelastic resonance. Journal of Applied Physics, 1997, 81, 5686-5688.	1.1	3
116	Two phase magnetic wire obtained by high frequency current annealing. IEEE Transactions on Magnetics, 1997, 33, 3343-3345.	1.2	3
117	Magnetic study of electrodeposited Cuî—¸Co heterogeneous alloys. Journal of Magnetism and Magnetic Materials, 1999, 196-197, 53-55.	1.0	3
118	Different ferromagnetic character of Fe in FeB and FeP amorphous alloys. Journal of Magnetism and Magnetic Materials, 1999, 196-197, 204-206.	1.0	3
119	Magnetoelastic coupling constant of amorphous ferromagnetic alloys-A critical study. IEEE Transactions on Magnetics, 2000, 36, 3241-3243.	1.2	3
120	Study of the magnetic anisotropy induced in CoFeSiB amorphous ribbons by solidification in a magnetic field using giant magnetoimpedance measurements. Physica B: Condensed Matter, 2004, 354, 183-186.	1.3	3
121	Interface electronics for an RF resonance-based displacement sensor. Journal of Physics: Conference Series, 2013, 450, 012017.	0.3	3
122	Innovative On-Line Oil Sensor Technologies for the Condition Monitoring of Wind Turbines. Key Engineering Materials, 0, 644, 53-56.	0.4	3
123	Study of the influence of sensor permeability in the detection of a single magnetotactic bacterium. Journal of Magnetism and Magnetic Materials, 2020, 500, 166346.	1.0	3
124	Joule heating nanocrystallization of FeZrCuB glass studied by neutron diffraction. Physica B: Condensed Matter, 2000, 276-278, 461-462.	1.3	2
125	Influence of metalloids on the XANES spectra of metallic glasses. Journal of Non-Crystalline Solids, 2001, 287, 60-64.	1.5	2
126	Observation of the segregation and the dissolution of the Co and the Cu in CoCu metastable alloys. Journal of Synchrotron Radiation, 2001, 8, 883-885.	1.0	2

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127	Energy-saving control strategies for a ferromagnetic shape memory alloy based actuator. Sensors and Actuators A: Physical, 2016, 249, 112-121.	2.0	2
128	Evaluation of a Thin Film Giant Magneto-Impedance Electronic Compass. Sensor Letters, 2013, 11, 36-39.	0.4	2
129	A Special Issueâ€"The European Magnetic Sensor and Actuator Conference (EMSA 2006). Sensor Letters, 2007, 5, 1-1.	0.4	2
130	Differential anomalous scattering on Fe-Co-based metallic glasses. Journal of Physics Condensed Matter, 1999, 11, 10199-10210.	0.7	1
131	GMI magnetic-particle concentration detection in continuous flow. Procedia Engineering, 2010, 5, 1324-1327.	1.2	1
132	A Novel Micro- and Nano-Scale Positioning Sensor Based on Radio Frequency Resonant Cavities. Sensors, 2014, 14, 9615-9627.	2.1	1
133	Reluctance Sensor for Penetration Depth Control in Friction Stir Welding. Sensor Letters, 2013, 11, 62-65.	0.4	1
134	Observation of a Strong Short Range Order in Co Rich Amorphous Alloys Prepared by Different Methods. European Physical Journal Special Topics, 1997, 7, C2-995-C2-996.	0.2	1
135	Magnetization evolution during thermal treatments of CoCu metastable alloys. Journal of Non-Crystalline Solids, 2001, 287, 282-285.	1.5	0
136	In situ observation of the structural changes induced by thermal annealing on melt-spun Co15Cu85 granular alloys. Journal of Magnetism and Magnetic Materials, 2003, 254-255, 82-84.	1.0	0
137	Micropositioning control using shape memory alloys. , 2006, , .		0
138	Magnetoelastic Viscosity Sensor for Lubricant Oil Condition Monitoring. Key Engineering Materials, 0, 495, 71-74.	0.4	0
139	Design of a new FSMA-based actuator for nanopositioning applications. Proceedings of SPIE, 2012, , .	0.8	0
140	Electronic interface for position sensing using resonant cavities. , 2013, , .		0
141	Equivalent magnetic noise of thin film based giant magneto-impedance microsensors. , 2014, , .		0
142	350% Magneto-impedance ratio in thin-film structures. , 2015, , .		0
143	Magnetoimpedance in Samples With Patterned Surfaces for the Detection of Magnetic Particles and Ferrofluids. IEEE Transactions on Magnetics, 2017, 53, 1-6.	1.2	0
144	Magnetoimpedance in samples with patterned surfaces for the detection of ferrofluids. , 2017, , .		0

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145	Giant Magneto-Impedance Measurements at High Frequency in Planar Samples. Transactions of the Magnetics Society of Japan, 2005, 5, 152-156.	0.5	0
146	Influence of the Structure in Magnetic Properties in Co-P Electrodeposited Amorphous Alloys. European Physical Journal Special Topics, 1997, 7, C2-997-C2-998.	0.2	0
147	Correction to â€œMagnetic Study of Co-Doped Magnetosome Chainsâ€. Journal of Physical Chemistry C, 0, , .	1.5	0