Giovanni Miano

List of Publications by Year
in descending order

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159	2,544	186265	254184
papers	citations	28 h-index	43 g-index

166	166	166	2393
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Models of magnetic hysteresis based on play and stop hysterons. IEEE Transactions on Magnetics, 1997, 33, 4417-4426.	2.1	136
2	Geometrical integration of Landauâ€“Lifshitzâ€“Gilbert equation based on the mid-point rule. Journal of Computational Physics, 2005, 209, 730-753.	3.8	108
3	Genetically Engineered Plasmonic Nanoarrays. Nano Letters, 2012, 12, 2037-2044.	9.1	102
4	An Integral Formulation for the Electrodynamics of Metallic Carbon Nanotubes Based on a Fluid Model. IEEE Transactions on Antennas and Propagation, 2006, 54, 2713-2724.	5.1	83
5	Particle-swarm optimization of broadband nanoplasmonic arrays. Optics Letters, 2010, 35, 133.	3.3	81
6	Analysis of Dynamics of Excitation and Dephasing of Plasmon Resonance Modes in Nanoparticles. Physical Review Letters, 2007, 98, 147401.	7.8	70
7	Overview of the JET results with the ITER-like wall. Nuclear Fusion, 2013, 53, 104002.	3.5	70
8	A transmission line model for metallic carbon nanotube interconnects. International Journal of Circuit Theory and Applications, 2008, 36, 31-51.	2.0	65
9	The role of nanoparticle shapes and deterministic aperiodicity for the design of nanoplasmonic arrays. Optics Express, 2009, 17, 9648.	3.4	54
10	Signal Propagation in Carbon Nanotubes of Arbitrary Chirality. IEEE Nanotechnology Magazine, 2011, 10, 135-149.	2.0	53
11	Theory of coupled plasmon modes and Fano-like resonances in subwavelength metal structures. Physical Review B, 2013, 88, .	3.2	53
12	Performance Comparison Between Metallic Carbon Nanotube and Copper Nano-Interconnects. IEEE Transactions on Advanced Packaging, 2008, 31, 692-699.	1.6	50
13	A New Circuit Model for Carbon Nanotube Interconnects With Diameter-Dependent Parameters. IEEE Nanotechnology Magazine, 2009, 8, 345-354.	2.0	50
14	An Enhanced Transmission Line Model for Conducting Wires. IEEE Transactions on Electromagnetic Compatibility, 2004, 46, 512-528.	2.2	44
15	Multipolar second harmonic generation from planar arrays of Au nanoparticles. Optics Express, 2012, 20, 15797.	3.4	43
16	A surface integral formulation of Maxwell equations for topologically complex conducting domains. IEEE Transactions on Antennas and Propagation, 2005, 53, 4001-4014.	5.1	39
17	A novel formulation for the numerical computation of magnetization modes in complex micromagnetic systems. Journal of Computational Physics, 2009, 228, 6130-6149.	3.8	39
18	Overview of JET results. Nuclear Fusion, 2003, 43, 1540-1554.	3.5	38

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19	Size-dependent second-harmonic generation from gold nanoparticles. Physical Review B, 2014, 89, .	3.2	38
20	A Z-Pinch Plasma Lens for Focusing High-Energy Particles in an Accelerator. IEEE Transactions on Plasma Science, 1987, 15, 226-237.	1.3	36
21	Eddy current losses in ferromagnetic laminations. Journal of Applied Physics, 2000, 87, 6923-6925.	2.5	36
22	Role of aperiodic order in the spectral, localization, and scaling properties of plasmon modes for the design of nanoparticle arrays. Physical Review B, 2009, 79, .	3.2	35
23	Circuit Models of Carbon-Based Interconnects for Nanopackaging. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2013, 3, 1926-1937.	2.5	35
24	Surface integral method for second harmonic generation in metal nanoparticles including both local-surface and nonlocal-bulk sources. Journal of the Optical Society of America B: Optical Physics, 2013, 30, 2355.	2.1	34
25	Modeling, Fabrication, and Characterization of Large Carbon Nanotube Interconnects With Negative Temperature Coefficient of the Resistance. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2017, 7, 485-493.	2.5	33
26	Surface integral formulations for the design of plasmonic nanostructures. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2012, 29, 2314.	1.5	32
27	Electrical Properties of Graphene for Interconnect Applications. Applied Sciences (Switzerland), 2014, 4, 305-317.	2.5	31
28	Plasmonic Fano Resonances in Single-Layer Gold Conical Nanoshells. Plasmonics, 2013, 8, 1429-1437.	3.4	30
29	Field distribution in cable terminations from a quasi-static approximation of the Maxwell equations. IEEE Transactions on Dielectrics and Electrical Insulation, 1996, 3, 399-409.	2.9	28
30	Electrical Modeling of Carbon Nanotube Vias. IEEE Transactions on Electromagnetic Compatibility, 2012, 54, 158-166.	2.2	28
31	Number of Conducting Channels for Armchair and Zig-Zag Graphene Nanoribbon Interconnects. IEEE Nanotechnology Magazine, 2013, 12, 817-823.	2.0	28
32	A T formulation for 3D finite element Eddy current computation. IEEE Transactions on Magnetics, 1985, 21, 2299-2302.	2.1	25
33	On the Evaluation of the Number of Conducting Channels in Multiwall Carbon Nanotubes. IEEE Nanotechnology Magazine, 2011, 10, 1221-1223.	2.0	25
34	Transmission-Line Model for Multiwall Carbon Nanotubes With Intershell Tunneling. IEEE Nanotechnology Magazine, 2012, 11, 554-564.	2.0	25
35	Numerical integration of Landauâ€“Lifshitzâ€“Gilbert equation based on the midpoint rule. Journal of Applied Physics, 2005, 97, 10E319.	2.5	24
36	Higher Order Tunable Fano Resonances in Multilayer Nanocones. Plasmonics, 2013, 8, 1023-1034.	3.4	24

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37	Full-Wave Analytical Solution of Second-Harmonic Generation in Metal Nanospheres. Plasmonics, 2014, 9, 151-166.	3.4	24
38	Nanoscale Electromagnetic Compatibility: Quantum Coupling and Matching in Nanocircuits. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 1645-1654.	2.2	24
39	Size and temperature effects on the resistance of copper and carbon nanotubes nano-interconnects. , 2010, , .		23
40	Full-wave electromagnetic modes and hybridization in nanoparticle dimers. Scientific Reports, 2019, 9, 14524.	3.3	23
41	Generation of second harmonic radiation from sub-stoichiometric silicon nitride thin films. Applied Physics Letters, 2013, 102, 141114.	3.3	21
42	Material-independent modes for electromagnetic scattering. Physical Review B, 2016, 94, .	3.2	21
43	The plasma undulator. Physica Scripta, 1990, T30, 192-197.	2.5	20
44	Chaotic dynamics in an infinite-dimensional electromagnetic system. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1994, 41, 730-736.	0.1	20
45	Hydrodynamic model for the signal propagation along carbon nanotubes. Journal of Nanophotonics, 2010, 4, 041695.	1.0	20
46	Nanoplasmonics of prime number arrays. Optics Express, 2009, 17, 24288.	3.4	19
47	An enhanced transmission line model for conductors with arbitrary cross sections. IEEE Transactions on Advanced Packaging, 2005, 28, 174-188.	1.6	18
48	Periodic solutions of nonlinear eddy current problems in three-dimensional geometries. IEEE Transactions on Magnetics, 1992, 28, 1118-1121.	2.1	17
49	A new model of magnetic hysteresis, based on stop hysterons: an application to the magnetic field diffusion. IEEE Transactions on Magnetics, 1996, 32, 1132-1135.	2.1	17
50	Irregular terms in the impulse response of a multiconductor lossy transmission line. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1999, 46, 788-805.	0.1	17
51	Investigation of Plasmonic Resonances in Mismatched Gold Nanocone Dimers. Plasmonics, 2014, 9, 35-45.	3.4	17
52	A Transmission-Line Model for Full-Wave Analysis of Mixed-Mode Propagation. IEEE Transactions on Advanced Packaging, 2008, 31, 275-284.	1.6	16
53	Near-field calculation based on the T-matrix method with discrete sources. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 2384-2394.	2.3	16
54	A new method of solution of HallÃ©nâ€™s problem. Journal of Mathematical Physics, 1995, 36, 4087-4099.	1.1	15

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55	On the numerical solution of the nonlinear three-dimensional eddy current problem. IEEE Transactions on Magnetics, 1991, 27, 3990-3995.	2.1	14
56	Full-wave transmission-line theory. IEEE Transactions on Magnetics, 2003, 39, 1594-1597.	2.1	14
57	Volume Integral Formulation for the Calculation of Material Independent Modes of Dielectric Scatterers. IEEE Transactions on Antennas and Propagation, 2018, 66, 2505-2514.	5.1	14
58	Comparison of different hysteresis models in FE analysis of magnetic field diffusion. IEEE Transactions on Magnetics, 1995, 31, 1789-1792.	2.1	12
59	A new model of scalar magnetic hysteresis. IEEE Transactions on Magnetics, 1994, 30, 3367-3370.	2.1	11
60	An accurate time-domain model of transmission lines with frequency-dependent parameters. International Journal of Circuit Theory and Applications, 2000, 28, 263-280.	2.0	11
61	Transmission Line Model of Graphene Nanoribbon Interconnects. Nanoscience and Nanotechnology Letters, 2013, 5, 1207-1216.	0.4	11
62	A Frequency Stable Volume Integral Equation Method for Anisotropic Scatterers. IEEE Transactions on Antennas and Propagation, 2017, 65, 1224-1235.	5.1	11
63	Anomalous electromagnetic coupling via entanglement at the nanoscale. New Journal of Physics, 2017, 19, 023014.	2.9	11
64	Temperature effects on electrical performance of carbonâ€based nanoâ€interconnects at chip and package level. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2013, 26, 560-572.	1.9	10
65	Electromagnetic modes and resonances of two-dimensional bodies. Physical Review B, 2019, 99, .	3.2	10
66	Nonuniform Transmission Lines. , 2001, , 265-304.		9
67	Magnetoquasistatic resonances of small dielectric objects. Physical Review Research, 2020, 2, .	3.6	9
68	On the dynamic equations of linear multiconductor transmission lines with terminal nonlinear multiport resistors. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1998, 45, 812-829.	0.1	8
69	Forces in magnetic fluids subject to stationary magnetic fields. IEEE Transactions on Magnetics, 2003, 39, 2657-2659.	2.1	8
70	Metallic Carbon Nanotube Interconnects, Part I: a Fluid Model and a 3D Integral Formulation. , 2006, , .		8
71	Comparison between metallic carbon nanotube and copper future VLSI nano-interconnects. , 2007, , .		8
72	Linearized Fluid Model for Plasmon Oscillations in Metallic Nanoparticles. IEEE Transactions on Magnetics, 2008, 44, 822-825.	2.1	8

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73	Computation of Resonant Modes and Frequencies for Saturated Ferromagnetic Nanoparticles. IEEE Transactions on Magnetics, 2008, 44, 3141-3144.	2.1	8
74	Spectral theory of electromagnetic scattering by a coated sphere. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 1524.	2.1	8
75	Numerical analysis of time-dependent field perturbations due to gaps and holes in the shell of a reverse field pinch device. IEEE Transactions on Magnetics, 1985, 21, 2400-2403.	2.1	7
76	A mixed frequency and time domain approach for accurate evaluation of the dynamics of lemp-excited lossy multiconductor power lines. Electrical Engineering, 2001, 83, 147-155.	2.0	7
77	Electromagnetic models for metallic carbon nanotube interconnects. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2007, 26, 571-585.	0.9	7
78	Magnetization normal oscillation modes in saturated ferromagnetic nanoparticles. Physica B: Condensed Matter, 2008, 403, 242-244.	2.7	7
79	Dipolar mode localization and spectral gaps in quasi-periodic arrays of ferromagnetic nanoparticles. Physical Review B, 2009, 79, .	3.2	7
80	AN HYBRID MODEL FOR THE EVALUATION OF THE FULL-WAVE FAR-FIELD RADIATED EMISSION FROM PCB TRACES. Progress in Electromagnetics Research, 2010, 101, 125-138.	4.4	7
81	Numerical Modeling for the Analysis of Plasmon Oscillations in Metallic Nanoparticles. IEEE Transactions on Antennas and Propagation, 2010, 58, 2920-2933.	5.1	7
82	Electrical behaviour of carbon nanotube Through-Silicon Vias. , 2011, , .		7
83	GPU-accelerated T-matrix algorithm for light-scattering simulations. Journal of Computational Physics, 2012, 231, 5640-5652.	3.8	7
84	Uniqueness of solution for linear transmission lines with nonlinear terminal resistors. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1997, 44, 569-582.	0.1	6
85	Comparison between theory and simulations for longitudinal instabilities of coasting beams. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1998, 415, 411-416.	1.6	6
86	Fluid description of the longitudinal instability in high current coasting beams. Physics of Plasmas, 1999, 6, 4349-4359.	1.9	6
87	Metallic Carbon Nanotube Interconnects, Part II: a Transmission Line Model. , 2006, , .		6
88	High frequency and crosstalk analysis of VLSI carbon nanotube nanointerconnects. , 2009, , .		6
89	Quantum theory of radiative decay rate and frequency shift of surface plasmon modes. Physical Review A, 2020, 102, .	2.5	6
90	Dynamics of nonlinearly excited plasma waves. Physics of Fluids, 1988, 31, 848.	1.4	5

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91	Applications of a new model of scalar hysteresis to a series ferroresonant circuit. Journal of Magnetism and Magnetic Materials, 1994, 133, 596-598.	2.3	5
92	A new numerical treatment for Pocklington's integral equation. IEEE Transactions on Magnetics, 1996, 32, 918-921.	2.1	5
93	An analytical approach to optical properties of plasma lenses with a non-linear magnetic field profile. Fusion Engineering and Design, 1996, 32-33, 377-383.	1.9	5
94	Ring capacitance in microstrip. Journal of Electrostatics, 1999, 46, 49-57.	1.9	5
95	Low-Order Identification of Interconnects With the Generalized Method of Characteristics. IEEE Transactions on Electromagnetic Compatibility, 2007, 49, 670-676.	2.2	5
96	A Fast Computation Method for the Analysis of an Array of Metallic Nanoparticles. IEEE Transactions on Magnetics, 2009, 45, 1618-1621.	2.1	5
97	Time-domain formulation of electromagnetic scattering based on a polarization-mode expansion and the principle of least action. Physical Review A, 2021, 104, .	2.5	5
98	A beat wave experiment in an open resonator. Physica Scripta, 1990, T30, 122-126.	2.5	4
99	Three dimensional analysis of nonlinear plasma oscillation. Physica Scripta, 1990, T30, 198-207.	2.5	4
100	Bifurcations and chaos in transmission lines. Archiv Fuer Elektrotechnik, 1996, 79, 165-171.	0.1	4
101	A new technique for simulating nonlinear loaded lossy lines. IEEE Transactions on Magnetics, 1996, 32, 934-937.	2.1	4
102	A hybrid procedure to solve Hallen's problem. IEEE Transactions on Electromagnetic Compatibility, 1996, 38, 495-498.	2.2	4
103	Numerical modelling of the interaction of nanoparticles with electromagnetic waves. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2007, 26, 586-599.	0.9	4
104	Analysis of Multiwall Carbon Nanotubes Using a Three-Dimensional Integral Formulation and a Fluid Model. IEEE Transactions on Magnetics, 2008, 44, 1614-1617.	2.1	4
105	Finite element computations of resonant modes for small magnetic particles. Journal of Applied Physics, 2009, 105, .	2.5	4
106	Assessment of the Electromagnetic Disturbance of a Glass Fiber Reinforced Composite Fencing Structure. Journal of Composites for Construction, 2010, 14, 629-635.	3.2	4
107	Numerical modeling for plasmonics. International Journal of Applied Electromagnetics and Mechanics, 2011, 35, 79-91.	0.6	4
108	Cloaking of arbitrarily shaped objects with homogeneous coatings. Physical Review B, 2014, 89, .	3.2	4

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109	On small signal equivalent circuit models for quantum dots. International Journal of Circuit Theory and Applications, 2017, 45, 935-950.	2.0	4
110	Saturation and cross-field coupling of beat wave driven 3-D plasma waves. Plasma Physics and Controlled Fusion, 1989, 31, 1381-1389.	2.1	3
111	A numerical analysis of the behaviour of the Galerkin equations relevant to electromagnetic wave propagation in nonlinear media. IEEE Transactions on Magnetics, 1994, 30, 3196-3199.	2.1	3
112	A new method to compute the capacitance of the circular patch resonator. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 1996, 15, 73-85.	0.9	3
113	On the uniqueness of the numerical solution of non-linearly loaded lossy transmission lines. International Journal of Circuit Theory and Applications, 1999, 27, 455-472.	2.0	3
114	Analysis of plasmon oscillations in metallic nanoparticles. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2007, 26, 626-639.	0.9	3
115	A general transmission line model for conventional metallic nanowires and innovative carbon nano-interconnects. , 2013, , .		3
116	Simple Theoretical Considerations for Blockâ€Copolymerâ€Based Plasmonic Metamaterials. Macromolecular Symposia, 2016, 359, 72-78.	0.7	3
117	A Microwave-Driven Beat Wave Accelerator for Scaled Experments. IEEE Transactions on Plasma Science, 1987, 15, 179-185.	1.3	2
118	Chaotic dynamics in a simple electromagnetic system. Il Nuovo Cimento B, 1994, 109, 911-916.	0.1	2
119	Some integrals involving Bessel functions. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1995, 110, 441-454.	0.2	2
120	A new method to compute the longitudinal coupling impedance of a drift tube. Il Nuovo Cimento A, 1996, 109, 99-109.	0.2	2
121	A new model of static scalar hysteresis. Journal of Magnetism and Magnetic Materials, 1996, 160, 89-90.	2.3	2
122	Time-domain two-port representations of a lossy line. Electrical Engineering, 1997, 80, 235-240.	2.0	2
123	Time-domain two-port representation of some nonuniform two-conductor transmission lines. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2002, 49, 1639-1645.	0.1	2
124	Analysis of interconnects in huge frequency ranges with a 3-d superficial integral formulation. , 0, , .		2
125	Signal integrity analysis of high-speed interconnects through a full-wave transmission line model. , 0, , .		2
126	Full-wave Numerical Analysis of Single-Layered Substrate Planar Interconnects. , 2006, , .		2

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127	Electromagnetic and circuital modeling of carbon nanotube interconnects. , 2008, , .		2
128	Signal integrity analysis of carbon nanotube on-chip interconnects. , 2009, , .		2
129	Block-copolymer-based plasmonic metamaterials. , 2013, , .		2
130	Scattering properties of carbon nanotubes. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2013, 32, 1793-1808.	0.9	2
131	A Full-Retarded Spectral Technique for the Analysis of Fano Resonances in a Dielectric Nanosphere. Springer Series in Optical Sciences, 2018, , 185-218.	0.7	2
132	Electromagnetic Scattering Resonances of Quasi-1-D Nanoribbons. IEEE Transactions on Antennas and Propagation, 2019, 67, 5497-5506.	5.1	2
133	Volterraâ€™s series solutions of free boundary plasma equilibria. Physics of Fluids, 1987, 30, 409.	1.4	1
134	A plasma lens for the CERN Antiproton Collector scaled from model and experiment. , 0, , .		1
135	Coupling of a nonlinear diffusive electromagnetic system to a linear electric circuit. IEEE Transactions on Magnetics, 1992, 28, 1307-1310.	2.1	1
136	Magnetic field reconstruction with optical fiber sensors in plasma lenses. IEEE Transactions on Plasma Science, 1995, 23, 381-387.	1.3	1
137	Time domain analysis of a charged particle travelling along the axis of a circular waveguide. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1996, 111, 659-664.	0.2	1
138	Numerical solution of the Maxwell equations in nonlinear media. IEEE Transactions on Magnetics, 1996, 32, 950-953.	2.1	1
139	Deformations of polarizable fluids subject to stationary electromagnetic fields. IEEE Transactions on Magnetics, 2003, 39, 1440-1443.	2.1	1
140	A full-wave model for the analysis of the high-frequency behavior of open interconnect structures. , 2003, , .		1
141	Evaluation of Crosstalk in High-Frequency Interconnects with an Enhanced Transmission Line Model. , 2006, , .		1
142	Scattering properties of carbon nanotube arrays. International Journal of Microwave and Wireless Technologies, 2010, 2, 445-452.	1.9	1
143	Modeling carbon nanotube bundles for future on-chip nano-interconnects. , 2011, , .		1
144	A temperature-dependent circuit model for carbon-based on-chip global interconnects. , 2012, , .		1

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145	Electrical Propagation Models for Single- and Multi-Wall Carbon Nanotubes. Journal of Nanoelectronics and Optoelectronics, 2012, 7, 12-16.	0.5	1
146	A one-dimensional solution of the homogeneous diffusion equation. IEEE Transactions on Education, 1989, 32, 454-456.	2.4	0
147	A qualitative analysis of the behaviour of the Galerkin equations relevant to non-linear eddy current problems. International Journal for Numerical Methods in Engineering, 1995, 38, 631-647.	2.8	0
148	Capacitance of a cylindrical system. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1996, 111, 769-781.	0.2	0
149	Report of the working group on plasma phenomena in beams. AIP Conference Proceedings, 1997, , .	0.4	0
150	Electromagnetic waves dynamics in a nonlinear dielectric slab by the method of characteristics. Electrical Engineering, 1997, 80, 5-12.	2.0	0
151	Theory and simulations of intense laser cooled coasting beams. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 441, 191-195.	1.6	0
152	Ideal Multiconductor Transmission Lines. , 2001, , 93-127.		0
153	Lossy Multiconductor Transmission Lines. , 2001, , 215-263.		0
154	A new approach to computations of forces in magnetic fluids. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 657-658.	2.3	0
155	Broad-Band Characterization of Conductors with Arbitrary Topology Using a Surface Integral Formulation. , 2006, , .		0
156	Plasmonic, Carbon Nanotube and Conventional nano-interconnects: a comparison of propagation properties. , 2008, , .		0
157	Quantum entanglement in electric circuits: From anomalous crosstalk to electromagnetic compatibility in nano-electronics. , 2016, , .		0
158	Electromagnetic Scattering by Networks of High-Permittivity Thin Wires. Physical Review Applied, 2021, 16, .	3.8	0
159	Genetically Engineered Plasmonic Nano-Arrays. , 2012, , .		0