Antonio Faba

List of Publications by Year
in descending order

96 papers	1,294 citations	279798 23 h-index	414414 32 g-index
96 all docs	96 docs citations	96 times ranked	452 citing authors

#	Article	IF	Citations
1	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
2	Computing Frequency-Dependent Hysteresis Loops and Dynamic Energy Losses in Soft Magnetic Alloys via Artificial Neural Networks. Mathematics, 2022, 10, 2346.	2.2	4
3	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
4	Vector Hysteresis Processes for Innovative Fe-Si Magnetic Powder Cores: Experiments and Neural Network Modeling. Magnetochemistry, 2021, 7, 18.	2.4	5
5	Properties of Additively Manufactured Electric Steel Powder Cores with Increased Si Content. Materials, 2021, 14, 1489.	2.9	44
6	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
7	An Overview of Non-Destructive Testing of Goss Texture in Grain-Oriented Magnetic Steels. Mathematics, 2021, 9, 1539.	2.2	4
8	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
9	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
10	Modelling of dynamic losses in soft ferrite cores. Physica B: Condensed Matter, 2020, 579, 411811.	2.7	7
11	Analytical formulation to estimate the dynamic energy loss in electrical steels: Effectiveness and limitations. Physica B: Condensed Matter, 2020, 579, 411899.	2.7	8
12	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
13	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
14	Time domain modelling of soft ferrite inductors for power converters applications. , 2019, , .		2
15	Towards online evaluation of Goss-texture in grain-oriented ferromagnetic sheets. Journal of Magnetism and Magnetic Materials, 2019, 473, 136-143.	2.3	3
16	Pattern search approach to ferromagnetic material modelling. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2019, 32, e2271.	1.9	13
17	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
18	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

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19	Modeling of Inductive Blocking Devices for the Mitigation of Indirect Lightning Effects. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	3
20	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
21	Generalization of the vector hysteron model through the dependence of moving functions on frequency. , 2017, , .		1
22	Implementation of the Single Hysteron Model in a Finite-Element Scheme. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	15
23	Surface Testing the Crystal Grain Orientation by Lag Angle Plots. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	13
24	Magnetic losses in Si-Fe alloys for avionic applications. AIP Advances, 2017, 7, .	1.3	13
25	A novel technique for online monitoring of photovoltaic devices degradation. Solar Energy, 2017, 158, 520-527.	6.1	20
26	Computer Modeling of Nickelâ€“Iron Alloy in Power Electronics Applications. IEEE Transactions on Industrial Electronics, 2017, 64, 2494-2501.	7.9	36
27	In-Plane Magnetic Anisotropy Detection of Crystal Grain Orientation in Goss-Textured Ferromagnets. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	4
28	Magnetic materials characterization by Tabu Search optimization. , 2017, , .		2
29	Lightning indirect effect protection in Avionic Environment. , 2017, , .		3
30	Magnetic sensors for motion measurement of avionic ballscrews. AIP Advances, 2017, 7, 056639.	1.3	7
31	In-plane magnetic anisotropy detection for crystal grain orientation in Goss-textured ferromagnets. , 2017, , .		2
32	Implementation of the Single Hysteron Model in a Finite Element Scheme. , 2017, , .		1
33	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
34	Materials characterization by Inverse Neural Network approach. , 2016, , .		0
35	Modeling of inductive blocking devices for the mitigation of indirect lightning effects. , 2016, , .		0
36	Magnetic modelling for the texture analysis of Fe-Si alloys. , 2016, , .		1

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37	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
38	A moving approach for the Vector Hysteron Model. Physica B: Condensed Matter, 2016, 486, 92-96.	2.7	33
39	A Neural-FEM tool for the 2-D magnetic hysteresis modeling. Physica B: Condensed Matter, 2016, 486, 111-115.	2.7	23
40	An equipment for photovoltaic panels characterization based on a fully programmable DC-DC converter. , 2016, , .		2
41	Performances prediction of inductive blocking devices for the mitigation of the lightning indirect effects. , 2016, , .		3
42	Moving vector hysteron model identification based on neural network inversion. , 2016, , .		3
43	Modelling of vector hysteresis at macromagnetic scale: Open questions and challenges. Physica B: Condensed Matter, 2016, 486, 130-137.	2.7	23
44	Vector hysteresis model identification for ironâ€“silicon thin films from micromagnetic simulations. Physica B: Condensed Matter, 2016, 486, 97-100.	2.7	24
45	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
46	Prediction and Control of Transformer Inrush Currents. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	34
47	Magnetic nondestructive testing of rotor blade tips. Journal of Applied Physics, 2015, 117, 17A705.	2.5	20
48	A neural approach for the numerical modeling of two-dimensional magnetic hysteresis. Journal of Applied Physics, 2015, 117, 17D129.	2.5	32
49	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
50	Magnetic material modeling for the optimization of the electrical machine design. , 2014, , .		0
51	Modeling of hysteresis in magnetic multidomains. Physica B: Condensed Matter, 2014, 435, 62-65.	2.7	19
52	Numerical modeling of transformer inrush currents. Physica B: Condensed Matter, 2014, 435, 116-119.	2.7	9
53	Numerical Modeling of Hysteresis in Si-Fe Steels. IEEE Transactions on Magnetics, 2014, 50, 329-332.	2.1	37
54	A Benchmark Problem of Vector Magnetic Hysteresis for Numerical Models. IEEE Transactions on Magnetics, 2014, 50, 1049-1052.	2.1	35

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55	Genetic algorithm identification of a H-moving vector hysteresis model. Physica B: Condensed Matter, 2014, 435, 11-15.	2.7	26
56	Numerical two-dimensional modeling of grain oriented steel. Journal of Applied Physics, 2014, 115, 17A327.	2.5	27
57	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
58	Energy and Losses in Vector Thermal Aftereffect Model. IEEE Transactions on Magnetics, 2013, 49, 1869-1872.	2.1	28
59	Contact-Less Speed Probe Based on Eddy Currents. IEEE Transactions on Magnetics, 2013, 49, 3897-3900.	2.1	19
60	Magnetic field exposure systems for the study of ELF effects. , 2012, , .		0
61	Mathematical Modelling of Magnetic Hysteresis in Exchange-Bias Spin Valves. IEEE Transactions on Magnetics, 2012, 48, 3367-3370.	2.1	25
62	Numerical modelling of transformer inrush currents. , 2012, , .		0
63	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
64	Modeling of Vector Hysteresis in Si-Fe Magnetic Steels and Experimental Verification. IEEE Transactions on Magnetics, 2010, 46, 3465-3468.	2.1	4
65	A General Vector Hysteresis Operator: Extension to the 3-D Case. IEEE Transactions on Magnetics, 2010, 46, 3990-4000.	2.1	125
66	Nonferromagnetic Open Shields at Industrial Frequency Rate. IEEE Transactions on Magnetics, 2010, 46, 889-898.	2.1	10
67	Vector hysteresis modeling for anisotropic magnetic materials. , 2010, , .		0
68	Combined experimental and modeling analysis to study accommodation phenomenon. , 2010, , .		0
69	Micromagnetic simulations of linewidth and nonlinear frequency shift coefficient in spin-torque nanoscillators. , 2010, , .		0
70	Magnetic vortex chirality switching driven by a spin-polarized current. , 2010, , .		0
71	Magnetization dependent vector model and single domain nanostructures. Journal of Applied Physics, 2009, 105, .	2.5	13
72	Numerical Implementation of the DPC Model. IEEE Transactions on Magnetics, 2009, 45, 1186-1189.	2.1	27

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73	Numerical Identification Procedure for a Phenomenological Vector Hysteresis Model. IEEE Transactions on Magnetics, 2009, 45, 1166-1169.	2.1	14
74	Experimental Verification of the Deletion and Congruency Properties in Si-Fe Magnetic Steels. IEEE Transactions on Magnetics, 2009, 45, 5243-5246.	2.1	11
75	Analysis of a Unit Magnetic Particle Via the DPC Model. IEEE Transactions on Magnetics, 2009, 45, 5192-5195.	2.1	27
76	Theoretical Considerations of Magnetic Hysteresis and Transformer Inrush Current. IEEE Transactions on Magnetics, 2009, 45, 5247-5250.	2.1	27
77	Properties of a class of vector hysteron models. Journal of Applied Physics, 2008, 103, .	2.5	34
78	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
79	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
80	Vector hysteresis measurements via a single disk tester. Physica B: Condensed Matter, 2006, 372, 143-146.	2.7	21
81	Vector Hysteresis Model at Micromagnetic Scale. IEEE Transactions on Magnetics, 2006, 42, 3138-3140.	2.1	9
82	Vector Hysteresis Model at Micromagnetic Scale. , 2006, , .		0
83	Analysis methodologies and experimental benchmarks for eddy current testing. IEEE Transactions on Magnetics, 2005, 41, 1380-1383.	2.1	9
84	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
85	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
86	Single sheet tester efficiency macromagnetic analysis. Journal of Applied Physics, 2005, 97, 10E103.	2.5	3
87	FEM analysis of thin cracks in metallic plates. International Journal of Applied Electromagnetics and Mechanics, 2004, 19, 503-507.	0.6	6
88	About the role of hysteresis in magnetic penetration at extremely low frequency. Physica B: Condensed Matter, 2004, 343, 153-158.	2.7	1
89	Numerical modeling for the localization and the assessment of electromagnetic field sources. IEEE Transactions on Magnetics, 2003, 39, 1638-1641.	2.1	14
90	Experimental analysis of hysteresis in low frequency magnetic shields. Physica B: Condensed Matter, 2001, 306, 62-66.	2.7	2

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91	Neural blind separation for electromagnetic source localization and assessment. , 0, , .		1
92	Image Reconstruction of Defects in Metallic Plates Using a Multi-Frequency Detector System and a Discrete Geometric Approach. , 0, , .		0
93	FEM Approach to the Numerical Simulation of Vector Hysteresis. , 0, , .		0
94	Penetrating Cracks Assessment in Metallic Plates. , 0, , .		1
95	Feasibility Studies for the Detection of Long Defects in Hot Rods. , 0, , .		1
96	Possible Extension of the Radial Vector Model for Magnetic Hysteresis. , 0, , .		0