Thomas Koschny

List of Publications by Year
in descending order

137 papers	13,896 citations	36691 53 h-index	22488 117 g-index
138 all docs	138 docs citations	138 times ranked	9499 citing authors

#	Article	IF	Citations
1	Experimental Demonstration of Darkâ€State Metasurface Laser with Controllable Radiative Coupling. Advanced Optical Materials, 2022, 10, .	3.6	5
2	Topological Transition Enabled by Surface Modification of Photonic Crystals. ACS Photonics, 2021, 8, 1385-1392.	3.2	5
3	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
4	Experimental Implementation of Achromatic Multiresonant Metasurface for Broadband Pulse Delay. ACS Photonics, 2021, 8, 1649-1655.	3.2	23
5	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
6	Position dependence of local density of states in 3D band gap of a finite photonic crystal. , 2021, , .		0
7	Chiral Topological Surface States on a Finite Square Photonic Crystal Bounded by Air. Physical Review Applied, 2021, 16, .	1.5	8
8	Microwave realization of multiresonant metasurfaces for achromatic pulse delay. Journal of Physics: Conference Series, 2021, 2015, 012157.	0.3	0
9	Dark-State-Based Low-Loss Metasurfaces with Simultaneous Electric and Magnetic Resonant Response. ACS Photonics, 2020, 7, 241-248.	3.2	3
10	Squeezing a Prism into a Surface: Emulating Bulk Optics with Achromatic Metasurfaces. Advanced Optical Materials, 2020, 8, 2000942.	3.6	17
11	Bound States Sustained in Dielectric Photonic Crystals and Metasurfaces and Wavefront Manipulation. , 2020, , .		0
12	Surface States on Photonic Crystals As Hybrid Dielectric Metasurface Bound States of the Termination Layer. ACS Photonics, 2020, 7, 2842-2849.	3.2	9
13	Local density of optical states in the three-dimensional band gap of a finite photonic crystal. Physical Review B, 2020, 101, .	1.1	13
14	Robustness of Optical Response for Selfâ€Assembled Plasmonic Metamaterials with Morphological Disorder and Surface Roughness. Advanced Optical Materials, 2020, 8, 1901794.	3.6	3
15	Phaseâ€Modulated Scattering Manipulation for Exterior Cloaking in Metalâ€“Dielectric Hybrid Metamaterials. Advanced Materials, 2019, 31, e1903206.	11.1	38
16	Nonlinearity in the Dark: Broadband Terahertz Generation with Extremely High Efficiency. Physical Review Letters, 2019, 122, 027401.	2.9	29
17	On loss compensation, amplification and lasing in metallic metamaterials. Nanomaterials and Nanotechnology, 2019, 9, 184798041881794.	1.2	7
18	Antimatched Electromagnetic Metasurfaces for Broadband Arbitrary Phase Manipulation in Reflection. ACS Photonics, 2018, 5, 1101-1107.	3.2	36

#	Article	IF	Citations
19	Metasurfaces with Interleaved Electric and Magnetic Resonances for Broadband Arbitrary Group Delay in Reflection. , 2018, , .		0
20	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
21	Investigation of broadband terahertz generation from metasurface. Optics Express, 2018, 26, 14241.	1.7	29
22	Finite-Size Effects in Metasurface Lasers Based on Resonant Dark States. ACS Photonics, 2018, 5, 3788-3793.	3.2	14
23	Novel Lasers Based on Resonant Dark States. Physical Review Letters, 2017, 118, 073901.	2.9	22
24	Photoimprinted Controllable Fano Resonance in the Terahertz Regime. ACS Photonics, 2017, 4, 1785-1789.	3.2	4
25	Temperature-Controlled Chameleonlike Cloak. Physical Review X, 2017, 7, .	2.8	21
26	Surface-Plasmon-Mediated Gradient Force Enhancement and Mechanical State Transitions of Graphene Sheets. ACS Photonics, 2017, 4, 181-187.	3.2	19
27	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
28	Hyperbolic spoof plasmonic metasurfaces. NPG Asia Materials, 2017, 9, e428-e428.	3.8	97
29	Metamaterials in microwaves, optics, mechanics, thermodynamics, and transport. Journal of Optics (United Kingdom), 2017, 19, 084005.	1.0	26
30	Fundamentals of metasurface lasers based on resonant dark states. Physical Review B, 2017, 96, .	1.1	17
31	NEMS-Based Infrared Metamaterial via Tuning Nanocantilevers Within Complementary Split Ring Resonators. Journal of Microelectromechanical Systems, 2017, 26, 1371-1380.	1.7	12
32	Dielectric rod metasurfaces: Exploiting toroidal and magnetic dipole resonances. , 2017, , .		0
33	Unusual infrared absorption increases in photo-degraded organic films. Nanoscale, 2017, 9, 8665-8673.	2.8	8
34	Graded-index Media for Optical Manipulation. , 2017, , .		0
35	Broadband metasurfaces enabling arbitrarily large delay-bandwidth products. Applied Physics Letters, 2016, 108, .	1.5	17
36	Graded-index optical dimer formed by optical force. Optics Express, 2016, 24, 11376.	1.7	5

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37	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
38	Electrically Tunable Goosâ€“HÃnchen Effect with Graphene in the Terahertz Regime. Advanced Optical Materials, 2016, 4, 1824-1828.	3.6	144
39	Metamaterial-based lossy anisotropic epsilon-near-zero medium for energy collimation. Physical Review B, 2016, 93, .	1.1	17
40	Electrodynamic Modeling of Quantum Dot Luminescence in Plasmonic Metamaterials. ACS Photonics, 2016, 3, 558-563.	3.2	17
41	What is a good conductor for metamaterials or plasmonics. Nanophotonics, 2015, 4, 69-74.	2.9	9
42	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
43	Tunable meta-atom using liquid metal embedded in stretchable polymer. Journal of Applied Physics, 2015, 118, 014504.	1.1	50
44	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
45	Tailorable Zeroâ€Phase Delay of Subwavelength Particles toward Miniaturized Wave Manipulation Devices. Advanced Materials, 2015, 27, 6187-6194.	11.1	31
46	WHO grade related expression of TRAIL-receptors and apoptosis regulators in meningioma. Pathology Research and Practice, 2015, 211, 109-116.	1.0	11
47	Tunable terahertz frequency comb generation using time-dependent graphene sheets. Physical Review B, 2015, 91, .	1.1	16
48	Numerical investigation of the flat band Bloch modes in a 2D photonic crystal with Dirac cones. Optics Express, 2015, 23, 10444.	1.7	10
49	Frequency splitter based on the directional emission from surface modes in dielectric photonic crystal structures. Optics Express, 2015, 23, 13972.	1.7	24
50	Tunable Terahertz Meta-Surface with Graphene Cut-Wires. ACS Photonics, 2015, 2, 151-156.	3.2	208
51	Lasing threshold control in two-dimensional photonic crystals with gain. Optics Express, 2014, 22, 19242.	1.7	6
52	Mechanism of the metallic metamaterials coupled to the gain material. Optics Express, 2014, 22, 28596.	1.7	11
53	Large Quality Factor in Sheet Metamaterials Made from Dark Dielectric Meta-atoms. Physical Review Letters, 2014, 112, 117403.	2.9	30
54	Strong group-velocity dispersion compensation with phase-engineered sheet metamaterials. Physical Review B, 2014, 89, .	1.1	28

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55	Experimentally excellent beaming in a two-layer dielectric structure. Optics Express, 2014, 22, 23147.	1.7	23
56	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
57	Broadband terahertz generation from metamaterials. Nature Communications, 2014, 5, 3055.	5.8	175
58	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
59	Dielectric meta-atoms coupled by nonresonant metallic antennas: high-quality metamaterial resonances. , 2014, , .		0
60	One- and two-dimensional photo-imprinted diffraction gratings for manipulating terahertz waves. Applied Physics Letters, 2013, 103, .	1.5	41
61	Graphene for Terahertz Applications. Science, 2013, 341, 620-621.	6.0	207
62	Creating double negative index materials using the Babinet principle with one metasurface. Physical Review B, 2013, 87, .	1.1	40
63	Robust wedge demonstration to optical negative index metamaterials. Applied Physics Letters, 2013, 102, 241915.	1.5	2
64	Interaction between graphene and metamaterials: split rings vs wire pairs. Optics Express, 2012, 20, 12198.	1.7	58
65	Switching nonlinearity in a superconductor-enhanced metamaterial. Applied Physics Letters, 2012, 100, 121906.	1.5	39
66	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
67	Young's double-slit experiment in photonic crystals. Physica B: Condensed Matter, 2012, 407, 4048-4050.	1.3	1
68	Discontinuous design of negative index metamaterials based on mode hybridization. Applied Physics Letters, 2012, 101, 081913.	1.5	5
69	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
70	Reversible modulation and ultrafast dynamics of terahertz resonances in strongly photoexcited metamaterials. Physical Review B, 2012, 86, .	1.1	26
71	Theory of Pump-Probe Experiments of Metallic Metamaterials Coupled to a Gain Medium. Physical Review Letters, 2012, 108, 187402.	2.9	48
72	A comparison of graphene, superconductors and metals as conductors for metamaterials and plasmonics. Nature Photonics, 2012, 6, 259-264.	15.6	349

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73	Optical metamaterials with different metals. Physical Review B, 2012, 85, .	1.1	31
74	Loss compensated negative index material at optical wavelengths. Photonics and Nanostructures - Fundamentals and Applications, 2012, 10, 276-280.	1.0	3
75	Surface plasmon driven electric and magnetic resonators for metamaterials. Physical Review B, 2011, 83, .	1.1	24
76	Conjugated gammadion chiral metamaterial with uniaxial optical activity and negative refractive index. Physical Review B, 2011, 83, .	1.1	201
77	Classical Analogue of Electromagnetically Induced Transparency with a Metal-Superconductor Hybrid Metamaterial. Physical Review Letters, 2011, 107, 043901.	2.9	251
78	Overcoming the losses of a split ring resonator array with gain. Optics Express, 2011, 19, 12688.	1.7	58
79	Optically Implemented Broadband Blueshift Switch in the Terahertz Regime. Physical Review Letters, 2011, 106, 037403.	2.9	237
80	Repulsive Casimir forces with finite-thickness slabs. Physical Review B, 2011, 83, .	1.1	37
81	Self-consistent calculations of loss-compensated fishnet metamaterials. Physical Review B, 2010, 82, .	1.1	83
82	WHO grade-specific comparative genomic hybridization pattern of astrocytoma â€“ A meta-analysis. Pathology Research and Practice, 2010, 206, 663-668.	1.0	11
83	Transmission in the vicinity of the Dirac point in hexagonal photonic crystals. Physica B: Condensed Matter, 2010, 405, 2990-2995.	1.3	47
84	Comparison of chiral metamaterial designs for repulsive Casimir force. Physical Review B, 2010, 81, .	1.1	55
85	Lasing in metamaterial nanostructures. Journal of Optics (United Kingdom), 2010, 12, 024013.	1.0	85
86	Chiral metamaterials reduce the attractive Casimir force. , 2010, , .		0
87	Intra-connected three-dimensionally isotropic bulk negative index photonic metamaterial. Optics Express, 2010, 18, 12348.	1.7	49
88	Chiral metamaterials: retrieval of the effective parameters with and without substrate. Optics Express, 2010, 18, 14553.	1.7	205
89	Optical forces in nanowire pairs and metamaterials. Optics Express, 2010, 18, 25665.	1.7	66
90	Chiral metamaterials with negative refractive index based on four â€œUâ€•split ring resonators. Applied Physics Letters, 2010, 97, .	1.5	199

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91	ZhaoetÂal.Reply:. Physical Review Letters, 2010, 105, .	2.9	6
92	Magnetic response of nanoscale left-handed metamaterials. Physical Review B, 2010, 81, .	1.1	48
93	Large group delay in a microwave metamaterial analog of electromagnetically induced transparency. Applied Physics Letters, 2010, 97, .	1.5	147
94	Optical metamaterials: Possibilities and limitations. , 2010, , .		0
95	Reducing ohmic losses in metamaterials by geometric tailoring. Physical Review B, 2009, 80, .	1.1	84
96	Electromagnetically Induced Transparency in Metamaterials. , 2009, , .		0
97	Wide-angle and polarization-independent chiral metamaterial absorber. Physical Review B, 2009, 80, .	1.1	225
98	Connected bulk negative index photonic metamaterials. Optics Letters, 2009, 34, 506.	1.7	39
99	Planar designs for electromagnetically induced transparency in metamaterials. Optics Express, 2009, 17, 5595.	1.7	179
100	Bi-layer cross chiral structure with strong optical activity and negative refractive index. Optics Express, 2009, 17, 14172.	1.7	92
101	Negative refractive index due to chirality. Physical Review B, 2009, 79, .	1.1	359
102	Compact planar far-field superlens based on anisotropic left-handed metamaterials. Physical Review B, 2009, 80, .	1.1	29
103	Optical anisotropic metamaterials: Negative refraction and focusing. Physical Review B, 2009, 79, .	1.1	159
104	Metamaterial with negative index due to chirality. Physical Review B, 2009, 79, .	1.1	683
105	Chiral metamaterials: simulations and experiments. Journal of Optics, 2009, 11, 114003.	1.5	273
106	Broadband blueshift tunable metamaterials and dual-band switches. Physical Review B, 2009, 79, .	1.1	96
107	Negative refractive index response of weakly and strongly coupled optical metamaterials. Physical Review B, 2009, 80, .	1.1	89
108	Repulsive Casimir Force in Chiral Metamaterials. Physical Review Letters, 2009, 103, 103602.	2.9	196

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109	Low-Loss Metamaterials Based on Classical Electromagnetically Induced Transparency. Physical Review Letters, 2009, 102, 053901.	2.9	615
110	Wide-angle perfect absorber/thermal emitter in the terahertz regime. Physical Review B, 2009, 79, .	1.1	450
111	Nonplanar chiral metamaterials with negative index. Applied Physics Letters, 2009, 94, .	1.5	134
112	Size dependence and convergence of the retrieval parameters of metamaterials. Photonics and Nanostructures - Fundamentals and Applications, 2008, 6, 96-101.	1.0	44
113	Metamaterials for microwaves and optics. , 2008, , .		0
114	An efficient way to reduce losses of left-handed metamaterials. Optics Express, 2008, 16, 11147.	1.7	99
115	Nonlinear properties of split-ring resonators. Optics Express, 2008, 16, 16058.	1.7	115
116	Multi-gap individual and coupled split-ring resonator structures. Optics Express, 2008, 16, 18131.	1.7	92
117	The science of negative index materials. Journal of Physics Condensed Matter, 2008, 20, 304217.	0.7	58
118	Left-Handed Materials in Microwave and Infrared Frequencies. , 2007, , .		0
119	Magnetic and electric excitations in split ring resonators. Optics Express, 2007, 15, 17881.	1.7	121
120	Magnetic response of split ring resonators at terahertz frequencies. Physica Status Solidi (B): Basic Research, 2007, 244, 1181-1187.	0.7	35
121	Experimental demonstration of negative index of refraction. Applied Physics Letters, 2006, 88, 221103.	1.5	167
122	Photonic Metamaterials: Magnetism at Optical Frequencies. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 1097-1105.	1.9	180
123	Negative index materials using simple short wire pairs. Physical Review B, 2006, 73, .	1.1	372
124	Unifying approach to left-handed material design. Optics Letters, 2006, 31, 3620.	1.7	376
125	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
126	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

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127	Negative Index Materials in GHz and THz Frequencies. , 2006, , .		0
128	Magnetic Metamaterials at Telecommunication and Visible Frequencies. Physical Review Letters, 2005, 95, 203901.	2.9	707
129	Focused-Ion-Beam Nanofabrication of Near-Infrared Magnetic Metamaterials. Advanced Materials, 2005, 17, 2547-2549.	11.1	134
130	Magnetic response of split-ring resonators in the far-infrared frequency regime. Optics Letters, 2005, 30, 1348.	1.7	199
131	Saturation of the Magnetic Response of Split-Ring Resonators at Optical Frequencies. Physical Review Letters, 2005, 95, 223902.	2.9	559
132	Magnetic Response of Metamaterials at 100 Terahertz. Science, 2004, 306, 1351-1353.	6.0	1,432
133	Effective Medium Theory of Left-Handed Materials. Physical Review Letters, 2004, 93, 107402.	2.9	317
134	Electric coupling to the magnetic resonance of split ring resonators. Applied Physics Letters, 2004, 84, 2943-2945.	1.5	428
135	Comparative genomic hybridization in glioma. Cancer Genetics and Cytogenetics, 2002, 135, 147-159.	1.0	78
136	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
137	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