Maria Kafesaki

List of Publications by Year
in descending order

154 papers	9,610 citations	44042 48 h-index	38368 95 g-index
161 all docs	161 docs citations	161 times ranked	6416 citing authors

#	Article	IF	Citations
1	Saturation of the Magnetic Response of Split-Ring Resonators at Optical Frequencies. Physical Review Letters, 2005, 95, 223902.	2.9	559
2	Electric coupling to the magnetic resonance of split ring resonators. Applied Physics Letters, 2004, 84, 2943-2945.	1.5	428
3	Negative refractive index due to chirality. Physical Review B, 2009, 79, .	1.1	359
4	A comparison of graphene, superconductors and metals as conductors for metamaterials and plasmonics. Nature Photonics, 2012, 6, 259-264.	15.6	349
5	Left-handed metamaterials: The fishnet structure and its variations. Physical Review B, 2007, 75, .	1.1	331
6	Effective Medium Theory of Left-Handed Materials. Physical Review Letters, 2004, 93, 107402.	2.9	317
7	Multiple-scattering theory for three-dimensional periodic acoustic composites. Physical Review B, 1999, 60, 11993-12001.	1.1	313
8	Chiral metamaterials: simulations and experiments. Journal of Optics, 2009, 11, 114003.	1.5	273
9	Investigation of magnetic resonances for different split-ring resonator parameters and designs. New Journal of Physics, 2005, 7, 168-168.	1.2	270
10	Frequency Modulation in the Transmittivity of Wave Guides in Elastic-Wave Band-Gap Materials. Physical Review Letters, 2000, 85, 4044-4047.	2.9	247
11	Optically Implemented Broadband Blueshift Switch in the Terahertz Regime. Physical Review Letters, 2011, 106, 037403.	2.9	237
12	Theory and Experiments on Elastic Band Gaps. Physical Review Letters, 2000, 84, 4349-4352.	2.9	206
13	Magnetic response of split-ring resonators in the far-infrared frequency regime. Optics Letters, 2005, 30, 1348.	1.7	199
14	Chiral metamaterials with negative refractive index based on four â€œUâ€•split ring resonators. Applied Physics Letters, 2010, 97, .	1.5	199
15	Negative-Index Materials: New Frontiers in Optics. Advanced Materials, 2006, 18, 1941-1952.	11.1	192
16	Classical vibrational modes in phononic lattices: theory and experiment. Zeitschrift Fur Kristallographie - Crystalline Materials, 2005, 220, .	0.4	189
17	Extremely high <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Q</mml:mi></mml:math> -factor metamaterials due to anapole excitation. Physical Review B, 2017, 95, .	1.1	183
18	Experimental observation of true left-handed transmission peaks in metamaterials. Optics Letters, 2004, 29, 2623.	1.7	160

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19	Dielectric Metamaterials with Toroidal Dipolar Response. Physical Review X, 2015, 5, .	2.8	145
20	Toward Intelligent Metasurfaces: The Progress from Globally Tunable Metasurfaces to Softwareâ€Defined Metasurfaces with an Embedded Network of Controllers. Advanced Optical Materials, 2020, 8, 2000783.	3.6	145
21	Elastic wave band gaps in 3-D periodic polymer matrix composites. Solid State Communications, 1995, 96, 285-289.	0.9	133
22	Experimental Demonstration of Ultrafast THz Modulation in a Graphene-Based Thin Film Absorber through Negative Photoinduced Conductivity. ACS Photonics, 2019, 6, 720-727.	3.2	128
23	Three-Dimensional Infrared Metamaterial with Asymmetric Transmission. ACS Photonics, 2015, 2, 287-294.	3.2	122
24	Controlling the Resonance of a Photonic Crystal Microcavity by a Near-Field Probe. Physical Review Letters, 2005, 95, 153904.	2.9	121
25	Air Bubbles in Water: A Strongly Multiple Scattering Medium for Acoustic Waves. Physical Review Letters, 2000, 84, 6050-6053.	2.9	120
26	Left-handed metamaterials: detailed numerical studies of the transmission properties. Journal of Optics, 2005, 7, S12-S22.	1.5	118
27	Photonic-crystal ultrashort bends with improved transmission and low reflection at 1.55 Î¼m. Applied Physics Letters, 2002, 80, 547-549.	1.5	112
28	Experimental demonstration of a left-handed metamaterial operating at100GHz. Physical Review B, 2006, 73, .	1.1	108
29	Intelligent Metasurfaces with Continuously Tunable Local Surface Impedance for Multiple Reconfigurable Functions. Physical Review Applied, 2019, 11, .	1.5	108
30	Broadband blueshift tunable metamaterials and dual-band switches. Physical Review B, 2009, 79, .	1.1	96
31	Multi-gap individual and coupled split-ring resonator structures. Optics Express, 2008, 16, 18131.	1.7	92
32	Negative refractive index response of weakly and strongly coupled optical metamaterials. Physical Review B, 2009, 80, .	1.1	89
33	Threeâ€Dimensional Metallic Photonic Crystals with Optical Bandgaps. Advanced Materials, 2012, 24, 1101-1105.	11.1	88
34	Design and Development of Software Defined Metamaterials for Nanonetworks. IEEE Circuits and Systems Magazine, 2015, 15, 12-25.	2.6	84
35	Interpretation of the band-structure results for elastic and acoustic waves by analogy with the LCAO approach. Physical Review B, 1995, 52, 13317-13331.	1.1	81
36	Theoretical model of homogeneous metalâ€“insulatorâ€“metal perfect multi-band absorbers for the visible spectrum. Journal Physics D: Applied Physics, 2016, 49, 055104.	1.3	77

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37	Optically controllable THz chiral metamaterials. Optics Express, 2014, 22, 12149.	1.7	74
38	Flexible chiral metamaterials in the terahertz regime: a comparative study of various designs. Optical Materials Express, 2012, 2, 1702.	1.6	72
39	A Multi-Functional Reconfigurable Metasurface: Electromagnetic Design Accounting for Fabrication Aspects. IEEE Transactions on Antennas and Propagation, 2021, 69, 1440-1454.	3.1	71
40	Near-field visualization of light confinement in a photonic crystal microresonator. Optics Letters, 2004, 29, 174.	1.7	70
41	Dynamic response of metamaterials in the terahertz regime: Blueshift tunability and broadband phase modulation. Applied Physics Letters, 2010, 96, .	1.5	67
42	Single and multilayer metamaterials fabricated by nanoimprint lithography. Nanotechnology, 2011, 22, 325301.	1.3	65
43	Pairing Toroidal and Magnetic Dipole Resonances in Elliptic Dielectric Rod Metasurfaces for Reconfigurable Wavefront Manipulation in Reflection. Advanced Optical Materials, 2018, 6, 1800633.	3.6	65
44	Spontaneous emission rates of dipoles in photonic crystal membranes. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 1196.	0.9	58
45	The science of negative index materials. Journal of Physics Condensed Matter, 2008, 20, 304217.	0.7	58
46	Toroidal eigenmodes in all-dielectric metamolecules. Physical Review B, 2016, 94, .	1.1	58
47	Models and measurements for the transmission of submicron-width waveguide bends defined in two-dimensional photonic crystals. IEEE Journal of Quantum Electronics, 2002, 38, 770-785.	1.0	52
48	Left- and right-handed transmission peaks near the magnetic resonance frequency in composite metamaterials. Physical Review B, 2004, 70, .	1.1	51
49	Programmable Metasurfaces: State of the Art and Prospects. , 2018, , .		49
50	Magnetic response of nanoscale left-handed metamaterials. Physical Review B, 2010, 81, .	1.1	48
51	Optically switchable and tunable terahertz metamaterials through photoconductivity. Journal of Optics (United Kingdom), 2012, 14, 114008.	1.0	47
52	Experimental demonstration of negative magnetic permeability in the far-infrared frequency regime. Applied Physics Letters, 2006, 89, 084103.	1.5	46
53	Two-dimensional polaritonic photonic crystals as terahertz uniaxial metamaterials. Physical Review B, 2011, 84, .	1.1	45
54	Epsilon near zero based phenomena in metamaterials. Physical Review B, 2013, 87, .	1.1	45

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55	Passive radiative cooling and other photonic approaches for the temperature control of photovoltaics: a comparative study for crystalline silicon-based architectures. Optics Express, 2020, 28, 18548.	1.7	45
56	Size dependence and convergence of the retrieval parameters of metamaterials. Photonics and Nanostructures - Fundamentals and Applications, 2008, 6, 96-101.	1.0	44
57	Self-organization approach for THz polaritonic metamaterials. Optics Express, 2012, 20, 14663.	1.7	42
58	Exploration of Intercell Wireless Millimeter-Wave Communication in the Landscape of Intelligent Metasurfaces. IEEE Access, 2019, 7, 122931-122948.	2.6	41
59	Spectral gaps for electromagnetic and scalar waves: Possible explanation for certain differences. Physical Review B, 1994, 50, 3393-3396.	1.1	39
60	Connected bulk negative index photonic metamaterials. Optics Letters, 2009, 34, 506.	1.7	39
61	Spontaneous emission in the near field of two-dimensional photonic crystals. Optics Letters, 2005, 30, 3210.	1.7	37
62	Wave guides in two-dimensional elastic wave band-gap materials. Physica B: Condensed Matter, 2001, 296, 190-194.	1.3	36
63	Eutectic epsilon-near-zero metamaterial terahertz waveguides. Optics Letters, 2013, 38, 1140.	1.7	36
64	Scalability Analysis of Programmable Metasurfaces for Beam Steering. IEEE Access, 2020, 8, 105320-105334.	2.6	36
65	Magnetic response of split ring resonators at terahertz frequencies. Physica Status Solidi (B): Basic Research, 2007, 244, 1181-1187.	0.7	35
66	Negative index short-slab pair and continuous wires metamaterials in the far infrared regime. Optics Express, 2008, 16, 9173.	1.7	34
67	Simulation and micro-fabrication of optically switchable split ring resonators. Photonics and Nanostructures - Fundamentals and Applications, 2007, 5, 106-112.	1.0	33
68	Chiral Metamaterials with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>P</mml:mi><mml:mi>T</mml:mi></mml:mrow></mml:math> Symmetry and Beyond. Physical Review Letters, 2019, 122, 213201.	2.9	32
69	Backward surface waves at photonic crystals. Physical Review B, 2007, 75, .	1.1	31
70	Optical metamaterials with different metals. Physical Review B, 2012, 85, .	1.1	31
71	Composite chiral metamaterials with negative refractive index and high values of the figure of merit. Optics Express, 2012, 20, 6146.	1.7	30
72	Combined nano and micro structuring for enhanced radiative cooling and efficiency of photovoltaic cells. Scientific Reports, 2021, 11, 11552.	1.6	30

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73	Waveguides in finite-height two-dimensional photonic crystals. Journal of the Optical Society of America B: Optical Physics, 2002, 19, 2232.	0.9	29
74	Theoretical study of left-handed behavior of composite metamaterials. Photonics and Nanostructures - Fundamentals and Applications, 2006, 4, 12-16.	1.0	29
75	Compact planar far-field superlens based on anisotropic left-handed metamaterials. Physical Review B, 2009, 80, .	1.1	29
76	Intercell Wireless Communication in Software-defined Metasurfaces. , 2018, , .		28
77	Perfect optical absorption with nanostructured metal films: design and experimental demonstration. Optics Express, 2019, 27, 6842.	1.7	28
78	Efficient and environmental-friendly perovskite solar cells via embedding plasmonic nanoparticles: an optical simulation study on realistic device architectures. Optics Express, 2019, 27, 31144.	1.7	28
79	Perfect absorbers based on metalâ€“insulatorâ€“metal structures in the visible region: a simple approach for practical applications. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	1.1	27
80	Interacting plasmon and phonon polaritons in aligned nano- and microwires. Optics Express, 2012, 20, 10879.	1.7	26
81	Frequency splitter based on the directional emission from surface modes in dielectric photonic crystal structures. Optics Express, 2015, 23, 13972.	1.7	24
82	Near-Infrared and Optical Beam Steering and Frequency Splitting in Air-Holes-in-Silicon Inverse Photonic Crystals. ACS Photonics, 2017, 4, 2782-2788.	3.2	24
83	Experimentally excellent beaming in a two-layer dielectric structure. Optics Express, 2014, 22, 23147.	1.7	23
84	Electromagnetic shielding effectiveness and mechanical properties of graphite-based polymeric films. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	23
85	Flexible 3D Printed Conductive Metamaterial Units for Electromagnetic Applications in Microwaves. Materials, 2020, 13, 3879.	1.3	23
86	Experimental Implementation of Achromatic Multiresonant Metasurface for Broadband Pulse Delay. ACS Photonics, 2021, 8, 1649-1655.	3.2	23
87	THz metamaterials made of phonon-polariton materials. Photonics and Nanostructures - Fundamentals and Applications, 2014, 12, 376-386.	1.0	22
88	All-graphene perfect broadband THz absorber. Carbon, 2021, 185, 709-716.	5.4	22
89	Submicron Organicâ€“Inorganic Hybrid Radiative Cooling Coatings for Stable, Ultrathin, and Lightweight Solar Cells. ACS Photonics, 2022, 9, 1327-1337.	3.2	22
90	Phononic crystals and elastodynamics: Some relevant points. AIP Advances, 2014, 4, 124203.	0.6	21

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91	Phonons in colloidal crystals. Europhysics Letters, 2002, 58, 699-704.	0.7	19
92	Bilayer metamaterial: analysis of left-handed transmission and retrieval of effective medium parameters. Journal of Optics, 2007, 9, S361-S365.	1.5	19
93	Influence of external magnetic field on magnonâ€“plasmon polaritons in negative-index antiferromagnetâ€“semiconductor superlattices. Journal of Magnetism and Magnetic Materials, 2010, 322, 603-608.	1.0	19
94	Joint Compressed Sensing and Manipulation of Wireless Emissions with Intelligent Surfaces. , 2019, , .		19
95	Experimental verification of backward wave propagation at photonic crystal surfaces. Applied Physics Letters, 2007, 91, 214102.	1.5	18
96	Losses and transmission in two-dimensional slab photonic crystals. Journal of Applied Physics, 2004, 96, 4033-4038.	1.1	17
97	Squeezing a Prism into a Surface: Emulating Bulk Optics with Achromatic Metasurfaces. Advanced Optical Materials, 2020, 8, 2000942.	3.6	17
98	PT -symmetric chiral metamaterials: Asymmetric effects and PT -phase control. Physical Review B, 2020, 101, .	1.1	17
99	Micro-Ring Resonator Devices Prototyped on Optical Fiber Tapers by Multi-Photon Lithography. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-7.	1.9	17
100	2D-patterned graphene metasurfaces for efficient third harmonic generation at THz frequencies. Optics Express, 2022, 30, 460.	1.7	17
101	Near-field optics and control of photonic crystals. Photonics and Nanostructures - Fundamentals and Applications, 2005, 3, 63-74.	1.0	16
102	Anapole Tolerance to Dissipation Losses in Thermally Tunable Water-Based Metasurfaces. Physical Review Applied, 2021, 15, .	1.5	16
103	Acoustic waves in random media. Europhysics Letters, 1997, 37, 7-12.	0.7	15
104	Backward wave radiation from negative permittivity waveguides and its use for THz subwavelength imaging. Optics Express, 2012, 20, 12752.	1.7	14
105	Software-Defined Metasurface Paradigm: Concept, Challenges, Prospects. , 2018, , .		14
106	ABSense. , 2019, , .		14
107	Multiwideband Terahertz Communications Via Tunable Graphene-Based Metasurfaces in 6G Networks: Graphene Enables Ultimate Multiwideband THz Wavefront Control. IEEE Vehicular Technology Magazine, 2022, 17, 16-25.	2.8	14
108	Parametric investigation and analysis of fishnet metamaterials in the microwave regime. Journal of the Optical Society of America B: Optical Physics, 2009, 26, B61.	0.9	13

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109	Split-cube-resonator-based metamaterials for polarization-selective asymmetric perfect absorption. Scientific Reports, 2020, 10, 17653.	1.6	13
110	Local density of optical states in the three-dimensional band gap of a finite photonic crystal. Physical Review B, 2020, 101, .	1.1	13
111	Controlling THz and far-IR waves with chiral and bianisotropic metamaterials. EPJ Applied Metamaterials, 2015, 2, 15.	0.8	12
112	Nanoimprinted plasmonic crystals for light extraction applications. Microelectronic Engineering, 2010, 87, 1367-1369.	1.1	9
113	Microwave and THz sensing using slab-pair-based metamaterials. Physica B: Condensed Matter, 2012, 407, 4070-4074.	1.3	9
114	Temperature induced modification of the mid-infrared response of single-walled carbon nanotubes. Journal of Applied Physics, 2016, 119, .	1.1	9
115	Electromagnetic behaviour of left-handed materials. Physica B: Condensed Matter, 2007, 394, 148-154.	1.3	8
116	Ultraviolet radiation impact on the efficiency of commercial crystalline silicon-based photovoltaics: a theoretical thermal-electrical study in realistic device architectures. OSA Continuum, 2020, 3, 1436.	1.8	8
117	Chiral Topological Surface States on a Finite Square Photonic Crystal Bounded by Air. Physical Review Applied, 2021, 16, .	1.5	8
118	Comment on â€œEnergy Velocity of Diffusing Waves in Strongly Scattering Mediaâ€• Physical Review Letters, 1999, 82, 2000-2000.	2.9	7
119	3D Photonic Nanostructures via Diffusion-Assisted Direct fs Laser Writing. Advances in OptoElectronics, 2012, 2012, 1-6.	0.6	7
120	Tunable Perfect Anomalous Reflection in Metasurfaces with Capacitive Lumped Elements. , 2018, , .		7
121	Spontaneous-relaxation-rate suppression in cavities with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi mathvariant="script">PT</mml:mi></mml:math> symmetry. Physical Review A, 2019, 99, .	1.0	7
122	On loss compensation, amplification and lasing in metallic metamaterials. Nanomaterials and Nanotechnology, 2019, 9, 184798041881794.	1.2	7
123	Scattering Properties of PT-Symmetric Chiral Metamaterials. Photonics, 2020, 7, 43.	0.9	7
124	Accessible phases via wave impedance engineering with PT -symmetric metamaterials. Physical Review B, 2019, 100, .	1.1	6
125	Experimental demonstration of ultrathin broken-symmetry metasurfaces with controllably sharp resonant response. Applied Physics Letters, 2021, 119, 231601.	1.5	6
126	Chirality sensing employing parity-time-symmetric and other resonant gain-loss optical systems. Physical Review B, 2022, 105, .	1.1	6

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127	Possible molecular bottom-up approach to optical metamaterials. Physical Review B, 2012, 86, .	1.1	5
128	Discontinuous design of negative index metamaterials based on mode hybridization. Applied Physics Letters, 2012, 101, 081913.	1.5	5
129	Graded-index optical dimer formed by optical force. Optics Express, 2016, 24, 11376.	1.7	5
130	Polaritonic cylinders as multifunctional metamaterials: Single scattering and effective medium description. Physical Review B, 2020, 102, .	1.1	5
131	Low-loss photonic crystal and monolithic InP integration: bands, bends, lasers, and filters. , 2004, 5360, 119.		4
132	High Frequency Substrate Technologies for the Realisation of Software Programmable Metasurfaces on PCB Hardware Platforms with Integrated Controller Nodes. , 2019, , .		4
133	Scanning Near-Field Optical Studies of Photonic Devices. , 2006, , 215-237.		3
134	The Fourth Quadrant in the <I>Îµ</I>, <I>Î¼</I> Plane: A New Frontier in Optics. Journal of Computational and Theoretical Nanoscience, 2009, 6, 1827-1836.	0.4	3
135	Acoustic and elastic waves in random media - CPA. Annalen Der Physik, 1998, 7, 383-388.	0.9	2
136	Robust wedge demonstration to optical negative index metamaterials. Applied Physics Letters, 2013, 102, 241915.	1.5	2
137	Toroidal Multipoles in Metamaterials. , 2020, , 237-278.		2
138	Historical Perspective and Review of Fundamental Principles in Modeling Three-Dimensional Periodic Structures with Emphasis on Volumetric EBGs. , 0, , 211-238.		1
139	Experimental Observation of Ultrafast THz Absorption Modulation in a Graphene-Based Metasurface. , 2019, , .		1
140	Combining chirality and PT-symmetry in metamaterials. , 2019, , .		1
141	Passive radiative cooling for the temperature and efficiency control of photovoltaics. , 2021, , .		1
142	Left-Handed Materials in Microwave and Infrared Frequencies. , 2007, , .		0
143	Electromagnetic waves in complex eutectic structures. , 2010, , .		0
144	Electromagnetic Aspects of Practical Approaches to Realization of Intelligent Metasurfaces. , 2018, , .		0

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145	Demonstration of Ultrafast THz Absorption Modulation in a Graphene-Based Thin Absorber. , 2019, , .		0
146	Ultrafast THz Self-action Graphene Based Modulators. , 2021, , .		0
147	Passive radiative cooler for solar cellsâ€™ temperature and efficiency control. , 2021, , .		0
148	Observation of Ultrafast THz Self-actions in Graphene Based Modulators. , 2021, , .		0
149	A High Sensitivity Ethanol Sensor Based on Photo-imprinted, Micro-ring Resonators on Optical-Fiber Tapers. , 2021, , .		0
150	Position dependence of local density of states in 3D band gap of a finite photonic crystal. , 2021, , .		0
151	Negative Index Photonic Metamaterials for Direct Laser Writing. , 2008, , .		0
152	Tailoring the Properties of Designer Surface Plasmons for Subdiffraction Light Manipulation. , 2008, , .		0
153	Graded-index Media for Optical Manipulation. , 2017, , .		0
154	Light resonators imprinted onto optical fibers using multi-photon lithography. , 2022, , .		0