Antonio Faba

List of Publications by Year
in descending order

96	1,294	279798	414414
papers	citations	23	32
		h-index	g-index

96	96	96	452
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A General Vector Hysteresis Operator: Extension to the 3-D Case. IEEE Transactions on Magnetics, 2010, 46, 3990-4000.	2.1	125
2	Properties of Additively Manufactured Electric Steel Powder Cores with Increased Si Content. Materials, 2021, 14, 1489.	2.9	44
3	Numerical Modeling of Hysteresis in Si-Fe Steels. IEEE Transactions on Magnetics, 2014, 50, 329-332.	2.1	37
4	Computer Modeling of Nickel–Iron Alloy in Power Electronics Applications. IEEE Transactions on Industrial Electronics, 2017, 64, 2494-2501.	7.9	36
5	Surface field measurements in vector characterization of Si-Fe magnetic steel samples. International Journal of Applied Electromagnetics and Mechanics, 2014, 44, 331-338.	0.6	35
6	A Benchmark Problem of Vector Magnetic Hysteresis for Numerical Models. IEEE Transactions on Magnetics, 2014, 50, 1049-1052.	2.1	35
7	Properties of a class of vector hysteron models. Journal of Applied Physics, 2008, 103, .	2.5	34
8	Prediction and Control of Transformer Inrush Currents. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	34
9	A moving approach for the Vector Hysteron Model. Physica B: Condensed Matter, 2016, 486, 92-96.	2.7	33
10	A neural approach for the numerical modeling of two-dimensional magnetic hysteresis. Journal of Applied Physics, 2015, 117, 17D129.	2.5	32
11	Epstein frame: how and when it can be really representative about the magnetic behavior of laminated magnetic steels. IEEE Transactions on Magnetics, 2005, 41, 1516-1519.	2.1	31
12	Vector hysteresis measurements of not oriented grain SiFe steels by a biaxial hall sensors array. Physica B: Condensed Matter, 2014, 435, 34-39.	2.7	31
13	Energy and Losses in Vector Thermal Aftereffect Model. IEEE Transactions on Magnetics, 2013, 49, 1869-1872.	2.1	28
14	Numerical Implementation of the DPC Model. IEEE Transactions on Magnetics, 2009, 45, 1186-1189.	2.1	27
15	Analysis of a Unit Magnetic Particle Via the DPC Model. IEEE Transactions on Magnetics, 2009, 45, 5192-5195.	2.1	27
16	Theoretical Considerations of Magnetic Hysteresis and Transformer Inrush Current. IEEE Transactions on Magnetics, 2009, 45, 5247-5250.	2.1	27
17	Numerical two-dimensional modeling of grain oriented steel. Journal of Applied Physics, 2014, 115, 17A327.	2.5	27
18	An effective neural network approach to reproduce magnetic hysteresis in electrical steel under arbitrary excitation waveforms. Journal of Magnetism and Magnetic Materials, 2021, 528, 167735.	2.3	27

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19	Genetic algorithm identification of a H-moving vector hysteresis model. Physica B: Condensed Matter, 2014, 435, 11-15.	2.7	26
20	Mathematical Modelling of Magnetic Hysteresis in Exchange-Bias Spin Valves. IEEE Transactions on Magnetics, 2012, 48, 3367-3370.	2.1	25
21	A challenging hysteresis operator for the simulation of Goss-textured magnetic materials. Journal of Magnetism and Magnetic Materials, 2017, 432, 14-23.	2.3	25
22	Two-dimensional magnetic modeling of ferromagnetic materials by using a neural networks based hybrid approach. Physica B: Condensed Matter, 2016, 486, 106-110.	2.7	24
23	Vector hysteresis model identification for iron–silicon thin films from micromagnetic simulations. Physica B: Condensed Matter, 2016, 486, 97-100.	2.7	24
24	A Neural-FEM tool for the 2-D magnetic hysteresis modeling. Physica B: Condensed Matter, 2016, 486, 111-115.	2.7	23
25	Modelling of vector hysteresis at macromagnetic scale: Open questions and challenges. Physica B: Condensed Matter, 2016, 486, 130-137.	2.7	23
26	Robust Lightning Indirect Effect Protection in Avionic Diagnostics: Combining Inductive Blocking Devices With Metal Oxide Varistors. IEEE Transactions on Industrial Electronics, 2018, 65, 6457-6467.	7.9	22
27	Vector hysteresis measurements via a single disk tester. Physica B: Condensed Matter, 2006, 372, 143-146.	2.7	21
28	Magnetic nondestructive testing of rotor blade tips. Journal of Applied Physics, 2015, 117, 17A705.	2.5	20
29	A novel technique for online monitoring of photovoltaic devices degradation. Solar Energy, 2017, 158, 520-527.	6.1	20
30	Improved Spice Simulation of Dynamic Core Losses for Ferrites With Nonuniform Field and Its Experimental Validation. IEEE Transactions on Industrial Electronics, 2021, 68, 12069-12078.	7.9	20
31	Contact-Less Speed Probe Based on Eddy Currents. IEEE Transactions on Magnetics, 2013, 49, 3897-3900.	2.1	19
32	Modeling of hysteresis in magnetic multidomains. Physica B: Condensed Matter, 2014, 435, 62-65.	2.7	19
33	Image Reconstruction of Defects in Metallic Plates Using a Multifrequency Detector System and a Discrete Geometric Approach. IEEE Transactions on Magnetics, 2007, 43, 1857-1860.	2.1	15
34	Implementation of the Single Hysteron Model in a Finite-Element Scheme. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	15
35	Numerical modeling for the localization and the assessment of electromagnetic field sources. IEEE Transactions on Magnetics, 2003, 39, 1638-1641.	2.1	14
36	Numerical Identification Procedure for a Phenomenological Vector Hysteresis Model. IEEE Transactions on Magnetics, 2009, 45, 1166-1169.	2.1	14

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37	Magnetization dependent vector model and single domain nanostructures. Journal of Applied Physics, 2009, 105, .	2.5	13
38	Surface Testing the Crystal Grain Orientation by Lag Angle Plots. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	13
39	Magnetic losses in Si-Fe alloys for avionic applications. AIP Advances, 2017, 7, .	1.3	13
40	Pattern search approach to ferromagnetic material modelling. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2019, 32, e2271.	1.9	13
41	On the Analysis of the Dynamic Energy Losses in NGO Electrical Steels Under Non-Sinusoidal Polarization Waveforms. IEEE Transactions on Magnetics, 2020, 56, 1-15.	2.1	12
42	Protection From Indirect Lightning Effects for Power Converters in Avionic Environment: Modeling and Experimental Validation. IEEE Transactions on Industrial Electronics, 2021, 68, 7850-7862.	7.9	12
43	Experimental Verification of the Deletion and Congruency Properties in Si-Fe Magnetic Steels. IEEE Transactions on Magnetics, 2009, 45, 5243-5246.	2.1	11
44	In vivo mechanical and in vitro electromagnetic side-effects of a ruminal transponder in cattle1,2. Journal of Animal Science, 2006, 84, 3133-3142.	0.5	10
45	Nonferromagnetic Open Shields at Industrial Frequency Rate. IEEE Transactions on Magnetics, 2010, 46, 889-898.	2.1	10
46	Analysis methodologies and experimental benchmarks for eddy current testing. IEEE Transactions on Magnetics, 2005, 41, 1380-1383.	2.1	9
47	FEM time domain analysis for the detection of depth and thickness of cylindrical defects in metallic plates. IEEE Transactions on Magnetics, 2005, 41, 1616-1619.	2.1	9
48	Vector Hysteresis Model at Micromagnetic Scale. IEEE Transactions on Magnetics, 2006, 42, 3138-3140.	2.1	9
49	Reducing the Non-Linearities of a Spin-Torque Oscillator by Varying the Amplitude of the External Field Applied Along the In-Plane Hard-Axis. IEEE Transactions on Magnetics, 2010, 46, 1519-1522.	2.1	9
50	Numerical modeling of transformer inrush currents. Physica B: Condensed Matter, 2014, 435, 116-119.	2.7	9
51	Analytical formulation to estimate the dynamic energy loss in electrical steels: Effectiveness and limitations. Physica B: Condensed Matter, 2020, 579, 411899.	2.7	8
52	Numerical simulations of vector hysteresis processes via the Preisach model and the Energy Based Model: An application to Fe-Si laminated alloys. Journal of Magnetism and Magnetic Materials, 2021, 539, 168372.	2.3	8
53	Magnetic sensors for motion measurement of avionic ballscrews. AIP Advances, 2017, 7, 056639.	1.3	7
54	Modelling of dynamic losses in soft ferrite cores. Physica B: Condensed Matter, 2020, 579, 411811.	2.7	7

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55	FEM analysis of thin cracks in metallic plates. International Journal of Applied Electromagnetics and Mechanics, 2004, 19, 503-507.	0.6	6
56	Vector Hysteresis Processes for Innovative Fe-Si Magnetic Powder Cores: Experiments and Neural Network Modeling. Magnetochemistry, 2021, 7, 18.	2.4	5
57	Modeling of Vector Hysteresis in Si-Fe Magnetic Steels and Experimental Verification. IEEE Transactions on Magnetics, 2010, 46, 3465-3468.	2.1	4
58	In-Plane Magnetic Anisotropy Detection of Crystal Grain Orientation in Goss-Textured Ferromagnets. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	4
59	Modeling of Combined Metal Oxide Varistors and Ferrite Core Filters to Augment Avionic Safety During Lightning Transients. IEEE Transactions on Electromagnetic Compatibility, 2020, 62, 2012-2023.	2.2	4
60	An Overview of Non-Destructive Testing of Goss Texture in Grain-Oriented Magnetic Steels. Mathematics, 2021, 9, 1539.	2.2	4
61	Computing Frequency-Dependent Hysteresis Loops and Dynamic Energy Losses in Soft Magnetic Alloys via Artificial Neural Networks. Mathematics, 2022, 10, 2346.	2.2	4
62	Single sheet tester efficiency macromagnetic analysis. Journal of Applied Physics, 2005, 97, 10E103.	2.5	3
63	A moving approach to magnetic modeling of electrical steels in 2-d. International Journal of Applied Electromagnetics and Mechanics, 2015, 48, 263-270.	0.6	3
64	Performances prediction of inductive blocking devices for the mitigation of the lightning indirect effects. , 2016, , .		3
65	Moving vector hysteron model identification based on neural network inversion. , 2016, , .		3
66	Modeling of Inductive Blocking Devices for the Mitigation of Indirect Lightning Effects. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	3
67	Lightning indirect effect protection in Avionic Environment. , 2017, , .		3
68	Towards online evaluation of Goss-texture in grain-oriented ferromagnetic sheets. Journal of Magnetism and Magnetic Materials, 2019, 473, 136-143.	2.3	3
69	Experimental analysis of hysteresis in low frequency magnetic shields. Physica B: Condensed Matter, 2001, 306, 62-66.	2.7	2
70	An equipment for photovoltaic panels characterization based on a fully programmable DC-DC converter. , 2016, , .		2
71	Magnetic materials characterization by Tabu Search optimization. , 2017, , .		2
72	In-plane magnetic anisotropy detection for crystal grain orientation in Goss-textured ferromagnets. , 2017, , .		2

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73	Continuous Flock-of-Starlings Optimization for a general magnetic hysteresis model. International Journal of Applied Electromagnetics and Mechanics, 2017, 53, S229-S238.	0.6	2
74	Time domain modelling of soft ferrite inductors for power converters applications. , 2019, , .		2
75	Measurements of magnetic characteristics of laminated Fe-Si steel filter inductors in grid interface converters. Measurement: Journal of the International Measurement Confederation, 2022, 195, 111108.	5.0	2
76	Neural blind separation for electromagnetic source localization and assessment. , 0, , .		1
77	About the role of hysteresis in magnetic penetration at extremely low frequency. Physica B: Condensed Matter, 2004, 343, 153-158.	2.7	1
78	Penetrating Cracks Assessment in Metallic Plates. , 0, , .		1
79	Feasibility Studies for the Detection of Long Defects in Hot Rods. , 0, , .		1
80	Magnetic modelling for the texture analysis of Fe-Si alloys. , 2016, , .		1
81	Generalization of the vector hysteron model through the dependence of moving functions on frequency. , 2017, , .		1
82	Implementation of the Single Hysteron Model in a Finite Element Scheme. , 2017, , .		1
83	Image Reconstruction of Defects in Metallic Plates Using a Multi-Frequency Detector System and a Discrete Geometric Approach. , 0, , .		0
84	FEM Approach to the Numerical Simulation of Vector Hysteresis. , 0, , .		0
85	Vector Hysteresis Model at Micromagnetic Scale. , 2006, , .		0
86	Possible Extension of the Radial Vector Model for Magnetic Hysteresis. , 0, , .		0
87	Vector hysteresis modeling for anisotropic magnetic materials. , 2010, , .		0
88	Combined experimental and modeling analysis to study accommodation phenomenon. , 2010, , .		0
89	Micromagnetic simulations of linewidth and nonlinear frequency shift coefficient in spin-torque nanoscillators. , 2010, , .		0
90	Magnetic vortex chirality switching driven by a spin-polarized current. , 2010, , .		0

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91	Magnetic field exposure systems for the study of ELF effects. , 2012, , .		0
92	Numerical modelling of transformer inrush currents. , 2012, , .		0
93	Magnetic material modeling for the optimization of the electrical machine design. , 2014, , .		0
94	Materials characterization by Inverse Neural Network approach. , 2016, , .		0
95	Modeling of inductive blocking devices for the mitigation of indirect lightning effects. , 2016, , .		0
96	Optimal design of lightning pulse generators for the experimental study of indirect effects in avionic systems. International Journal of Applied Electromagnetics and Mechanics, 2018, 56, 123-131.	0.6	0