Rodolfo Araneo

List of Publications by Year
in descending order

128	2,206	236925 25	315739 38
papers	citations	h-index	g-index

133	133	133	1423
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Piezoâ€Semiconductive Quasiâ€1D Nanodevices with or without Antiâ€Symmetry. Advanced Materials, 2012, 24, 4719-4724.	21.0	124
2	Semiclassical spatially dispersive intraband conductivity tensor and quantum capacitance of graphene. Physical Review B, 2013, 87, .	3.2	116
3	Fast MoM Analysis of the Shielding Effectiveness of Rectangular Enclosures With Apertures, Metal Plates, and Conducting Objects. IEEE Transactions on Electromagnetic Compatibility, 2009, 51, 274-283.	2.2	89
4	EMC Issues in High-Power Grid-Connected Photovoltaic Plants. IEEE Transactions on Electromagnetic Compatibility, 2009, 51, 639-648.	2.2	81
5	A Neural Network Based Prediction System of Distributed Generation for the Management of Microgrids. IEEE Transactions on Industry Applications, 2019, 55, 7092-7102.	4.9	68
6	Prediction in Photovoltaic Power by Neural Networks. Energies, 2017, 10, 1003.	3.1	49
7	ZnO Nanostructures and Electrospun ZnOâ€“Polymeric Hybrid Nanomaterials in Biomedical, Health, and Sustainability Applications. Nanomaterials, 2019, 9, 1449.	4.1	47
8	Alternative Definitions for the Time-Domain Shielding Effectiveness of Enclosures. IEEE Transactions on Electromagnetic Compatibility, 2014, 56, 482-485.	2.2	46
9	An Efficient MoM Formulation for the Evaluation of the Shielding Effectiveness of Rectangular Enclosures With Thin and Thick Apertures. IEEE Transactions on Electromagnetic Compatibility, 2008, 50, 294-304.	2.2	45
10	Lateral bending of tapered piezo-semiconductive nanostructures for ultra-sensitive mechanical force to voltage conversion. Nanotechnology, 2013, 24, 265707.	2.6	43
11	Time-Domain Analysis of Building Shielding Against Lightning Electromagnetic Fields. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 397-404.	2.2	42
12	Shielding Effectiveness of Periodic Screens Against Finite High-Impedance Near-Field Sources. IEEE Transactions on Electromagnetic Compatibility, 2011, 53, 706-716.	2.2	37
13	The Clash of Mechanical and Electrical Sizeâ€Effects in ZnO Nanowires and a Double Power Law Approach to Elastic Strain Engineering of Piezoelectric and Piezotronic Devices. Advanced Materials, 2014, 26, 5976-5985.	21.0	36
14	A Distributed Algorithm for the Cooperative Prediction of Power Production in PV Plants. IEEE Transactions on Energy Conversion, 2019, 34, 497-508.	5.2	36
15	Smart ECM-Based Electrospun Biomaterials for Skeletal Muscle Regeneration. Nanomaterials, 2020, 10, 1781.	4.1	34
16	Review of O&M Practices in PV Plants: Failures, Solutions, Remote Control, and Monitoring Tools. IEEE Journal of Photovoltaics, 2020, 10, 914-926.	2.5	33
17	Innovative power-sharing model for buildings and energy communities. Renewable Energy, 2021, 172, 1087-1102.	8.9	33
18	Deep Neural Networks for Multivariate Prediction of Photovoltaic Power Time Series. IEEE Access, 2020, 8, 211490-211505.	4.2	32

#	Article	IF	Citations
19	Currentâ€“Voltage Characteristics of ZnO Nanowires Under Uniaxial Loading. IEEE Nanotechnology Magazine, 2014, 13, 724-735.	2.0	31
20	Efficient Evaluation of the 3-D Periodic Green's Function Through the Ewald Method. IEEE Transactions on Microwave Theory and Techniques, 2008, 56, 2069-2075.	4.6	29
21	Simplified Conservative Testing Method of Touch and Step Voltages by Multiple Auxiliary Electrodes at Reduced Distance. IEEE Transactions on Industry Applications, 2015, 51, 4987-4993.	4.9	29
22	Thermal-electric model for piezoelectric ZnO nanowires. Nanotechnology, 2015, 26, 265402.	2.6	29
23	Design Concepts, Fabrication and Advanced Characterization Methods of Innovative Piezoelectric Sensors Based on ZnO Nanowires. Sensors, 2014, 14, 23539-23562.	3.8	27
24	Transient behavior of wind towers grounding systems under lightning strikes. International Journal of Energy and Environmental Engineering, 2016, 7, 235-247.	2.5	27
25	Low-Frequency Dominant-Mode Propagation in Spatially Dispersive Graphene Nanowaveguides. IEEE Transactions on Electromagnetic Compatibility, 2012, , 1-6.	2.2	26
26	Embedding of time series for the prediction in photovoltaic power plants. , 2016, , .		26
27	Time-Domain Shielding of a Thin Conductive Sheet in the Presence of Pulsed Vertical Dipoles. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 157-165.	2.2	25
28	Dipole Excitation of Periodic Metallic Structures. IEEE Transactions on Antennas and Propagation, 2011, 59, 2178-2187.	5.1	24
29	Assessment of a practical model to estimate the cell temperature of a photovoltaic module. International Journal of Energy and Environmental Engineering, 2014, 5, 1.	2.5	22
30	Two-stage dynamic management in energy communities using a decision system based on elastic net regularization. Applied Energy, 2021, 291, 116852.	10.1	22
31	Toward a definition of the shielding effectiveness in the time - domain. , 2013, , .		21
32	Dyadic Greenâ€™s Functions for Dipole Excitation of Homogenized Metasurfaces. IEEE Transactions on Antennas and Propagation, 2016, 64, 167-178.	5.1	21
33	Magnetic Shielding of Planar Metallic Screens: A New Analytical Closed-Form Solution. IEEE Transactions on Electromagnetic Compatibility, 2020, 62, 1884-1888.	2.2	21
34	Utilization of Underbuilt Shield Wires to Improve the Lightning Performance of Overhead Distribution Lines Hit by Direct Strokes. IEEE Transactions on Power Delivery, 2020, 35, 1656-1666.	4.3	19
35	Modal Propagation and Crosstalk Analysis in Coupled Graphene Nanoribbons. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 726-733.	2.2	17
36	Nonlocal Effects on Surface Plasmon Polariton Propagation in Graphene Nanoribbons. IEEE Transactions on Terahertz Science and Technology, 2015, 5, 941-950.	3.1	17

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37	Eco-sustainable routing of power lines for the connection of renewable energy plants to the Italian high-voltage grid. International Journal of Energy and Environmental Engineering, 2015, 6, 9-19.	2.5	16
38	Semi-Analytical Representation of the Two-Dimensional Time-Domain Green's Function of a Graphene Sheet in the Intraband Regime. IEEE Nanotechnology Magazine, 2015, 14, 681-688.	2.0	16
39	Design of impedance matching couplers for power line communications. , 2009, , .		15
40	Time-Domain Shielding Performance of Enclosures: A Comparison of Different Global Approaches. IEEE Transactions on Electromagnetic Compatibility, 2016, 58, 434-441.	2.2	15
41	The Corona Phenomenon in Overhead Lines: Critical Overview of Most Common and Reliable Available Models. Energies, 2021, 14, 6612.	3.1	15
42	Frequency-Domain Analysis of Sectionalized Shield Wires on PLC Transmission Over High-Voltage Lines. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 853-861.	2.2	14
43	Analytical Evaluation of the Low-Frequency Magnetic Shielding of Thin Planar Magnetic and Conductive Screens. IEEE Transactions on Electromagnetic Compatibility, 2021, 63, 308-312.	2.2	14
44	COMPACT ELECTROMAGNETIC ABSORBERS FOR FREQUENCIES BELOW 1 GHZ. Progress in Electromagnetics Research, 2013, 143, 67-86.	4.4	12
45	NEAR-FIELD TIME-DOMAIN SHIELDING EFFECTIVENESS OF THIN CONDUCTIVE SCREENS. Progress in Electromagnetics Research, 2014, 146, 47-56.	4.4	12
46	Computation, Properties, and Realizability of the Characteristic Immittance Matrices of Nonuniform Multiconductor Transmission Lines. IEEE Transactions on Power Delivery, 2018, 33, 1885-1894.	4.3	12
47	An accurate approach for the evaluation of the performance of overhead distribution lines due to indirect lightning. Electric Power Systems Research, 2020, 186, 106411.	3.6	12
48	Assessment of the technical usable potential of the TUM Shaft Hydro Power plant on the Aurino River, Italy. Renewable Energy, 2013, 60, 648-654.	8.9	11
49	Space-domain method of moments for graphene nanoribbons. , 2014, , .		11
50	Magnetic field penetration through a circular aperture in a perfectly conducting plate excited by a coaxial loop. IET Microwaves, Antennas and Propagation, 2021, 15, 1147-1158.	1.4	11
51	2-D Convolutional Deep Neural Network for the Multivariate Prediction of Photovoltaic Time Series. Energies, 2021, 14, 2392.	3.1	11
52	Protection of distribution overhead power lines against direct lightning strokes by means of underbuilt ground wires. Electric Power Systems Research, 2022, 202, 107571.	3.6	11
53	Accurate models for the current-voltage characteristics of vertically compressed piezo-semiconductive quasi-1D NWs. Materials Research Society Symposia Proceedings, 2013, 1556, 1.	0.1	10
54	Transient response of grounding systems of wind turbines under lightning strikes. , 2014, , .		10

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55	Advanced mechanical and electrical characterization of piezoelectric ZnO nanowires for electro-mechanical modeling of enhanced performance sensors. Sensors and Actuators A: Physical, 2016, 244, 166-173.	4.1	10
56	Analysis of Metal Oxide Varistor Arresters for Protection of Multiconductor Transmission Lines Using Unconditionally-Stable Crankâ€“Nicolson FDTD. Energies, 2020, 13, 2112.	3.1	10
57	Closed-Form LF Magnetic Shielding Effectiveness of Thin Planar Screens in Coplanar Loops Configuration. IEEE Transactions on Electromagnetic Compatibility, 2021, 63, 631-635.	2.2	10
58	Impact of Non-Linear Piezoelectricity on the Piezotronic Effect of ZnO Nanowires. IEEE Nanotechnology Magazine, 2016, 15, 512-520.	2.0	9
59	Takagi-sugeno fuzzy systems applied to voltage prediction of photovoltaic plants. , 2017, , .		9
60	Pulsed Vertical Dipole Response of a Thin Sheet With High-Contrast Dielectric and Conductive Properties. IEEE Transactions on Antennas and Propagation, 2018, 66, 217-225.	5.1	9
61	A Review of the Enabling Methodologies for Knowledge Discovery from Smart Grids Data. Energies, 2020, 13, 6579.	3.1	9
62	On the Role of Shield Wires in Mitigating Lightning-Induced Overvoltages in Overhead Lines - Part I: A Critical Review and a New Analysis. IEEE Transactions on Power Delivery, 2023, 38, 335-344.	4.3	9
63	Shielding effectiveness of artificial magnetic screens in the VHF band. , 2009, , .		8
64	Multi-port impedance matching technique for power line communications. , 2011, , .		8
65	Assessment of a practical model to estimate the cell temperature of a photovoltaic module. International Journal of Energy and Environmental Engineering, 2014, 5, 2.	2.5	8
66	A Smart Grid in Ponza Island: Battery Energy Storage Management by Echo State Neural Network. , 2018, , .		8
67	On Electrical Safety in Academic Laboratories. IEEE Transactions on Industry Applications, 2019, 55, 5613-5620.	4.9	8
68	Axially Symmetric Source Field Penetration Through a Circular Aperture in a Thin Impedance Plate. IEEE Transactions on Antennas and Propagation, 2022, 70, 8348-8359.	5.1	8
69	Time-Domain Green's Function for a Vertical Dipole Above a Graphene Sheet. IEEE Nanotechnology Magazine, 2018, 17, 841-851.	2.0	7
70	Electrospinning nanofibers as separators for lithium-ion batteries. AIP Conference Proceedings, 2019, , .	0.4	7
71	An Analytical Approach to Assess the Influence of Shield Wires in Improving the Lightning Performance Due to Indirect Strokes. IEEE Transactions on Power Delivery, 2021, 36, 1491-1498.	4.3	7
72	The impact of different corona models on FD algorithms for the solution of multiconductor transmission lines equations. High Voltage, 2021, 6, 822-835.	4.7	7

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73	Low-frequency intertwined spiral-aperture absorbers for Shielded enclosures. , 2013, , .		6
74	A global approach to time-domain shielding problems. , 2014, , .		6
75	Low-environmental impact routeing of overhead power lines for the connection of renewable energy plants to the Italian HV grid. , 2014, , .		6
76	Ground Transient Resistance of Underground Cables. IEEE Transactions on Electromagnetic Compatibility, 2016, 58, 931-934.	2.2	6
77	Analysis of the lightning transient response of the earthing system of large-scale ground-mounted PV plants. , 2017, , .		6
78	Matching a Nonuniform MTL With Only Passive Elements Is Not Always Possible. IEEE Transactions on Power Delivery, 2019, 34, 467-474.	4.3	6
79	Unconditionally Stable Implicit Schemes for Transient Analysis of Lossy Multiconductor Lines. IEEE Transactions on Electromagnetic Compatibility, 2021, 63, 640-644.	2.2	6
80	Application of the Transfer Matrix Approach to Direct Lightning Studies of Overhead Power Lines With Underbuilt Shield Wiresâ€"Part I: Theory. IEEE Transactions on Power Delivery, 2022, 37, 1226-1233.	4.3	6
81	Application of the Transfer Matrix Approach to Direct Lightning Studies of Overhead Power Lines With Underbuilt Shield Wiresâ€"Part II: Simulation Results. IEEE Transactions on Power Delivery, 2022, 37, 1234-1241.	4.3	6
82	Electromagnetic Shielding. , 0, , .		6
83	Mechanics of quasi-1D ZnO nanostructures for energy harvesting. Materials Research Society Symposia Proceedings, 2013, 1556, 1.	0.1	5
84	Piezo-semiconductive quasi-1D conical NWs for high performance nanodevices. Materials Research Society Symposia Proceedings, 2013, 1556, 1.	0.1	5
85	Accurate analysis of the piezopotential and the stored energies in laterally bent piezo-semiconductive NWs. Materials Research Society Symposia Proceedings, 2013, 1556, 1.	0.1	5
86	Time-Domain shielding effectiveness of planar conductive nanoscreens. , 2014, , .		5
87	Theoretical Study of the First Higher Order Mode in Grounded Graphene Nanoribbons. IEEE Nanotechnology Magazine, 2018, 17, 814-823.	2.0	5
88	On the Role of Shield Wires in Mitigating Lightning-Induced Overvoltages in Overhead Lines - Part II: Simulation Results for Practical Configurations. IEEE Transactions on Power Delivery, 2023, 38, 345-352.	4.3	5
89	Tower Models for Power Systems Transients: A Review. Energies, 2022, 15, 4893.	3.1	5
90	Safety criteria for testing ground systems within their influence zone. , 2014, , .		4

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91	Joint meeting of the 17th edition of the IEEE international conference on environment and electrical engineering (EEEIC) and the 1st edition of the IEEE industrial and commercial power systems Europe (I&CPS Europe). IEEE Electromagnetic Compatibility Magazine, 2017, 6, 92-94.	0.1	4
92	Electromagnetic pulse response of planar screens. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2018, 31, e2329.	1.9	4
93	2-D Convolutional Deep Neural Network for Multivariate Energy Time Series Prediction. , 2019, , .		4
94	A Simple Ball Milling and Thermal Oxidation Method for Synthesis of ZnO Nanowires Decorated with Cubic ZnO2 Nanoparticles. Nanomaterials, 2021, 11, 475.	4.1	4
95	A Hybrid Energy Hub Investigation with Renewables and Electric Vehicle in a Smart Microgrid Lab. , 2021, , .		4
96	Deep Neural Networks for Electric Energy Theft and Anomaly Detection in the Distribution Grid. , 2021, , .		4
97	Shielding performance of nanostructured transparent thin films loading apertures of metallic enclosures excited by dipole sources. , 2011, , .		3
98	Toward an effective absorber for damping resonances in shielded enclosures. , 2012, , .		3
99	Planar and bulk resonant periodic screens against plane-wave and electric-dipole excitations. , 2012, , .		3
100	On the Insulation Resistance in High-Power Free-Field Grid-Connected Photovoltaic Plants. , 2019, , .		3
101	The Electromagnetic Effects of Pulsed Horizontal Dipoles on a Thin Conductive Sheet: Time-Domain Analysis. IEEE Transactions on Electromagnetic Compatibility, 2020, 62, 443-450.	2.2	3
102	Multidimensional Feeding of LSTM Networks for Multivariate Prediction of Energy Time Series. , 2020, , .		3
103	Time-domain surface plasmon polaritons on a graphene sheet. Physical Review B, 2018, 97, .	3.2	3
104	Transient impedance of grounding grids with different soil models. , 2021, , .		3
105	Effects of Aperture Thickness on the Shielding Effectiveness of Metallic Enclosures. , 2007, , .		2
106	Computer-aided design of coupling units for naval-network power line communications. , 2010, , .		2
107	Neural Network Approaches to Electricity Price Forecastingly in Day-Ahead Markets. , 2018, , .		2
108	Electrical Safety of Academic Laboratories. , 2019, , .		2

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109	A Review of the Enabling Methodologies for Knowledge Discovery from Smart Grids Data. , 2020, , .		2
110	A Combined Deep Learning Approach for Time Series Prediction in Energy Environments. , 2020, , .		2
111	Insulation Resistance and Failures of a High-Power Grid-Connected Photovoltaic Installation: A Case Study. IEEE Industry Applications Magazine, 2021, 27, 16-22.	0.4	2
112	Multivariate Prediction of Energy Time Series by Autoencoded LSTM Networks. , 2021, , .		2
113	Efficient computation of the shielding effectiveness of metallic enclosures loaded with conductors. , 2008, , .		1
114	Characterization of the induced effects on electronic boards placed in metal enclosures with loaded apertures. , 2011, , .		1
115	Conservative measurements of touch and step voltages by auxiliary electrodes at reduced distance. , 2014, , .		1
116	Fundamental properties of plasmonic propagation in graphene nanoribbons. , 2015, , .		1
117	Frequency analysis of PLC over HV transmission lines with segmented shield wires. , 2017, , .		1
118	Predictive Analysis of Photovoltaic Power Generation Using Deep Learning. , 2019, , .		1
119	The Sommerfeld-Goubau Theory for the Transient Response of Towers. , 2022, , .		1
120	Analysis of the shielding performance of 2-D periodic screens against near sources. , 2010, , .		0
121	Transmission properties of resonant metasurfaces in the presence of nearby interacting sources. , 2014, , .		0
122	Time-domain Green's function of planar conductive thin screens for shielding effectiveness evaluations. , 2014, , .		0
123	A statistical approach to time-domain shielding. , 2014, , .		0
124	Homogenized Dyadic Green's functions for electric dipole excitation over metasurfaces. , 2015, , .		0
125	A rigorous matrix procedure for calculating the line constants and wave parameters of uniform MTLs using SMT/PMU. International Transactions on Electrical Energy Systems, 2017, 27, e2377.	1.9	0
126	Multivariate Prediction in Photovoltaic Power Plants by a Stacked Deep Neural Network. , 2019, , .		0

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127	Prediction of Photovoltaic Time Series by Recurrent Neural Networks and Genetic Embedding. , 2020, , .		0
128	FDTD Analysis of Metal Oxide Surge Arresters for Protection of Multiconductor Transmission Lines. , 2020, , .		0