Thomas Koschny

List of Publications by Year
in descending order

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137	13,896	31902	19690
papers	citations	53 h-index	117 g-index

138	138	138	8227
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Magnetic Response of Metamaterials at 100 Terahertz. Science, 2004, 306, 1351-1353.	6.0	1,432
2	Magnetic Metamaterials at Telecommunication and Visible Frequencies. Physical Review Letters, 2005, 95, 203901.	2.9	707
3	Metamaterial with negative index due to chirality. Physical Review B, 2009, 79, .	1.1	683
4	Low-Loss Metamaterials Based on Classical Electromagnetically Induced Transparency. Physical Review Letters, 2009, 102, 053901.	2.9	615
5	Saturation of the Magnetic Response of Split-Ring Resonators at Optical Frequencies. Physical Review Letters, 2005, 95, 223902.	2.9	559
6	Wide-angle perfect absorber/thermal emitter in the terahertz regime. Physical Review B, 2009, 79, .	1.1	450
7	Electric coupling to the magnetic resonance of split ring resonators. Applied Physics Letters, 2004, 84, 2943-2945.	1.5	428
8	Unifying approach to left-handed material design. Optics Letters, 2006, 31, 3620.	1.7	376
9	Negative index materials using simple short wire pairs. Physical Review B, 2006, 73, .	1.1	372
10	Negative refractive index due to chirality. Physical Review B, 2009, 79, .	1.1	359
11	A comparison of graphene, superconductors and metals as conductors for metamaterials and plasmonics. Nature Photonics, 2012, 6, 259-264.	15.6	349
12	Effective Medium Theory of Left-Handed Materials. Physical Review Letters, 2004, 93, 107402.	2.9	317
13	Electromagnetically Induced Transparency and Absorption in Metamaterials: The Radiating Two-Oscillator Model and Its Experimental Confirmation. Physical Review Letters, 2012, 109, 187401.	2.9	298
14	Chiral metamaterials: simulations and experiments. Journal of Optics, 2009, 11, 114003.	1.5	273
15	Classical Analogue of Electromagnetically Induced Transparency with a Metal-Superconductor Hybrid Metamaterial. Physical Review Letters, 2011, 107, 043901.	2.9	251
16	Optically Implemented Broadband Blueshift Switch in the Terahertz Regime. Physical Review Letters, 2011, 106, 037403.	2.9	237
17	Wide-angle and polarization-independent chiral metamaterial absorber. Physical Review B, 2009, 80, .	1.1	225
18	Tunable Terahertz Meta-Surface with Graphene Cut-Wires. ACS Photonics, 2015, 2, 151-156.	3.2	208

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19	Graphene for Terahertz Applications. Science, 2013, 341, 620-621.	6.0	207
20	Chiral metamaterials: retrieval of the effective parameters with and without substrate. Optics Express, 2010, 18, 14553.	1.7	205
21	Conjugated gammadion chiral metamaterial with uniaxial optical activity and negative refractive index. Physical Review B, 2011, 83, .	1.1	201
22	Magnetic response of split-ring resonators in the far-infrared frequency regime. Optics Letters, 2005, 30, 1348.	1.7	199
23	Chiral metamaterials with negative refractive index based on four â€œUâ€•split ring resonators. Applied Physics Letters, 2010, 97, .	1.5	199
24	Repulsive Casimir Force in Chiral Metamaterials. Physical Review Letters, 2009, 103, 103602.	2.9	196
25	Photonic Metamaterials: Magnetism at Optical Frequencies. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 1097-1105.	1.9	180
26	Planar designs for electromagnetically induced transparency in metamaterials. Optics Express, 2009, 17, 5595.	1.7	179
27	Broadband terahertz generation from metamaterials. Nature Communications, 2014, 5, 3055.	5.8	175
28	Experimental demonstration of negative index of refraction. Applied Physics Letters, 2006, 88, 221103.	1.5	167
29	Optical anisotropic metamaterials: Negative refraction and focusing. Physical Review B, 2009, 79, .	1.1	159
30	Large group delay in a microwave metamaterial analog of electromagnetically induced transparency. Applied Physics Letters, 2010, 97, .	1.5	147
31	Electrically Tunable Goosâ€“HÃnchen Effect with Graphene in the Terahertz Regime. Advanced Optical Materials, 2016, 4, 1824-1828.	3.6	144
32	Focused-Ion-Beam Nanofabrication of Near-Infrared Magnetic Metamaterials. Advanced Materials, 2005, 17, 2547-2549.	11.1	134
33	Nonplanar chiral metamaterials with negative index. Applied Physics Letters, 2009, 94, .	1.5	134
34	Magnetic and electric excitations in split ring resonators. Optics Express, 2007, 15, 17881.	1.7	121
35	Nonlinear properties of split-ring resonators. Optics Express, 2008, 16, 16058.	1.7	115
36	A New Perspective on Plasmonics: Confinement and Propagation Length of Surface Plasmons for Different Materials and Geometries. Advanced Optical Materials, 2016, 4, 177-184.	3.6	107

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37	An efficient way to reduce losses of left-handed metamaterials. Optics Express, 2008, 16, 11147.	1.7	99
38	Hyperbolic spoof plasmonic metasurfaces. NPG Asia Materials, 2017, 9, e428-e428.	3.8	97
39	Broadband blueshift tunable metamaterials and dual-band switches. Physical Review B, 2009, 79, .	1.1	96
40	Multi-gap individual and coupled split-ring resonator structures. Optics Express, 2008, 16, 18131.	1.7	92
41	Bi-layer cross chiral structure with strong optical activity and negative refractive index. Optics Express, 2009, 17, 14172.	1.7	92
42	Negative refractive index response of weakly and strongly coupled optical metamaterials. Physical Review B, 2009, 80, .	1.1	89
43	Lasing in metamaterial nanostructures. Journal of Optics (United Kingdom), 2010, 12, 024013.	1.0	85
44	Reducing ohmic losses in metamaterials by geometric tailoring. Physical Review B, 2009, 80, .	1.1	84
45	Self-consistent calculations of loss-compensated fishnet metamaterials. Physical Review B, 2010, 82, .	1.1	83
46	Comparative genomic hybridization in glioma. Cancer Genetics and Cytogenetics, 2002, 135, 147-159.	1.0	78
47	Optical forces in nanowire pairs and metamaterials. Optics Express, 2010, 18, 25665.	1.7	66
48	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
49	Effective material parameter retrieval for thin sheets: Theory and application to graphene, thin silver films, and single-layer metamaterials. Physica B: Condensed Matter, 2012, 407, 4062-4065.	1.3	64
50	The science of negative index materials. Journal of Physics Condensed Matter, 2008, 20, 304217.	0.7	58
51	Overcoming the losses of a split ring resonator array with gain. Optics Express, 2011, 19, 12688.	1.7	58
52	Interaction between graphene and metamaterials: split rings vs wire pairs. Optics Express, 2012, 20, 12198.	1.7	58
53	Comparison of chiral metamaterial designs for repulsive Casimir force. Physical Review B, 2010, 81, .	1.1	55
54	Tunable meta-atom using liquid metal embedded in stretchable polymer. Journal of Applied Physics, 2015, 118, 014504.	1.1	50

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55	Intra-connected three-dimensionally isotropic bulk negative index photonic metamaterial. Optics Express, 2010, 18, 12348.	1.7	49
56	Magnetic response of nanoscale left-handed metamaterials. Physical Review B, 2010, 81, .	1.1	48
57	Theory of Pump-Probe Experiments of Metallic Metamaterials Coupled to a Gain Medium. Physical Review Letters, 2012, 108, 187402.	2.9	48
58	Transmission in the vicinity of the Dirac point in hexagonal photonic crystals. Physica B: Condensed Matter, 2010, 405, 2990-2995.	1.3	47
59	Electric and Magnetic Response in Dielectric Dark States for Low Loss Subwavelength Optical Meta Atoms. Advanced Optical Materials, 2015, 3, 1431-1438.	3.6	45
60	Size dependence and convergence of the retrieval parameters of metamaterials. Photonics and Nanostructures - Fundamentals and Applications, 2008, 6, 96-101.	1.0	44
61	One- and two-dimensional photo-imprinted diffraction gratings for manipulating terahertz waves. Applied Physics Letters, 2013, 103, .	1.5	41
62	Creating double negative index materials using the Babinet principle with one metasurface. Physical Review B, 2013, 87, .	1.1	40
63	Connected bulk negative index photonic metamaterials. Optics Letters, 2009, 34, 506.	1.7	39
64	Switching nonlinearity in a superconductor-enhanced metamaterial. Applied Physics Letters, 2012, 100, 121906.	1.5	39
65	Comparison of gold- and graphene-based resonant nanostructures for terahertz metamaterials and an ultrathin graphene-based modulator. Physical Review B, 2014, 90, .	1.1	39
66	Phaseâ€Modulated Scattering Manipulation for Exterior Cloaking in Metalâ€“Dielectric Hybrid Metamaterials. Advanced Materials, 2019, 31, e1903206.	11.1	38
67	Repulsive Casimir forces with finite-thickness slabs. Physical Review B, 2011, 83, .	1.1	37
68	Antimatched Electromagnetic Metasurfaces for Broadband Arbitrary Phase Manipulation in Reflection. ACS Photonics, 2018, 5, 1101-1107.	3.2	36
69	Magnetic response of split ring resonators at terahertz frequencies. Physica Status Solidi (B): Basic Research, 2007, 244, 1181-1187.	0.7	35
70	Optical metamaterials with different metals. Physical Review B, 2012, 85, .	1.1	31
71	Tailorable Zeroâ€Phase Delay of Subwavelength Particles toward Miniaturized Wave Manipulation Devices. Advanced Materials, 2015, 27, 6187-6194.	11.1	31
72	Large Quality Factor in Sheet Metamaterials Made from Dark Dielectric Meta-atoms. Physical Review Letters, 2014, 112, 117403.	2.9	30

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73	Compact planar far-field superlens based on anisotropic left-handed metamaterials. Physical Review B, 2009, 80, .	1.1	29
74	Investigation of broadband terahertz generation from metasurface. Optics Express, 2018, 26, 14241.	1.7	29
75	Nonlinearity in the Dark: Broadband Terahertz Generation with Extremely High Efficiency. Physical Review Letters, 2019, 122, 027401.	2.9	29
76	Strong group-velocity dispersion compensation with phase-engineered sheet metamaterials. Physical Review B, 2014, 89, .	1.1	28
77	Levitation of Current Carrying States in the Lattice Model for the Integer Quantum Hall Effect. Physical Review Letters, 2001, 86, 3863-3866.	2.9	26
78	Reversible modulation and ultrafast dynamics of terahertz resonances in strongly photoexcited metamaterials. Physical Review B, 2012, 86, .	1.1	26
79	Metamaterials in microwaves, optics, mechanics, thermodynamics, and transport. Journal of Optics (United Kingdom), 2017, 19, 084005.	1.0	26
80	Surface plasmon driven electric and magnetic resonators for metamaterials. Physical Review B, 2011, 83, .	1.1	24
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	Experimental Implementation of Achromatic Multiresonant Metasurface for Broadband Pulse Delay. ACS Photonics, 2021, 8, 1649-1655.	3.2	23
85	Novel Lasers Based on Resonant Dark States. Physical Review Letters, 2017, 118, 073901.	2.9	22
86	Temperature-Controlled Chameleonlike Cloak. Physical Review X, 2017, 7, .	2.8	21
87	Surface-Plasmon-Mediated Gradient Force Enhancement and Mechanical State Transitions of Graphene Sheets. ACS Photonics, 2017, 4, 181-187.	3.2	19
88	Limits on the amplification of evanescent waves of left-handed materials. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 485.	0.9	18
89	Bortezomib Sensitizes Primary Meningioma Cells to TRAIL-Induced Apoptosis by Enhancing Formation of the Death-Inducing Signaling Complex. Journal of Neuropathology and Experimental Neurology, 2014, 73, 1034-1046.	0.9	18
90	Broadband metasurfaces enabling arbitrarily large delay-bandwidth products. Applied Physics Letters, 2016, 108, .	1.5	17

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91	Metamaterial-based lossy anisotropic epsilon-near-zero medium for energy collimation. Physical Review B, 2016, 93, .	1.1	17
92	Electrodynamic Modeling of Quantum Dot Luminescence in Plasmonic Metamaterials. ACS Photonics, 2016, 3, 558-563.	3.2	17
93	Fundamentals of metasurface lasers based on resonant dark states. Physical Review B, 2017, 96, .	1.1	17
94	Squeezing a Prism into a Surface: Emulating Bulk Optics with Achromatic Metasurfaces. Advanced Optical Materials, 2020, 8, 2000942.	3.6	17
95	Tunable terahertz frequency comb generation using time-dependent graphene sheets. Physical Review B, 2015, 91, .	1.1	16
96	Finite-Size Effects in Metasurface Lasers Based on Resonant Dark States. ACS Photonics, 2018, 5, 3788-3793.	3.2	14
97	Local density of optical states in the three-dimensional band gap of a finite photonic crystal. Physical Review B, 2020, 101, .	1.1	13
98	NEMS-Based Infrared Metamaterial via Tuning Nanocantilevers Within Complementary Split Ring Resonators. Journal of Microelectromechanical Systems, 2017, 26, 1371-1380.	1.7	12
99	WHO grade-specific comparative genomic hybridization pattern of astrocytoma â€“ A meta-analysis. Pathology Research and Practice, 2010, 206, 663-668.	1.0	11
100	Mechanism of the metallic metamaterials coupled to the gain material. Optics Express, 2014, 22, 28596.	1.7	11
101	WHO grade related expression of TRAIL-receptors and apoptosis regulators in meningioma. Pathology Research and Practice, 2015, 211, 109-116.	1.0	11
102	Numerical investigation of the flat band Bloch modes in a 2D photonic crystal with Dirac cones. Optics Express, 2015, 23, 10444.	1.7	10
103	Comparative genomic hybridization pattern of non-anaplastic and anaplastic oligodendrogliomas â€“ A meta-analysis. Pathology Research and Practice, 2006, 202, 23-30.	1.0	9
104	What is a good conductor for metamaterials or plasmonics. Nanophotonics, 2015, 4, 69-74.	2.9	9
105	Surface States on Photonic Crystals As Hybrid Dielectric Metasurface Bound States of the Termination Layer. ACS Photonics, 2020, 7, 2842-2849.	3.2	9
106	Unusual infrared absorption increases in photo-degraded organic films. Nanoscale, 2017, 9, 8665-8673.	2.8	8
107	Chiral Topological Surface States on a Finite Square Photonic Crystal Bounded by Air. Physical Review Applied, 2021, 16, .	1.5	8
108	On loss compensation, amplification and lasing in metallic metamaterials. Nanomaterials and Nanotechnology, 2019, 9, 184798041881794.	1.2	7

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109	ZhaoetÂal.Reply:. Physical Review Letters, 2010, 105, .	2.9	6
110	Lasing threshold control in two-dimensional photonic crystals with gain. Optics Express, 2014, 22, 19242.	1.7	6
111	Gain of chromosome 7 detected by comparative genomic hybridization accumulates with age in patients with glioblastoma multiforme. Cancer Genetics and Cytogenetics, 2002, 136, 92-94.	1.0	5
112	Discontinuous design of negative index metamaterials based on mode hybridization. Applied Physics Letters, 2012, 101, 081913.	1.5	5
113	Graded-index optical dimer formed by optical force. Optics Express, 2016, 24, 11376.	1.7	5
114	Topological Transition Enabled by Surface Modification of Photonic Crystals. ACS Photonics, 2021, 8, 1385-1392.	3.2	5
115	Shape- and Orientation-Dependent Scattering of Isolated Gold Nanostructures Using Polarized Dark-Field Microscopy. Journal of Physical Chemistry C, 2021, 125, 11478-11488.	1.5	5
116	Experimental Demonstration of Darkâ€State Metasurface Laser with Controllable Radiative Coupling. Advanced Optical Materials, 2022, 10, .	3.6	5
117	Photoimprinted Controllable Fano Resonance in the Terahertz Regime. ACS Photonics, 2017, 4, 1785-1789.	3.2	4
118	Loss compensated negative index material at optical wavelengths. Photonics and Nanostructures - Fundamentals and Applications, 2012, 10, 276-280.	1.0	3
119	Dark-State-Based Low-Loss Metasurfaces with Simultaneous Electric and Magnetic Resonant Response. ACS Photonics, 2020, 7, 241-248.	3.2	3
120	Robustness of Optical Response for Selfâ€Assembled Plasmonic Metamaterials with Morphological Disorder and Surface Roughness. Advanced Optical Materials, 2020, 8, 1901794.	3.6	3
121	Robust wedge demonstration to optical negative index metamaterials. Applied Physics Letters, 2013, 102, 241915.	1.5	2
122	Young's double-slit experiment in photonic crystals. Physica B: Condensed Matter, 2012, 407, 4048-4050.	1.3	1
123	Effects of Coherent versus Incoherent Illumination and Imaging Setup on Experimental Measurements of Scattering Amplitudes in Metamaterials. ACS Photonics, 2021, 8, 1856-1862.	3.2	1
124	Left-Handed Materials in Microwave and Infrared Frequencies. , 2007, , .		0
125	Metamaterials for microwaves and optics. , 2008, , .		0
126	Electromagnetically Induced Transparency in Metamaterials. , 2009, , .		0

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127	Chiral metamaterials reduce the attractive Casimir force. , 2010, , .		0
128	Metamaterials: Tailorable Zero-Phase Delay of Subwavelength Particles toward Miniaturized Wave Manipulation Devices (Adv. Mater. 40/2015). Advanced Materials, 2015, 27, 6304-6304.	11.1	0
129	Dielectric rod metasurfaces: Exploiting toroidal and magnetic dipole resonances. , 2017, , .		0
130	Metasurfaces with Interleaved Electric and Magnetic Resonances for Broadband Arbitrary Group Delay in Reflection. , 2018, , .		0
131	Bound States Sustained in Dielectric Photonic Crystals and Metasurfaces and Wavefront Manipulation. , 2020, , .		0
132	Position dependence of local density of states in 3D band gap of a finite photonic crystal. , 2021, , .		0
133	Negative Index Materials in GHz and THz Frequencies. , 2006, , .		0
134	Optical metamaterials: Possibilities and limitations. , 2010, , .		0
135	Dielectric meta-atoms coupled by nonresonant metallic antennas: high-quality metamaterial resonances. , 2014, , .		0
136	Graded-index Media for Optical Manipulation. , 2017, , .		0
137	Microwave realization of multiresonant metasurfaces for achromatic pulse delay. Journal of Physics: Conference Series, 2021, 2015, 012157.	0.3	0