Javier S Blzquez

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130 papers	4,204 citations	24 h-index	62 g-index
132 ext. papers	4,784 ext. citations	4.1 avg, IF	5.58 L-index

#	Paper	IF	Citations
130	The Magnetocaloric Effect and Magnetic Refrigeration Near Room Temperature: Materials and Models. *Annual Review of Materials Research*, **2012**, 42, 305-342	12.8	753
129	Field dependence of the magnetocaloric effect in materials with a second order phase transition: A master curve for the magnetic entropy change. *Applied Physics Letters*, **2006**, 89, 222512	3.4	715
128	Magnetocaloric effect: From materials research to refrigeration devices. *Progress in Materials Science*, **2018**, 93, 112-232	42.2	592
127	A universal curve for the magnetocaloric effect: an analysis based on scaling relations. *Journal of Physics Condensed Matter*, **2008**, 20, 285207	1.8	240
126	A constant magnetocaloric response in FeMoCuB amorphous alloys with different Fe/B ratios. *Journal of Applied Physics*, **2007**, 101, 093903	2.5	106
125	A Finemet-type alloy as a low-cost candidate for high-temperature magnetic refrigeration. *Applied Physics Letters*, **2006**, 88, 042505	3.4	101
124	Non-isothermal approach to isokinetic crystallization processes: Application to the nanocrystallization of HITPERM alloys. *Acta Materialia*, **2005**, 53, 2305-2311	8.4	97
123	The influence of Co addition on the magnetocaloric effect of Nanoperm-type amorphous alloys. *Journal of Applied Physics*, **2006**, 100, 064307	2.5	95
122	The magnetocaloric effect in soft magnetic amorphous alloys. *Journal of Applied Physics*, **2007**, 101, 09C503	2.5	82
121	Influence of Ge addition on the magnetocaloric effect of a Co-containing Nanoperm-type alloy. *Journal of Applied Physics*, **2008**, 103, 07B316	2.5	72
120	Enhancement of the magnetocaloric effect in composites: Experimental validation. *Solid State Communications*, **2012**, 152, 1590-1594	1.6	51
119	Crystallisation process in (FeCo)78Nb6(BCu)16 alloys. *Journal of Non-Crystalline Solids*, **2001**, 287, 187-192	3.9	47
118	Structural ordering and magnetic properties of arc-melted FeGa alloys. *Intermetallics*, **2007**, 15, 193-200	3.5	43
117	Magnetocaloric response of Fe75Nb10B15 powders partially amorphized by ball milling. *Journal of Applied Physics*, **2009**, 105, 123922	2.5	38
116	Partitioning of Co during crystallisation of Fe□CoNbB(□u) amorphous alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2003**, 353, 158-163	5.3	36
115	The influence of Cu addition on the crystallization and magnetic properties of FeCoNbB alloys. *Journal of Physics Condensed Matter*, **2002**, 14, 11717-11727	1.8	36
114	Microstructure and magnetic properties of Fe78□CoxNb6B15Cu1 (x=18, 39, 60) alloys. *Journal of Magnetism and Magnetic Materials*, **2003**, 254-255, 460-462	2.8	32

113	Thermomagnetic detection of recrystallization in FeCoNbBCu nanocrystalline alloys. *Applied Physics Letters*, **2001**, 79, 2898-2900	3.4	31
112	Mössbauer study of FeCoNbBCu hitperm-type alloys. *Applied Physics Letters*, **2002**, 81, 1612-1614	3.4	30
111	Ball milling as a way to produce magnetic and magnetocaloric materials: a review. *Journal of Materials Science*, **2017**, 52, 11834-11850	4.3	29
110	Kinetics of nanocrystallization in FeCoNbB(Cu) alloys. *Applied Physics A: Materials Science and Processing*, **2003**, 76, 571-575	2.6	29
109	Influence of Co addition on the magnetic properties and magnetocaloric effect of Nanoperm (Fe1−xCox)75Nb10B15 type alloys prepared by mechanical alloying. *Journal of Alloys and Compounds*, **2010**, 496, 7-12	5.7	26
108	Influence of the demagnetizing factor on the magnetocaloric effect: Critical scaling and numerical simulations. *Applied Physics Letters*, **2014**, 104, 252405	3.4	25
107	Microstructural evolution characterization of FeNbB ternary systems processed by ball milling. *Philosophical Magazine*, **2009**, 89, 1415-1423	1.6	25
106	Gd+GdZn biphasic magnetic composites synthesized in a single preparation step: Increasing refrigerant capacity without decreasing magnetic entropy change. *Journal of Alloys and Compounds*, **2016**, 675, 244-247	5.7	22
105	Magnetocaloric effect of Co62Nb6Zr2B30 amorphous alloys obtained by mechanical alloying or rapid quenching. *Journal of Applied Physics*, **2014**, 115, 17A302	2.5	22
104	An equivalent time approach for scaling the mechanical alloying processes. *Intermetallics*, **2008**, 16, 470-478	3.5	22
103	On the effects of partial substitution of Co for Fe in FINEMET and Nb-containing HITPERM alloys. *Journal of Physics Condensed Matter*, **2003**, 15, 3957-3968	1.8	22
102	Partial substitution of Co and Ge for Fe and B in Fe-Zr-B-Cu alloys: microstructure and soft magnetic applicability at high temperature. *Acta Materialia*, **2005**, 53, 1241-1251	8.4	22
101	Study of phases evolution in high-coercive MnAl powders obtained through short milling time of gas-atomized particles. *Journal of Alloys and Compounds*, **2017**, 712, 373-378	5.7	21
100	Mechanical alloying of Fe100−x−yNbxBy (x=5, 10; y=10, 15): From pure powder mixture to amorphous phase. *Intermetallics*, **2008**, 16, 1073-1082	3.5	21
99	Enthalpy and Curie temperature relaxation effects in FeSiBCuNb alloys prepared at different quenching rates. *Materials Letters*, **2000**, 45, 246-250	3.3	21
98	Soft magnetic properties of high-temperature nanocrystalline alloys: Permeability and magnetoimpedance. *Journal of Applied Physics*, **2003**, 93, 2172-2177	2.5	20
97	Magnetic and structural characterization of Mo-Hitperm alloys with different Fe/Co ratio. *Journal of Alloys and Compounds*, **2011**, 509, 1994-2000	5.7	18
96	Instantaneous growth approximation describing the nanocrystallization process of amorphous alloys: A cellular automata model. *Journal of Non-Crystalline Solids*, **2008**, 354, 3597-3605	3.9	18

95	Analysis of magnetocaloric effect of ball milled amorphous alloys: Demagnetizing factor and Curie temperature distribution. *Journal of Alloys and Compounds*, **2015**, 622, 606-609	5.7	17
94	Extension of the classical theory of crystallization to non-isothermal regimes: Application to nanocrystallization processes. *Journal of Alloys and Compounds*, **2012**, 544, 73-81	5.7	17
93	Amorphization and evolution of magnetic properties during mechanical alloying of Co62Nb6Zr2B30: Dependence on starting boron microstructure. *Journal of Alloys and Compounds*, **2014**, 585, 485-490	5.7	16
92	The evolution of magnetostriction and coercivity with temperature in the early stages of nanocrystallisation in FeCoNbB(Cu) alloys. *Journal of Magnetism and Magnetic Materials*, **2002**, 250, 260-266	2.8	16
91	Effect of substitution of rare earth by mischmetal on the devitrification process of AlXNiCo (X=Y, Ce, Mm) alloys. *Journal of Non-Crystalline Solids*, **2005**, 351, 158-166	3.9	15
90	A study of the fcc (FeCo) 23 B 6 phase in fully crystallized Fe-Co-Nb-B-Cu alloys. *Philosophical Magazine Letters*, **2002**, 82, 409-417	1	15
89	Effect of Fe impurities on the field dependence of magnetocaloric response in LaFe11.5Si1.5. *Journal of Alloys and Compounds*, **2015**, 646, 101-105	5.7	14
88	Supersaturated solid solution obtained by mechanical alloying of 75% Fe, 20% Ge and 5% Nb mixture at different milling intensities. *Journal of Alloys and Compounds*, **2009**, 469, 169-178	5.7	14
87	Role of starting phase of boron on the mechanical alloying of FeNbB composition. *Journal of Alloys and Compounds*, **2013**, 553, 119-124	5.7	13
86	Mechanochemistry of copper sulphides: phase interchanges during milling. *Journal of Materials Science*, **2017**, 52, 11947-11961	4.3	12
85	Magnetocaloric response of amorphous and nanocrystalline Cr-containing Vitroperm-type alloys. *Journal of Magnetism and Magnetic Materials*, **2016**, 409, 56-61	2.8	12
84	Microstructure and magnetic properties of FeMoBCu alloys: Influence of B content. *Acta Materialia*, **2007**, 55, 5675-5683	8.4	12
83	On the isothermal kinetics analysis of transformations in metastable systems: combined use of isothermal and non-isothermal calorimetry. *Philosophical Magazine*, **2007**, 87, 4151-4167	1.6	12
82	Grinding and particle size selection as a procedure to enhance the magnetocaloric response of La(Fe,Si)13 bulk samples. *Intermetallics*, **2017**, 84, 30-34	3.5	11
81	On the use of classical JMAK crystallization kinetic theory to describe simultaneous processes leading to the formation of different phases in metals. *International Journal of Thermal Sciences*, **2015**, 88, 1-6	4.1	11
80	Metastable Soft Magnetic Materials Produced by Mechanical Alloying: Analysis Using an Equivalent Time Approach. *Jom*, **2013**, 65, 870-882	2.1	11
79	Relationship between mechanical amorphization and boron integration during processing of FeNbB alloys. *Intermetallics*, **2014**, 49, 98-105	3.5	11
78	Correlation between microstructure and temperature dependence of magnetic properties in Fe60Co18(Nb,Zr)6B15Cu1 alloy series. *Journal of Applied Physics*, **2009**, 105, 093928	2.5	11

77	Magnetocaloric effect in Mn-containing Hitperm-type alloys. *Journal of Applied Physics*, **2007**, 102, 013908	2.5	11
76	Mössbauer study of a Fe-Zr-B-Cu-(Ge, Co) nanocrystalline alloy series. *Journal of Alloys and Compounds*, **2006**, 422, 32-39	5.7	11
75	Evolution of Fe environments and phase composition during mechanical amorphization of Fe70Zr30 and Fe70Nb30 alloys. *Journal of Non-Crystalline Solids*, **2018**, 494, 78-85	3.9	10
74	Enhancement of the magnetic refrigerant capacity in partially amorphous Fe70Zr30 powders obtained by mechanical alloying. *Intermetallics*, **2012**, 26, 52-56	3.5	10
73	Preferential Co partitioning to α-Fe in nanocrystalline CoFeNbB alloys by Mn addition. *Journal of Non-Crystalline Solids*, **2009**, 355, 109-113	3.9	10
72	Microstructure and mechanical properties of bulk nanocrystalline Al88Mm5Ni5Fe2 alloy consolidated at high pressure. *Intermetallics*, **2007**, 15, 891-900	3.5	10
71	Ball milling of Fe83Zr6B10Cu1 amorphous alloy containing quenched in crystals. *Intermetallics*, **2007**, 15, 1132-1138	3.5	10
70	Nanocrystalline Fe-Nb-(B,Ge) alloys from ball milling: Microstructure, thermal stability and magnetic properties. *Intermetallics*, **2007**, 15, 1351-1360	3.5	10
69	Ordering of FeCo nanocrystalline phase in FeCoNbBCu alloys. *Journal of Physics Condensed Matter*, **2003**, 15, 7843-7849	1.8	10
68	A New Method for Determining the Curie Temperature From Magnetocaloric Measurements. *IEEE Magnetics Letters*, **2016**, 7, 1-4	1.6	9
67	On the Use of JMAK Theory to Describe Mechanical Amorphization: A Comparison between Experiments, Numerical Solutions and Simulations. *Metals*, **2018**, 8, 450	2.3	9
66	Enhanced cryogenic magnetocaloric effect in Eu8Ga16Ge30 clathrate nanocrystals. *Journal of Applied Physics*, **2015**, 117, 033903	2.5	9
65	Mechanical amorphization of Fe75Nb10B15 powder: Microstructural and magnetic characterization. *Intermetallics*, **2010**, 18, 565-568	3.5	9
64	A direct extension of the Avrami equation to describe the non-isothermal crystallization of Al-base alloys. *Journal of Alloys and Compounds*, **2007**, 434-435, 187-189	5.7	9
63	Evolution of the hyperfine and magnetoelastic parameters in the course of crystallization process in niobium-free FINEMET-type alloy. *Journal of Magnetism and Magnetic Materials*, **2002**, 250, 83-91	2.8	9
62	A unified approach to describe the thermal and magnetic hysteresis in Heusler alloys. *Applied Physics Letters*, **2016**, 109, 122410	3.4	9
61	Influence of microstructure on the enhancement of soft magnetic character and the induced anisotropy of field annealed HITPERM-type alloys. *Journal of Applied Physics*, **2015**, 117, 17A301	2.5	8
60	Two milling time regimes in the evolution of magnetic anisotropy of mechanically alloyed soft magnetic powders. *Journal of Alloys and Compounds*, **2011**, 509, 1407-1410	5.7	8

59	Cellular automata simulations on nanocrystallization processes: From instantaneous growth approximation to limited growth. *Journal of Non-Crystalline Solids*, **2011**, 357, 2833-2839	3.9	8
58	Kinetic and microstructural studies on the devitrification of Fe60Co18MnxNb6B16 amorphous alloys. *Journal of Alloys and Compounds*, **2008**, 454, 156-163	5.7	8
57	A procedure to obtain the parameters of Curie temperature distribution from thermomagnetic and magnetocaloric data. *Journal of Non-Crystalline Solids*, **2019**, 520, 119460	3.9	7
56	Optimal temperature range for determining magnetocaloric magnitudes from heat capacity. *Journal Physics D: Applied Physics*, **2016**, 49, 495001	3	7
55	Correction of the shape effect on magnetic entropy change in ball milled Fe70Zr30 alloys. *Journal of Alloys and Compounds*, **2018**, 765, 437-443	5.7	7
54	A procedure to extract the magnetocaloric parameters of the single phases from experimental data of a multiphase system. *Applied Physics Letters*, **2014**, 105, 172405	3.4	7
53	Structure and magnetic properties of FeNbB amorphous/nanocrystalline alloys produced by compaction of mechanically alloyed powders. *Journal of Applied Physics*, **2010**, 107, 073901	2.5	7
52	Nanocrystallization kinetics under instantaneous growth approximation: Experiments and cellular automata simulations. *Physica Status Solidi (A) Applications and Materials Science*, **2010**, 207, 1148-1153	1.6	7
51	Nanocrystallization effects on the specific heat of FeCoNbB amorphous alloy. *Journal of Non-Crystalline Solids*, **2008**, 354, 5135-5137	3.9	7
50	Thermal and microstructural stability of the soft magnetic Fe60Co18Nb6B15Cu1 alloy. *Journal of Non-Crystalline Solids*, **2007**, 353, 872-874	3.9	7
49	Effect of partial substitution of Ge for B on the high temperature response of soft magnetic nanocrystalline alloys. *Journal of Alloys and Compounds*, **2005**, 395, 313-317	5.7	7
48	Influence of Cu addition on the magnetic and magnetotransport properties of HITPERM-type alloys. *Journal of Magnetism and Magnetic Materials*, **2003**, 262, 170-173	2.8	7
47	Anisotropy field distribution in soft magnetic Hitperm alloys submitted to different field annealing processes. *Journal of Alloys and Compounds*, **2016**, 658, 367-371	5.7	6
46	Nanocrystallization kinetics understood as multiple microprocesses following the classical theory of crystallization. *Journal of Alloys and Compounds*, **2016**, 675, 81-85	5.7	6
45	Analysis of the Magnetocaloric Effect in Powder Samples Obtained by Ball Milling. *Metallurgical and Materials Transactions E*, **2015**, 2, 131-138		6
44	Extracting the composition of nanocrystals of mechanically alloyed systems using Mössbauer spectroscopy. *Journal of Alloys and Compounds*, **2014**, 610, 92-99	5.7	6
43	Comparison of equivalent ball milling processes on Fe70Zr30 and Fe70Nb30. *Journal of Alloys and Compounds*, **2012**, 536, S9-S12	5.7	6
42	High temperature coercivity of Nb-containing HITPERM alloys: Effect of Cu addition. *Materials Letters*, **2008**, 62, 780-783	3.3	6

41	Effects of the heating rate on the microstructure and the thermal stability of FeCoNbB(Cu) nanocrystalline alloys. *Journal of Alloys and Compounds*, **2005**, 397, 173-178	5.7	6
40	Influence of hot compaction on microstructure and magnetic properties of mechanically alloyed Fe(Co)-based amorphous compositions. *Journal of Alloys and Compounds*, **2015**, 653, 546-551	5.7	5
39	Structural relaxation in Fe(Co)SiAlGaPCB amorphous alloys. *Journal of Alloys and Compounds*, **2014**, 584, 607-610	5.7	5
38	Milling effects on magnetic properties of melt spun Fe-Nb-B alloy. *Journal of Applied Physics*, **2014**, 115, 17B518	2.5	5
37	Nucleation rate and nanocrystallization of Co60(Fe, Mn)18Nb6B16 amorphous alloys in the frame of instantaneous growth approximation. *Journal of Alloys and Compounds*, **2010**, 505, 91-95	5.7	5
36	Detection of the onset of nanocrystallization by calorimetric and magnetic measurements. *Journal of Applied Physics*, **2005**, 97, 044308	2.5	5
35	Mössbauer and magnetoelastic investigations of the surface effects in Fe72Cu1.5Nb4Si13.5B9 nanocrystalline alloy. *Journal of Magnetism and Magnetic Materials*, **2004**, 272-276, 1443-1444	2.8	5
34	Crystallization kinetics and soft magnetic properties in metalloid-free (Fe, Co)90Zr10 amorphous and nanocrystalline alloys. *Journal of Alloys and Compounds*, **2014**, 615, S213-S216	5.7	4
33	Microstructural characterization by TEM techniques of mechanically alloyed FeNbGe powders. *Journal of Alloys and Compounds*, **2010**, 505, 86-90	5.7	4
32	Effects of high temperature treatments in air and argon on the magnetic properties of HITPERM alloys. *Journal of Magnetism and Magnetic Materials*, **2006**, 304, e627-e629	2.8	4
31	Influence of Mn and Cu addition on the hyperfine parameters of amorphous and nanocrystalline FeCoNbB alloys. *Journal of Alloys and Compounds*, **2004**, 370, 36-42	5.7	4
30	Crystallization Kinetics of Al-Mm-Ni-(Co,Fe) Alloys. *Solid State Phenomena*, **2005**, 101-102, 265-268	0.4	4
29	Milling effects on the distribution of Curie temperatures and magnetic properties of Ni-doped La0.7Ca0.3MnO3 compounds. *Journal of Alloys and Compounds*, **2020**, 848, 156566	5.7	4
28	Nanocrystallization Process of the Hitperm Fe-Co-Nb-B Alloys **2005**, 111-121		4
27	Time evolution of mechanical amorphization: A kinetic model. *Scripta Materialia*, **2017**, 130, 260-263	5.6	3
26	Effect of pressure on the phase stability and magnetostructural transitions in nickel-rich NiFeGa ribbons. *Journal of Alloys and Compounds*, **2020**, 844, 156092	5.7	3
25	Thermal and microstructural dependence of the initial permeability of Co60Fe18Nb6(B,Cu)16 alloys. *Journal of Alloys and Compounds*, **2007**, 431, 100-106	5.7	3
24	Mean magnetic moment of polydisperse superparamagnetic nanoparticles: correlation between grain size and magnetic moment distributions. *Journal of Nanoscience and Nanotechnology*, **2007**, 7, 1043-51	1.3	3

23	Effect of Co and Ge addition on soft magnetic properties of Fe₂ZrB₂Cu alloys. *Journal of Magnetism and Magnetic Materials*, **2005**, 290-291, 1589-1592	2.8	3
22	Mechanical Amorphization and Recrystallization of Mn-Co(Fe)-Ge(Si) Compositions. *Metals*, **2019**, 9, 534	2.3	2
21	Distribution of Transition Temperatures in Magnetic Transformations: Sources, Effects and Procedures to Extract Information from Experimental Data. *Metals*, **2020**, 10, 226	2.3	2
20	Study of the kinetics and products of the devitrification process of mechanically amorphized Fe70Zr30 alloy. *Journal of Alloys and Compounds*, **2020**, 825, 154021	5.7	2
19	Study of the Induced Anisotropy in Field Annealed Hitperm Alloys by Mössbauer Spectroscopy and Kerr Microscopy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2016**, 47, 4301-4305	2.3	2
18	The use of amorphous boron powder enhances mechanical alloying in soft magnetic FeNbB alloy: A magnetic study. *Journal of Applied Physics*, **2013**, 113, 17A330	2.5	2
17	Evolution of Fe environments in mechanically alloyed Fe₈₅Nb₅B₁₀ compositions. *Journal of Alloys and Compounds*, **2014**, 615, S555-S558	5.7	2
16	Analysis of the mechanically alloyed Fe85Nb5B10 powder using a non-unique lattice parameter. *Journal of Non-Crystalline Solids*, **2008**, 354, 5132-5134	3.9	2
15	Magnetic permeability of (FeCoGe)88Zr6B5Cu1 alloys: Thermal stability in a wide temperature range. *Journal of Applied Physics*, **2008**, 103, 07E721	2.5	2
14	Frequency dependence of the superparamagnetic transition in a Finemet-type nanocrystalline alloy. *Physica Status Solidi A*, **2004**, 201, 3314-3318		2
13	Kinetic Analysis of the Transformation from 14M Martensite to L21 Austenite in Ni-Fe-Ga Melt Spun Ribbons. *Metals*, **2021**, 11, 849	2.3	2
12	Combined kinetic and Bean–Rodbell approach for describing field-induced transitions in LaFe11.6Si1.4 alloys. *Journal Physics D: Applied Physics*, **2021**, 54, 135003	3	2
11	Obtaining magnetocaloric MnCo(Fe)Ge intermetallics from low temperature treatment of mechanically alloyed precursors. *Journal of Magnetism and Magnetic Materials*, **2020**, 514, 167127	2.8	1
10	Correction to "A procedure to obtain the parameters of curie temperature distribution from thermomagnetic and magnetocaloric data" [orginally published as J. non-cryst. solids 520, 119,460 (2019). *Journal of Non-Crystalline Solids*, **2020**, 538, 120047	3.9	1
9	Analysis of nanocrystallization kinetics and crystal size distribution under limited growth approach. *Journal of Alloys and Compounds*, **2012**, 536, S550-S553	5.7	1
8	Ball milling nanocrystallization of arc-melted and melt-spun Fe78Co5Nb3Zr3B5Ge5Cu1 alloy: microstructure and magnetic properties. *Philosophical Magazine*, **2006**, 86, 2271-2282	1.6	1
7	Influence of Milling Time on the Homogeneity and Magnetism of a FeZr Partially Amorphous Alloy: Distribution of Curie Temperatures. *Materials*, **2020**, 13,	3.5	1
6	Devitrification of Mechanically Alloyed Fe-Nb System: Mössbauer Study of the Intermetallic Phases. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2020**, 51, 1395-1401	2.3	1

5	Thermo-magnetic characterization of phase transitions in a Ni-Mn-In metamagnetic shape memory alloy. *Journal of Alloys and Compounds*, **2021**, 887, 161395	5.7	1
4	A Review of Different Models Derived from Classical Kolmogorov, Johnson and Mehl, and Avrami (KJMA) Theory to Recover Physical Meaning in Solid-State Transformations. *Physica Status Solidi (B): Basic Research*,2100524	1.3	1
3	Comparative study of structural and magnetic properties of ribbon and bulk Ni55Fe19Ga26 Heusler alloy. *Journal of Alloys and Compounds*, **2022**, 889, 161819	5.7	0
2	Specific heat measurements on amorphous and nanocrystalline Al88Y5Ni5Co2. *Journal of Alloys and Compounds*, **2009**, 478, 19-21	5.7	
1	Thermal stability of a supersaturated Fe-Ge-Nb solid solution produced by ball milling. *Journal of Physics: Conference Series*, **2010**, 217, 012083	0.3	