Rafael Alonso

List of Publications by Year
in descending order

63 papers	1,521 citations	361413 20 h-index	315739 38 g-index
63 all docs	63 docs citations	63 times ranked	752 citing authors

#	Article	IF	Citations
1	Domestic Induction Appliances. IEEE Industry Applications Magazine, 2010, 16, 39-47.	0.4	164
2	Frequency-dependent resistance in Litz-wire planar windings for domestic induction heating appliances. IEEE Transactions on Power Electronics, 2006, 21, 856-866.	7.9	144
3	Analysis of the Mutual Inductance of Planar-Lumped Inductive Power Transfer Systems. IEEE Transactions on Industrial Electronics, 2013, 60, 410-420.	7.9	128
4	Analytical equivalent impedance for a planar circular induction heating system. IEEE Transactions on Magnetics, 2006, 42, 84-86.	2.1	81
5	Simple resistance calculation in litz-wire planar windings for induction cooking appliances. IEEE Transactions on Magnetics, 2005, 41, 1280-1288.	2.1	80
6	Quantitative Evaluation of Induction Efficiency in Domestic Induction Heating Applications. IEEE Transactions on Magnetics, 2013, 49, 1382-1389.	2.1	73
7	Modeling of Planar Spiral Inductors Between Two Multilayer Media for Induction Heating Applications. IEEE Transactions on Magnetics, 2006, 42, 3719-3729.	2.1	70
8	AC Power Losses Model for Planar Windings With Rectangular Cross-Sectional Conductors. IEEE Transactions on Power Electronics, 2014, 29, 23-28.	7.9	61
9	Analysis and Modeling of Planar Concentric Windings Forming Adaptable-Diameter Burners for Induction Heating Appliances. IEEE Transactions on Power Electronics, 2011, 26, 1546-1558.	7.9	59
10	The domestic induction heating appliance: An overview of recent research. IEEE Applied Power Electronics Conference and Exposition, 2008, , .	0.0	54
11	TM-TE DECOMPOSITION OF POWER LOSSES IN MULTI-STRANDED LITZ-WIRES USED IN ELECTRONIC DEVICES. Progress in Electromagnetics Research, 2012, 123, 83-103.	4.4	45
12	Frequency-Dependent Resistance of Planar Coils in Printed Circuit Board With Litz Structure. IEEE Transactions on Magnetics, 2014, 50, 1-9.	2.1	45
13	Mutual Impedance of Small Ring-Type Coils for Multiwinding Induction Heating Appliances. IEEE Transactions on Power Electronics, 2013, 28, 1025-1035.	7.9	44
14	Design and Implementation of PCB Inductors With Litz-Wire Structure for Conventional-Size Large-Signal Domestic Induction Heating Applications. IEEE Transactions on Industry Applications, 2015, 51, 2434-2442.	4.9	33
15	Frequency-dependent modelling of domestic induction heating systems using numerical methods for accurate time-domain simulation. IET Power Electronics, 2012, 5, 1291.	2.1	32
16	Inductive Sensor for Temperature Measurement in Induction Heating Applications. IEEE Sensors Journal, 2012, 12, 996-1003.	4.7	32
17	Infrared Thermometry System for Temperature Measurement in Induction Heating Appliances. IEEE Transactions on Industrial Electronics, 2014, 61, 2622-2630.	7.9	27
18	Temperature Influence on Equivalent Impedance and Efficiency of Inductor Systems for Domestic Induction Heating Appliances. IEEE Applied Power Electronics Conference and Exposition, 2007, , .	0.0	26

#	Article	IF	Citations
19	Electromagnetic induction of planar windings with cylindrical symmetry between two half-spaces. Journal of Applied Physics, 2008, 103, .	2.5	22
20	Enhancement of induction heating performance by sandwiched planar windings. Electronics Letters, 2006, 42, 241.	1.0	20
21	Embedded Ring-Type Inductors Modeling With Application to Induction Heating Systems. IEEE Transactions on Magnetics, 2009, 45, 5333-5343.	2.1	20
22	A model of losses in twisted-multistranded wires for planar windings used in domestic induction heating appliances. IEEE Applied Power Electronics Conference and Exposition, 2007, , .	0.0	16
23	COUPLING IMPEDANCE BETWEEN PLANAR COILS INSIDE A LAYERED MEDIA. Progress in Electromagnetics Research, 2011, 112, 381-396.	4.4	16
24	Infrared Sensor-Based Temperature Control for Domestic Induction Cooktops. Sensors, 2014, 14, 5278-5295.	3.8	15
25	Design and Optimization of Small Inductors on Extra-Thin PCB for Flexible Cooking Surfaces. IEEE Transactions on Industry Applications, 2017, 53, 371-379.	4.9	15
26	Modeling Mutual Impedances of Loaded Non-Coaxial Inductors for Induction Heating Applications. IEEE Transactions on Magnetics, 2008, 44, 4115-4118.	2.1	14
27	Identification of the material properties used in domestic induction heating appliances for system-level simulation and design purposes. , 2010, , .		12
28	Normal-Mode Decomposition of Surface Power Distribution in Multiple-Coil Induction Heating Systems. IEEE Transactions on Magnetics, 2016, 52, 1-8.	2.1	12
29	Modeling of domestic induction heating systems with non-linear saturable loads. , 2017, , .		12
30	An electromagnetic-based model for calculating the efficiency in domestic induction heating appliances. , 0, , .		11
31	A model of the equivalent impedance of the coupled winding-load system for a domestic induction heating application. , 2007, , .		11
32	Printed circuit board implementation of small inductors for domestic induction heating applications using a planar litz wire structure. , 2013, , .		11
33	FEA-Based Model of Elliptic Coils of Rectangular Cross Section. IEEE Transactions on Magnetics, 2014, 50, 1-7.	2.1	11
34	Optical and electrical properties of stainless steel oxynitride thin films deposited in an in-line sputtering system. Applied Surface Science, 2016, 379, 249-258.	6.1	11
35	Analytical solution of the induced currents in multilayer cylindrical conductors under external electromagnetic sources. Applied Mathematical Modelling, 2016, 40, 10667-10678.	4.2	11
36	Interference Emission Estimation of Domestic Induction Cookers Based on Finite-Element Simulation. IEEE Transactions on Electromagnetic Compatibility, 2016, 58, 993-999.	2.2	9

#	Article	IF	Citations
37	Minimization of vias in PCB implementations of planar coils with litz-wire structure. , 2015, , .		8
38	Performance Evaluation of Graphite Thin Slabs for Induction Heating Domestic Applications. IEEE Transactions on Industry Applications, 2015, 51, 2398-2404.	4.9	8
39	Measurement of the effective area of non-linear power transfer in single-mode fibers due to stimulated Raman scattering. Optics Communications, 2000, 176, 387-392.	2.1	5
40	Electrostriction-free n_2 measurement in single-mode optical fibers based on nonlinear-polarization evolution. Journal of the Optical Society of America B: Optical Physics, 2002, 19, 390.	2.1	5
41	Loss Analysis and Optimization of Round-wire Planar Windings for Domestic Induction Heating Appliances. , 0, , .		5
42	Analysis of the Snow Water Equivalent at the AEMet-Formigal Field Laboratory (Spanish Pyrenees) During the 2019/2020 Winter Season Using a Stepped-Frequency Continuous Wave Radar (SFCW). Remote Sensing, 2021, 13, 616.	4.0	5
43	An application of the impedance boundary condition for the design of coils used in domestic induction heating systems. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2011, 30, 1616-1625.	0.9	4
44	Modeling and Calculation of the Efficiency for Low-cost Round-wire Planar Windings in Domestic Induction Heating Applications. , 2007, , .		3
45	Efficiency model of planar loaded twisted-wire windings in a magnetic substrate for domestic induction heating appliances. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	3
46	Optimized 4-coil inductor system arrangement for induction heating appliances. , 2015, , .		3
47	Oxygen diffusion at high temperatures within the SnO2/Sst interlayer in sputtered thin films. Applied Surface Science, 2015, 359, 669-675.	6.1	3
48	Design and Implementation of a Test-Bench for Efficiency Measurement of Domestic Induction Heating Appliances. Energies, 2016, 9, 636.	3.1	3
49	Portable Solar Spectrum Reflectometer for planar and parabolic mirrors in solar thermal energy plants. Solar Energy, 2016, 135, 446-454.	6.1	3
50	Analysis Of Snow Water Equivalent (Swe) Of Snowpack By An Ultra Wide Band Step Frequency Continuous Wave Radar (Sfcw). , 2020, , .		3
51	PCB multi-track coils for domestic induction heating applications. , 2012, , .		2
52	Design and optimization of small inductors on extra-thin PCB for flexible cooking surfaces. , 2015, , .		2
53	Design of efficient loads for domestic induction heating applications by means of non-magnetic thin metallic layers. , 2016, , .		2
54	Snow Water Equivalent Evolution During the 2019/2020 Winter Period in Aemet-Formigal Test Site Using a SFCW Radar. , 2021, , .		2

#	Article	IF	Citations
55	Modeling of adaptable-diameter burners formed by concentric planar windings for domestic induction heating applications. , 2010, , .		1
56	Analysis of the coupling between small ring-type coils used in adaptable-size burners for domestic induction heating hobs. , 2011, , .		1
57	IR sensor for temperature measurement in domestic induction heating systems. , 2012, , .		1
58	Determination of oxygen diffusion in the SnO2/stainless steel interface of thin films by spectrophotometric measurements. Journal Physics D: Applied Physics, 2016, 49, 215302.	2.8	1
59	Semitransparent Decorative Coatings Based on Optical Interference of Metallic and Dielectric Thin Films for High Temperature Applications. Coatings, 2018, 8, 183.	2.6	1
60	Radiation heat measurement model for temperature estimation in induction heating appliances. , 2014, , .		0
61	Performance evaluation of graphite thin slabs for induction heating domestic applications. , 2014, , .		0
62	Calculation of losses in PCB windings for multi-coil contactless charging systems. , 2016, , .		0
63	High sensitivity infrared thermometry for precise temperature control in domestic induction cooktops. , 2019, , .		0