Salvatore Campione

List of Publications by Year
in descending order

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149 papers	4,112 citations	117625 34 h-index	118850 62 g-index
154 all docs	154 docs citations	154 times ranked	3676 citing authors

#	Article	IF	Citations
1	Polarization-Independent Silicon Metadevices for Efficient Optical Wavefront Control. Nano Letters, 2015, 15, 5369-5374.	9.1	344
2	Broken Symmetry Dielectric Resonators for High Quality Factor Fano Metasurfaces. ACS Photonics, 2016, 3, 2362-2367.	6.6	271
3	Femtosecond optical polarization switching using a cadmium oxide-based perfect absorber. Nature Photonics, 2017, 11, 390-395.	31.4	245
4	Theory of epsilon-near-zero modes in ultrathin films. Physical Review B, 2015, 91, .	3.2	215
5	Optical magnetic mirrors without metals. Optica, 2014, 1, 250.	9.3	188
6	Enhanced third harmonic generation from the epsilon-near-zero modes of ultrathin films. Applied Physics Letters, 2015, 106, .	3.3	126
7	Phased-array sources based on nonlinear metamaterial nanocavities. Nature Communications, 2015, 6, 7667.	12.8	115
8	High Quality Factor Toroidal Resonances in Dielectric Metasurfaces. ACS Photonics, 2020, 7, 1699-1707.	6.6	112
9	Directional perfect absorption using deep subwavelength low-permittivity films. Physical Review B, 2014, 90, .	3.2	111
10	Electric field enhancement in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>É</mml:mi></mml:math>-near-zero slabs under TM-polarized oblique incidence. Physical Review B, 2013, 87, .	3.2	102
11	Complex modes and near-zero permittivity in 3D arrays of plasmonic nanoshells: loss compensation using gain [Invited]. Optical Materials Express, 2011, 1, 1077.	3.0	101
12	Hyperbolic metamaterial as super absorber for scattered fields generated at its surface. Physical Review B, 2012, 86, .	3.2	98
13	Strong coupling in the sub-wavelength limit using metamaterial nanocavities. Nature Communications, 2013, 4, 2882.	12.8	96
14	Gigahertz speed operation of epsilon-near-zero silicon photonic modulators. Optica, 2018, 5, 233.	9.3	93
15	Tailoring dielectric resonator geometries for directional scattering and Huygensâ€™ metasurfaces. Optics Express, 2015, 23, 2293.	3.4	88
16	Enhanced Magnetic and Electric Fields via Fano Resonances in Metasurfaces of Circular Clusters of Plasmonic Nanoparticles. ACS Photonics, 2014, 1, 254-260.	6.6	73
17	Low-damping epsilon-near-zero slabs: Nonlinear and nonlocal optical properties. Physical Review B, 2013, 87, .	3.2	72
18	Silicon-based optical leaky wave antenna with narrow beam radiation. Optics Express, 2011, 19, 8735.	3.4	69

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19	Nonâ€lithographic SERS Substrates: Tailoring Surface Chemistry for Au Nanoparticle Cluster Assembly. Small, 2012, 8, 2239-2249.	10.0	68
20	Near-Infrared Strong Coupling between Metamaterials and Epsilon-near-Zero Modes in Degenerately Doped Semiconductor Nanolayers. ACS Photonics, 2016, 3, 293-297.	6.6	68
21	Huygensâ€™ Metasurfaces Enabled by Magnetic Dipole Resonance Tuning in Split Dielectric Nanoresonators. Nano Letters, 2017, 17, 4297-4303.	9.1	66
22	Second harmonic generation from metamaterials strongly coupled to intersubband transitions in quantum wells. Applied Physics Letters, 2014, 104, .	3.3	61
23	Directional and monochromatic thermal emitter from epsilon-near-zero conditions in semiconductor hyperbolic metamaterials. Scientific Reports, 2016, 6, 34746.	3.3	50
24	Epsilon-Near-Zero Modes for Tailored Light-Matter Interaction. Physical Review Applied, 2015, 4, .	3.8	46
25	Complex bound and leaky modes in chains of plasmonic nanospheres. Optics Express, 2011, 19, 18345.	3.4	45
26	Experimental verification of epsilon-near-zero plasmon polariton modes in degenerately doped semiconductor nanolayers. Optics Express, 2016, 24, 18782.	3.4	44
27	Active tuning of high-Q dielectric metasurfaces. Applied Physics Letters, 2017, 111, .	3.3	44
28	Gain-assisted harmonic generation in near-zero permittivity metamaterials made of plasmonic nanoshells. New Journal of Physics, 2012, 14, 103016.	2.9	41
29	Second-harmonic double-resonance cones in dispersive hyperbolic metamaterials. Physical Review B, 2014, 89, .	3.2	39
30	Broadband, Highâ€Speed, and Largeâ€Amplitude Dynamic Optical Switching with Yttriumâ€Doped Cadmium Oxide. Advanced Functional Materials, 2020, 30, 1908377.	14.9	38
31	Distributed feedback gallium nitride nanowire lasers. Applied Physics Letters, 2014, 104, .	3.3	36
32	Transient GaAs Plasmonic Metasurfaces at Terahertz Frequencies. ACS Photonics, 2017, 4, 15-21.	6.6	36
33	Submicrometer Epsilon-Near-Zero Electroabsorption Modulators Enabled by High-Mobility Cadmium Oxide. IEEE Photonics Journal, 2017, 9, 1-7.	2.0	36
34	Characterization of complex plasmonic modes in two-dimensional periodic arrays of metal nanospheres. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 1446.	2.1	34
35	Ewald method for 3D periodic dyadic Green's functions and complex modes in composite materials made of spherical particles under the dual dipole approximation. Radio Science, 2012, 47, .	1.6	34
36	Composite material made of plasmonic nanoshells with quantum dot cores: loss-compensation and Îµ-near-zero physical properties. Nanotechnology, 2012, 23, 235703.	2.6	33

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37	Complex modes and effective refractive index in 3D periodic arrays of plasmonic nanospheres. Optics Express, 2011, 19, 26027.	3.4	31
38	An optical leaky wave antenna with Si perturbations inside a resonator for enhanced optical control of the radiation. Optics Express, 2012, 20, 21305.	3.4	31
39	Compact epsilon-near-zero silicon photonic phase modulators. Optics Express, 2018, 26, 21594.	3.4	31
40	Viscoelastic optical nonlocality of low-loss epsilon-near-zero nanofilms. Scientific Reports, 2018, 8, 9335.	3.3	30
41	Control of Strong Lightâ€“Matter Coupling Using the Capacitance of Metamaterial Nanocavities. Nano Letters, 2015, 15, 1959-1966.	9.1	28
42	Broadband and Efficient Second-Harmonic Generation from a Hybrid Dielectric Metasurface/Semiconductor Quantum-Well Structure. ACS Photonics, 2019, 6, 1458-1465.	6.6	26
43	Comparison of electric field enhancements: Linear and triangular oligomers versus hexagonal arrays of plasmonic nanospheres. Optics Express, 2013, 21, 7957.	3.4	25
44	Optical Strong Coupling between near-Infrared Metamaterials and Intersubband Transitions in III-Nitride Heterostructures. ACS Photonics, 2014, 1, 906-911.	6.6	25
45	Near-infrared surface plasmon polariton dispersion control with hyperbolic metamaterials. Optics Express, 2013, 21, 11107.	3.4	24
46	Electrodynamic modeling of strong coupling between a metasurface and intersubband transitions in quantum wells. Physical Review B, 2014, 89, .	3.2	24
47	Directing Cluster Formation of Au Nanoparticles from Colloidal Solution. Langmuir, 2013, 29, 4242-4251.	3.5	22
48	An All-Dielectric Polaritonic Metasurface with a Giant Nonlinear Optical Response. Nano Letters, 2022, 22, 896-903.	9.1	22
49	Artificial magnetism at terahertz frequencies from three-dimensional lattices of TiO_2 microspheres accounting for spatial dispersion and magnetoelectric coupling. Journal of the Optical Society of America B: Optical Physics, 2014, 31, 1078.	2.1	21
50	Theory of a Directive Optical Leaky Wave Antenna Integrated into a Resonator and Enhancement of Radiation Control. Journal of Lightwave Technology, 2014, 32, 1741-1749.	4.6	21
51	Wideband Planar Transmission Line Hyperbolic Metamaterial for Subwavelength Focusing and Resolution. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 4110-4117.	4.6	20
52	Magnetoinductive Waves and Complex Modes in Two-Dimensional Periodic Arrays of Split Ring Resonators. IEEE Transactions on Antennas and Propagation, 2013, 61, 3554-3563.	5.1	19
53	Fano resonances in metasurfaces made of linear trimers of plasmonic nanoparticles. Optics Letters, 2013, 38, 5216.	3.3	18
54	Fano collective resonance as complex mode in a two-dimensional planar metasurface of plasmonic nanoparticles. Applied Physics Letters, 2014, 105, .	3.3	18

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55	Optical properties of transiently-excited semiconductor hyperbolic metamaterials. Optical Materials Express, 2015, 5, 2385.	3.0	18
56	Strong Coupling in All-Dielectric Intersubband Polaritonic Metasurfaces. Nano Letters, 2021, 21, 367-374.	9.1	18
57	Effective medium representation and complex modes in 3D periodic metamaterials made of cubic resonators with large permittivity at mid-infrared frequencies. Photonics and Nanostructures - Fundamentals and Applications, 2013, 11, 423-435.	2.0	17
58	Three dimensional metafilms with dual channel unit cells. Applied Physics Letters, 2017, 110, 143107.	3.3	16
59	Realizing high-quality, ultralarge momentum states and ultrafast topological transitions using semiconductor hyperbolic metamaterials. Journal of the Optical Society of America B: Optical Physics, 2015, 32, 1809.	2.1	14
60	SHIELDING EFFECTIVENESS OF MULTIPLE-SHIELD CABLES WITH ARBITRARY TERMINATIONS VIA TRANSMISSION LINE ANALYSIS. Progress in Electromagnetics Research C, 2016, 65, 93-102.	0.9	14
61	Symmetric and antisymmetric resonances in a pair of metal-dielectric nanoshells: tunability and closed-form formulas. Journal of Nanophotonics, 2010, 4, 041577.	1.0	13
62	Monolithic metallic nanocavities for strong light-matter interaction to quantum-well intersubband excitations. Optics Express, 2013, 21, 32572.	3.4	13
63	Complex modes and artificial magnetism in three-dimensional periodic arrays of titanium dioxide microspheres at millimeter waves. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 1697.	2.1	12
64	Surface plasmon polariton enhanced ultrathin nano-structured CdTe solar cell. Optics Express, 2014, 22, A1372.	3.4	11
65	Array of dipoles near a hyperbolic metamaterial: Evanescent-to-propagating Floquet wave transformation. Physical Review B, 2014, 89, .	3.2	10
66	A metasurface optical modulator using voltage-controlled population of quantum well states. Applied Physics Letters, 2018, 113, 201101.	3.3	10
67	Spectral filtering using active metasurfaces compatible with narrow bandgap III-V infrared detectors. Optics Express, 2016, 24, 21512.	3.4	9
68	Low dissipation spectral filtering using a field-effect tunable IIIâ€“V hybrid metasurface. Applied Physics Letters, 2018, 113, .	3.3	9
69	Multipolar second harmonic generation in a symmetric nonlinear metamaterial. Scientific Reports, 2017, 7, 8101.	3.3	8
70	Multipole-Based Cable Braid Electromagnetic Penetration Model: Electric Penetration Case. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 444-452.	2.2	8
71	Semiconductor Hyperbolic Metamaterials at the Quantum Limit. Scientific Reports, 2018, 8, 16694.	3.3	8
72	Symmetric triangle quadrature rules for arbitrary functions. Computers and Mathematics With Applications, 2020, 79, 2885-2896.	2.7	8

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73	Electromagnetic pulse excitation of finite- and infinitely-long lossy conductors over a lossy ground plane. Journal of Electromagnetic Waves and Applications, 2017, 31, 209-224.	1.6	7
74	Perturbation theory to model shielding effectiveness of cavities loaded with electromagnetic dampeners. Electronics Letters, 2019, 55, 644-646.	1.0	7
75	Electromagnetic coupling and array packing induce exchange of dominance on complex modes in 3D periodic arrays of spheres with large permittivity. Journal of the Optical Society of America B: Optical Physics, 2016, 33, 261.	2.1	6
76	Three-dimensional cut wire pair behavior and controllable bianisotropic response in vertically oriented meta-atoms. Optics Express, 2017, 25, 32198.	3.4	6
77	Enhancing Absorption Bandwidth through Vertically Oriented Metamaterials. Applied Sciences (Switzerland), 2019, 9, 2223.	2.5	6
78	Penetration Through Slots in Cylindrical Cavities Operating at Fundamental Cavity Modes. IEEE Transactions on Electromagnetic Compatibility, 2020, 62, 1980-1988.	2.2	6
79	An optical leaky wave antenna with silicon perturbations for electronic control. Proceedings of SPIE, 2011, , .	0.8	5
80	Critical excitation-rate enhancement of a dipolar scatterer close to a plasmonic nanosphere and importance of multipolar self-coupling. Physical Review B, 2014, 90, .	3.2	5
81	FIRST PRINCIPLES MODEL OF ELECTRIC CABLE BRAID PENETRATION WITH DIELECTRICS. Progress in Electromagnetics Research C, 2018, 82, 1-11.	0.9	4
82	Characterization and integration of the singular test integrals in the methodâ€ofâ€moments implementation of the electricâ€field integral equation. Engineering Analysis With Boundary Elements, 2021, 124, 185-193.	3.7	4
83	Closed form formulas and tunability of resonances in pairs of gold-dielectric nanoshells. Proceedings of SPIE, 2010, , .	0.8	3
84	LINEAR AND PLANAR PERIODIC ARRAYS OF METALLIC NANOSPHERES: FABRICATION, OPTICAL PROPERTIES AND APPLICATIONS. , 2011, , 141-194.		3
85	Characterization of the optical modes in 3D-periodic arrays of metallic nanospheres. , 2011, , .		3
86	Control of the radiation of a silicon-based optical leaky wave antenna through optical pumping. , 2011, , .		3
87	Experimental demonstration of directive Si3N4optical leaky wave antennas with semiconductor perturbations at near infrared frequencies. , 2015, , .		3
88	Dipole Approximation to Predict the Resonances of Dimers Composed of Dielectric Resonators for Directional Emission. Radio Science, 2017, 52, 1235-1241.	1.6	3
89	Experimental Evidence of the Lorentz-Like Effective Medium Resonance in Semiconductor Hyperbolic Metamaterials Using Strong Coupling to Plasmonic Metasurfaces. IEEE Transactions on Antennas and Propagation, 2020, 68, 1748-1754.	5.1	3
90	A Method of Moments Wide Band Adaptive Rational Interpolation Method for High-Quality Factor Resonant Cavities. IEEE Transactions on Antennas and Propagation, 2022, 70, 3595-3604.	5.1	3

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91	Description and characterization of the complex modes in a linear chain of gold nanospheres. , 2011, , .		2
92	Dual polarized near-field focusing plate for near-field optical focusing in two dimensions. Optics Express, 2011, 19, 24483.	3.4	2
93	Enhancing radiation control of an optical leaky wave antenna in a resonator. Proceedings of SPIE, 2012, , .	0.8	2
94	Quality factor assessment of finite-size all-dielectric metasurfaces at the magnetic dipole resonance. Nanomaterials and Nanotechnology, 2018, 8, 184798041882016.	3.0	2
95	Improved quantitative circuit model of realistic patch-based nanoantenna-enabled detectors. Journal of the Optical Society of America B: Optical Physics, 2018, 35, 2144.	2.1	2
96	PENETRATION THROUGH SLOTS IN CYLINDRICAL CAVITIES OPERATING AT FUNDAMENTAL CAVITY MODES IN THE PRESENCE OF ELECTROMAGNETIC ABSORBERS. Progress in Electromagnetics Research M, 2020, 96, 119-127.	0.9	2
97	Penetration through slots in cylindrical cavities with cavity modes overlapping with the first slot resonance. Electromagnetics, 2021, 41, 98-109.	0.7	2
98	Vertically oriented metamaterial broadband linear polariser. Electronics Letters, 2018, 54, 584-585.	1.0	2
99	A stable fast solver for quasi-Helmholtz decomposition methods. , 2009, , .		1
100	A dual polarized near-field focusing plate at microwave frequencies providing sub-wavelength focusing in two dimensions. , 2011, , .		1
101	Magnetoinductive waves in 2D periodic arrays of split ring resonators. , 2012, , .		1
102	Substrate effects onto complex modes and optical properties of 2D arrays of linear trimers of plasmonic nanospheres. , 2013, , .		1
103	Concept of an optical leaky-wave antenna embedded in a Fabry-Pérot resonator. , 2013, , .		1
104	Ultra-Strong Light-Matter Interaction with Mid-Infrared Metamaterials. , 2013, , .		1
105	Parametric Analysis of Vertically Oriented Metamaterials for Wideband Omnidirectional Perfect Absorption. , 2018, , .		1
106	Effect of Line-Tower Coupling on E1 Pulse Excitation of an Electrical Transmission Line. , 2020, , .		1
107	Electromagnetic Metamaterials as Artificial Composite Structures. The Electrical Engineering Handbook, 2012, , 595-682.	0.2	1
108	Erbium-based plasmonic-assisted vertical emitter. , 2011, , .		0

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109	A comparison of metalayers based on arrayed pairs of planar conductors. , 2011, , .		0
110	Hiding and absorbing the power emitted by a dipole at the interface of an indefinite medium. , 2012, , .		0
111	Radiation properties of an integrated optical leaky wave antenna with periodic silicon perturbations. , 2012, , .		0
112	Metamaterials based on plasmonic nanoshells and loss-compensation using fluorescent dye molecules and quantum dots. Proceedings of SPIE, 2012, , .	0.8	0
113	Conditions for electric field enhancement in ε-near-zero Slabs under TM-polarized oblique incidence. , 2013, , .		0
114	Absorption of near fields generated by a two-dimensional array of dipoles above a hyperbolic metamaterial. , 2013, , .		0
115	Studying dipole moment modification in a single fluorescent dye beside metallic Nano-Particle based on the Green's function theory. , 2013, , .		0
116	Subwavelength focusing and resolution with hyperbolic transmission line metamaterial. , 2013, , .		0
117	Artificial magnetism at terahertz frequencies in 3D arrays of TiO<inf>2</inf> microspheres including spatial dispersion and magnetoelectric coupling. , 2013, , .		0
118	Increased local density of states and electromagnetic well effect by using very thin hyperbolic metamaterial. , 2013, , .		0
119	Wave dynamics in a hyperbolic metamaterial excited by a two-dimensional periodic array of sources at its surface. , 2013, , .		0
120	Dispersion control of near-infrared surface plasmon polariton using hyperbolic metamaterials. , 2013, , .		0
121	Tailoring the properties of dielectric resonator-based metamaterials. , 2014, , .		0
122	Optical Magnetic Mirrors using All Dielectric Metasurfaces. , 2014, , .		0
123	Gallium Nitride Nanowire Distributed Feedback Lasers. , 2014, , .		0
124	Array-induced Fano resonances make high quality factors possible in plasmonic systems. , 2014, , .		0
125	Metamaterials strongly coupled to intersubband transitions: Circuit model and second order nonlinear processes. , 2014, , .		0
126	Second harmonic generation in quantum wells enhanced via coupling to metamaterials. , 2014, , .		0

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127	Optical leaky wave antennas integrated with resonator topologies. , 2014, , .		0
128	Maximizing Strong Coupling between Metasurface Resonators and Intersubband Transitions. , 2014, , .		0
129	What is an epsilon-near-zero mode?. , 2015, , .		0
130	Modeling shielded cables in Xyce based on transmission-line theory. , 2019, , .		0
131	Hybrid Dielectric Metasurfaces: From Strong Light-Matter Interaction to Extreme Nonlinearities. , 2019, , .		0
132	Penetration Through Slots in Overmoded Cavities. IEEE Transactions on Electromagnetic Compatibility, 2021, , 1-6.	2.2	0
133	Developing Uncertainty Quantification Strategies in Electromagnetic Problems Involving Highly Resonant Cavities. Journal of Verification, Validation and Uncertainty Quantification, 2021, 6, .	0.4	0
134	Second and Third Harmonic Generation at Îµ-Near-Zero Crossing Point in Arrays of Plasmonic Nanoshells. , 2012, , .		0
135	Leaky modes in low-damping Îµ-near-zero slabs. , 2013, , .		0
136	Nonlocal effects on second harmonic generation in low-damping epsilon-near-zero slabs. , 2013, , .		0
137	Influence of the Metamaterial Geometry on Ultra-Strong Light-Matter Interaction. , 2013, , .		0
138	Strong Light-Matter Coupling in Mid-Infrared Monolithic Metamaterial Nanocavities. , 2014, , .		0
139	Third harmonic generation in ultrathin epsilon-near-zero media. , 2015, , .		0
140	Coherent Second Harmonic Generation in a Quantum Well-Metasurface Coupled System. , 2015, , .		0
141	Tailored Light-Matter Interaction through Epsilon-Near-Zero Modes. , 2015, , .		0
142	Ultrafast Dynamics of Epsilon-Near-Zero Modes in GaAs at Terahertz Frequencies. , 2016, , .		0
143	High-Contrast, All-Optical Switching of Infrared Light using a Cadmium Oxide Perfect Absorber. , 2017, , .		0
144	High-Mobility Transparent Conducting Oxides for Compact Epsilon-Near-Zero Silicon Integrated Optical Modulators. , 2017, , .		0

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145	Coupling effects in dense arrays of 3D optical metamaterials. , 2018, , .		0
146	High-Mobility Transparent Conducting Oxides for Compact Epsilon-Near-Zero Silicon Photonic Phase Modulators. , 2019, , .		0
147	A Hybrid Dielectric-Semiconductor Resonant Nanostructure for Broadband and Efficient Second-Harmonic Generation. , 2019, , .		0
148	Broadband, High-Speed, and Extraordinarily Large All-Optical Switching with Yttrium-doped Cadmium Oxide. , 2020, , .		0
149	Intersubband Polaritonics in Dielectric Metasurfaces. , 2020, , .		0