Giovanni Miano

List of Publications by Year
in descending order

159 papers	2,544 citations	186265 28 h-index	254184 43 g-index
166 all docs	166 docs citations	166 times ranked	2393 citing authors

#	Article	IF	Citations
1	Electromagnetic Scattering by Networks of High-Permittivity Thin Wires. Physical Review Applied, 2021, 16, .	3.8	0
2	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
3	Quantum theory of radiative decay rate and frequency shift of surface plasmon modes. Physical Review A, 2020, 102, .	2.5	6
4	Magnetoquasistatic resonances of small dielectric objects. Physical Review Research, 2020, 2, .	3.6	9
5	Full-wave electromagnetic modes and hybridization in nanoparticle dimers. Scientific Reports, 2019, 9, 14524.	3.3	23
6	Electromagnetic Scattering Resonances of Quasi-1-D Nanoribbons. IEEE Transactions on Antennas and Propagation, 2019, 67, 5497-5506.	5.1	2
7	Electromagnetic modes and resonances of two-dimensional bodies. Physical Review B, 2019, 99, .	3.2	10
8	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
9	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
10	A Frequency Stable Volume Integral Equation Method for Anisotropic Scatterers. IEEE Transactions on Antennas and Propagation, 2017, 65, 1224-1235.	5.1	11
11	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
12	Anomalous electromagnetic coupling via entanglement at the nanoscale. New Journal of Physics, 2017, 19, 023014.	2.9	11
13	On small signal equivalent circuit models for quantum dots. International Journal of Circuit Theory and Applications, 2017, 45, 935-950.	2.0	4
14	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
15	Quantum entanglement in electric circuits: From anomalous crosstalk to electromagnetic compatibility in nano-electronics. , 2016, , .		0
16	Material-independent modes for electromagnetic scattering. Physical Review B, 2016, 94, .	3.2	21
17	Simple Theoretical Considerations for Blockâ€Copolymerâ€Based Plasmonic Metamaterials. Macromolecular Symposia, 2016, 359, 72-78.	0.7	3
18	Nanoscale Electromagnetic Compatibility: Quantum Coupling and Matching in Nanocircuits. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 1645-1654.	2.2	24

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19	Electrical Properties of Graphene for Interconnect Applications. Applied Sciences (Switzerland), 2014, 4, 305-317.	2.5	31
20	Investigation of Plasmonic Resonances in Mismatched Gold Nanocone Dimers. Plasmonics, 2014, 9, 35-45.	3.4	17
21	Full-Wave Analytical Solution of Second-Harmonic Generation in Metal Nanospheres. Plasmonics, 2014, 9, 151-166.	3.4	24
22	Size-dependent second-harmonic generation from gold nanoparticles. Physical Review B, 2014, 89, .	3.2	38
23	Cloaking of arbitrarily shaped objects with homogeneous coatings. Physical Review B, 2014, 89, .	3.2	4
24	Block-copolymer-based plasmonic metamaterials. , 2013, , .		2
25	A general transmission line model for conventional metallic nanowires and innovative carbon nano-interconnects. , 2013, , .		3
26	Plasmonic Fano Resonances in Single-Layer Gold Conical Nanoshells. Plasmonics, 2013, 8, 1429-1437.	3.4	30
27	Higher Order Tunable Fano Resonances in Multilayer Nanocones. Plasmonics, 2013, 8, 1023-1034.	3.4	24
28	Number of Conducting Channels for Armchair and Zig-Zag Graphene Nanoribbon Interconnects. IEEE Nanotechnology Magazine, 2013, 12, 817-823.	2.0	28
29	Theory of coupled plasmon modes and Fano-like resonances in subwavelength metal structures. Physical Review B, 2013, 88, .	3.2	53
30	Overview of the JET results with the ITER-like wall. Nuclear Fusion, 2013, 53, 104002.	3.5	70
31	Circuit Models of Carbon-Based Interconnects for Nanopackaging. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2013, 3, 1926-1937.	2.5	35
32	Generation of second harmonic radiation from sub-stoichiometric silicon nitride thin films. Applied Physics Letters, 2013, 102, 141114.	3.3	21
33	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
34	Transmission Line Model of Graphene Nanoribbon Interconnects. Nanoscience and Nanotechnology Letters, 2013, 5, 1207-1216.	0.4	11
35	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
36	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

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37	Multipolar second harmonic generation from planar arrays of Au nanoparticles. Optics Express, 2012, 20, 15797.	3.4	43
38	Transmission-Line Model for Multiwall Carbon Nanotubes With Intershell Tunneling. IEEE Nanotechnology Magazine, 2012, 11, 554-564.	2.0	25
39	A temperature-dependent circuit model for carbon-based on-chip global interconnects. , 2012, , .		1
40	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
41	GPU-accelerated T-matrix algorithm for light-scattering simulations. Journal of Computational Physics, 2012, 231, 5640-5652.	3.8	7
42	Genetically Engineered Plasmonic Nanoarrays. Nano Letters, 2012, 12, 2037-2044.	9.1	102
43	Electrical Modeling of Carbon Nanotube Vias. IEEE Transactions on Electromagnetic Compatibility, 2012, 54, 158-166.	2.2	28
44	Electrical Propagation Models for Single- and Multi-Wall Carbon Nanotubes. Journal of Nanoelectronics and Optoelectronics, 2012, 7, 12-16.	0.5	1
45	Genetically Engineered Plasmonic Nano-Arrays. , 2012, , .		0
46	Modeling carbon nanotube bundles for future on-chip nano-interconnects. , 2011, , .		1
47	Electrical behaviour of carbon nanotube Through-Silicon Vias. , 2011, , .		7
48	On the Evaluation of the Number of Conducting Channels in Multiwall Carbon Nanotubes. IEEE Nanotechnology Magazine, 2011, 10, 1221-1223.	2.0	25
49	Numerical modeling for plasmonics. International Journal of Applied Electromagnetics and Mechanics, 2011, 35, 79-91.	0.6	4
50	Signal Propagation in Carbon Nanotubes of Arbitrary Chirality. IEEE Nanotechnology Magazine, 2011, 10, 135-149.	2.0	53
51	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
52	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
53	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
54	Scattering properties of carbon nanotube arrays. International Journal of Microwave and Wireless Technologies, 2010, 2, 445-452.	1.9	1

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55	Particle-swarm optimization of broadband nanoplasmonic arrays. Optics Letters, 2010, 35, 133.	3.3	81
56	Hydrodynamic model for the signal propagation along carbon nanotubes. Journal of Nanophotonics, 2010, 4, 041695.	1.0	20
57	Size and temperature effects on the resistance of copper and carbon nanotubes nano-interconnects. , 2010, , .		23
58	Numerical Modeling for the Analysis of Plasmon Oscillations in Metallic Nanoparticles. IEEE Transactions on Antennas and Propagation, 2010, 58, 2920-2933.	5.1	7
59	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
60	Dipolar mode localization and spectral gaps in quasi-periodic arrays of ferromagnetic nanoparticles. Physical Review B, 2009, 79, .	3.2	7
61	Finite element computations of resonant modes for small magnetic particles. Journal of Applied Physics, 2009, 105, .	2.5	4
62	A Fast Computation Method for the Analysis of an Array of Metallic Nanoparticles. IEEE Transactions on Magnetics, 2009, 45, 1618-1621.	2.1	5
63	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
64	The role of nanoparticle shapes and deterministic aperiodicity for the design of nanoplasmonic arrays. Optics Express, 2009, 17, 9648.	3.4	54
65	Nanoplasmonics of prime number arrays. Optics Express, 2009, 17, 24288.	3.4	19
66	High frequency and crosstalk analysis of VLSI carbon nanotube nanointerconnects. , 2009, , .		6
67	A New Circuit Model for Carbon Nanotube Interconnects With Diameter-Dependent Parameters. IEEE Nanotechnology Magazine, 2009, 8, 345-354.	2.0	50
68	Signal integrity analysis of carbon nanotube on-chip interconnects. , 2009, , .		2
69	A transmission line model for metallic carbon nanotube interconnects. International Journal of Circuit Theory and Applications, 2008, 36, 31-51.	2.0	65
70	Magnetization normal oscillation modes in saturated ferromagnetic nanoparticles. Physica B: Condensed Matter, 2008, 403, 242-244.	2.7	7
71	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
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	A Transmission-Line Model for Full-Wave Analysis of Mixed-Mode Propagation. IEEE Transactions on Advanced Packaging, 2008, 31, 275-284.	1.6	16
74	Plasmonic, Carbon Nanotube and Conventional nano-interconnects: a comparison of propagation properties. , 2008, , .		0
75	Performance Comparison Between Metallic Carbon Nanotube and Copper Nano-Interconnects. IEEE Transactions on Advanced Packaging, 2008, 31, 692-699.	1.6	50
76	Computation of Resonant Modes and Frequencies for Saturated Ferromagnetic Nanoparticles. IEEE Transactions on Magnetics, 2008, 44, 3141-3144.	2.1	8
77	Electromagnetic and circuital modeling of carbon nanotube interconnects. , 2008, , .		2
78	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
79	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
80	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
81	Comparison between metallic carbon nanotube and copper future VLSI nano-interconnects. , 2007, , .		8
82	Low-Order Identification of Interconnects With the Generalized Method of Characteristics. IEEE Transactions on Electromagnetic Compatibility, 2007, 49, 670-676.	2.2	5
83	Analysis of Dynamics of Excitation and Dephasing of Plasmon Resonance Modes in Nanoparticles. Physical Review Letters, 2007, 98, 147401.	7.8	70
84	Metallic Carbon Nanotube Interconnects, Part II: a Transmission Line Model. , 2006, , .		6
85	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
86	Evaluation of Crosstalk in High-Frequency Interconnects with an Enhanced Transmission Line Model. , 2006, , .		1
87	Metallic Carbon Nanotube Interconnects, Part I: a Fluid Model and a 3D Integral Formulation. , 2006, , .		8
88	Full-wave Numerical Analysis of Single-Layered Substrate Planar Interconnects. , 2006, , .		2
89	Broad-Band Characterization of Conductors with Arbitrary Topology Using a Surface Integral Formulation. , 2006, , .		0
90	Geometrical integration of Landauâ€“Lifshitzâ€“Gilbert equation based on the mid-point rule. Journal of Computational Physics, 2005, 209, 730-753.	3.8	108

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91	Numerical integration of Landauâ€“Lifshitzâ€“Gilbert equation based on the midpoint rule. Journal of Applied Physics, 2005, 97, 10E319.	2.5	24
92	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
93	An enhanced transmission line model for conductors with arbitrary cross sections. IEEE Transactions on Advanced Packaging, 2005, 28, 174-188.	1.6	18
94	An Enhanced Transmission Line Model for Conducting Wires. IEEE Transactions on Electromagnetic Compatibility, 2004, 46, 512-528.	2.2	44
95	A new approach to computations of forces in magnetic fluids. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 657-658.	2.3	0
96	Full-wave transmission-line theory. IEEE Transactions on Magnetics, 2003, 39, 1594-1597.	2.1	14
97	Deformations of polarizable fluids subject to stationary electromagnetic fields. IEEE Transactions on Magnetics, 2003, 39, 1440-1443.	2.1	1
98	A full-wave model for the analysis of the high-frequency behavior of open interconnect structures. , 2003, , .		1
99	Forces in magnetic fluids subject to stationary magnetic fields. IEEE Transactions on Magnetics, 2003, 39, 2657-2659.	2.1	8
100	Overview of JET results. Nuclear Fusion, 2003, 43, 1540-1554.	3.5	38
101	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
102	Ideal Multiconductor Transmission Lines. , 2001, , 93-127.		0
103	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
104	Lossy Multiconductor Transmission Lines. , 2001, , 215-263.		0
105	Nonuniform Transmission Lines. , 2001, , 265-304.		9
106	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
107	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
108	Eddy current losses in ferromagnetic laminations. Journal of Applied Physics, 2000, 87, 6923-6925.	2.5	36

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109	Fluid description of the longitudinal instability in high current coasting beams. Physics of Plasmas, 1999, 6, 4349-4359.	1.9	6
110	Ring capacitance in microstrip. Journal of Electrostatics, 1999, 46, 49-57.	1.9	5
111	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
112	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
113	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
114	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
115	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
116	Report of the working group on plasma phenomena in beams. AIP Conference Proceedings, 1997, , .	0.4	0
117	Models of magnetic hysteresis based on play and stop hysterons. IEEE Transactions on Magnetics, 1997, 33, 4417-4426.	2.1	136
118	Time-domain two-port representations of a lossy line. Electrical Engineering, 1997, 80, 235-240.	2.0	2
119	Electromagnetic waves dynamics in a nonlinear dielectric slab by the method of characteristics. Electrical Engineering, 1997, 80, 5-12.	2.0	0
120	A new numerical treatment for Pocklington's integral equation. IEEE Transactions on Magnetics, 1996, 32, 918-921.	2.1	5
121	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
122	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
123	Bifurcations and chaos in transmission lines. Archiv Fuer Elektrotechnik, 1996, 79, 165-171.	0.1	4
124	Numerical solution of the Maxwell equations in nonlinear media. IEEE Transactions on Magnetics, 1996, 32, 950-953.	2.1	1
125	A new technique for simulating nonlinear loaded lossy lines. IEEE Transactions on Magnetics, 1996, 32, 934-937.	2.1	4
126	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

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127	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
128	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
129	A new method to compute the longitudinal coupling impedance of a drift tube. Il Nuovo Cimento A, 1996, 109, 99-109.	0.2	2
130	A new model of static scalar hysteresis. Journal of Magnetism and Magnetic Materials, 1996, 160, 89-90.	2.3	2
131	A hybrid procedure to solve Hallen's problem. IEEE Transactions on Electromagnetic Compatibility, 1996, 38, 495-498.	2.2	4
132	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
133	Comparison of different hysteresis models in FE analysis of magnetic field diffusion. IEEE Transactions on Magnetics, 1995, 31, 1789-1792.	2.1	12
134	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
135	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
136	A new method of solution of HallÃ©nâ€™s problem. Journal of Mathematical Physics, 1995, 36, 4087-4099.	1.1	15
137	Magnetic field reconstruction with optical fiber sensors in plasma lenses. IEEE Transactions on Plasma Science, 1995, 23, 381-387.	1.3	1
138	A new model of scalar magnetic hysteresis. IEEE Transactions on Magnetics, 1994, 30, 3367-3370.	2.1	11
139	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
140	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
141	Chaotic dynamics in a simple electromagnetic system. Il Nuovo Cimento B, 1994, 109, 911-916.	0.1	2
142	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
143	Periodic solutions of nonlinear eddy current problems in three-dimensional geometries. IEEE Transactions on Magnetics, 1992, 28, 1118-1121.	2.1	17
144	Coupling of a nonlinear diffusive electromagnetic system to a linear electric circuit. IEEE Transactions on Magnetics, 1992, 28, 1307-1310.	2.1	1

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145	On the numerical solution of the nonlinear three-dimensional eddy current problem. IEEE Transactions on Magnetics, 1991, 27, 3990-3995.	2.1	14
146	The plasma undulator. Physica Scripta, 1990, T30, 192-197.	2.5	20
147	A beat wave experiment in an open resonator. Physica Scripta, 1990, T30, 122-126.	2.5	4
148	Three dimensional analysis of nonlinear plasma oscillation. Physica Scripta, 1990, T30, 198-207.	2.5	4
149	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
150	A one-dimensional solution of the homogeneous diffusion equation. IEEE Transactions on Education, 1989, 32, 454-456.	2.4	0
151	Dynamics of nonlinearly excited plasma waves. Physics of Fluids, 1988, 31, 848.	1.4	5
152	Volterraâ€™s series solutions of free boundary plasma equilibria. Physics of Fluids, 1987, 30, 409.	1.4	1
153	A Microwave-Driven Beat Wave Accelerator for Scaled Experments. IEEE Transactions on Plasma Science, 1987, 15, 179-185.	1.3	2
154	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
155	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
156	A T formulation for 3D finite element Eddy current computation. IEEE Transactions on Magnetics, 1985, 21, 2299-2302.	2.1	25
157	A plasma lens for the CERN Antiproton Collector scaled from model and experiment. , 0, , .		1
158	Analysis of interconnects in huge frequency ranges with a 3-d superficial integral formulation. , 0, , .		2
159	Signal integrity analysis of high-speed interconnects through a full-wave transmission line model. , 0, , .		2