Thomas Koschny

List of Publications by Year in Descending Order

125 papers	11,457 citations	50 h-index	106 g-index
138 ext. papers	12,862 ext. citations	5.8 avg, IF	6.27 L-index

#	Paper	IF	Citations
125	Microwave realization of multiresonant metasurfaces for achromatic pulse delay. *Journal of Physics: Conference Series*, **2021**, 2015, 012157	0.3	
124	Topological Transition Enabled by Surface Modification of Photonic Crystals. *ACS Photonics*, **2021**, 8, 1385-1392	6.3	
123	Shape- and Orientation-Dependent Scattering of Isolated Gold Nanostructures Using Polarized Dark-Field Microscopy. *Journal of Physical Chemistry C*, **2021**, 125, 11478-11488	3.8	2
122	Experimental Implementation of Achromatic Multiresonant Metasurface for Broadband Pulse Delay. *ACS Photonics*, **2021**, 8, 1649-1655	6.3	9
121	Effects of Coherent versus Incoherent Illumination and Imaging Setup on Experimental Measurements of Scattering Amplitudes in Metamaterials. *ACS Photonics*, **2021**, 8, 1856-1862	6.3	0
120	Local density of optical states in the three-dimensional band gap of a finite photonic crystal. *Physical Review B*, **2020**, 101,	3.3	6
119	Robustness of Optical Response for Self-Assembled Plasmonic Metamaterials with Morphological Disorder and Surface Roughness. *Advanced Optical Materials*, **2020**, 8, 1901794	8.1	0
118	Dark-State-Based Low-Loss Metasurfaces with Simultaneous Electric and Magnetic Resonant Response. *ACS Photonics*, **2020**, 7, 241-248	6.3	2
117	Squeezing a Prism into a Surface: Emulating Bulk Optics with Achromatic Metasurfaces. *Advanced Optical Materials*, **2020**, 8, 2000942	8.1	9
116	Surface States on Photonic Crystals As Hybrid Dielectric Metasurface Bound States of the Termination Layer. *ACS Photonics*, **2020**, 7, 2842-2849	6.3	1
115	Phase-Modulated Scattering Manipulation for Exterior Cloaking in Metal-Dielectric Hybrid Metamaterials. *Advanced Materials*, **2019**, 31, e1903206	24	19
114	Nonlinearity in the Dark: Broadband Terahertz Generation with Extremely High Efficiency. *Physical Review Letters*, **2019**, 122, 027401	7.4	19
113	On loss compensation, amplification and lasing in metallic metamaterials. *Nanomaterials and Nanotechnology*, **2019**, 9, 184798041881794	2.9	3
112	Antimatched Electromagnetic Metasurfaces for Broadband Arbitrary Phase Manipulation in Reflection. *ACS Photonics*, **2018**, 5, 1101-1107	6.3	25
111	Investigation of broadband terahertz generation from metasurface. *Optics Express*, **2018**, 26, 14241-14250	3.3	14
110	Finite-Size Effects in Metasurface Lasers Based on Resonant Dark States. *ACS Photonics*, **2018**, 5, 3788-3793	6.3	11
109	Pairing Toroidal and Magnetic Dipole Resonances in Elliptic Dielectric Rod Metasurfaces for Reconfigurable Wavefront Manipulation in Reflection. *Advanced Optical Materials*, **2018**, 6, 1800633	8.1	44

108	Novel Lasers Based on Resonant Dark States. *Physical Review Letters*, **2017**, 118, 073901	7.4	19
107	Photoimprinted Controllable Fano Resonance in the Terahertz Regime. *ACS Photonics*, **2017**, 4, 1785-1789	6.3	4
106	Temperature-Controlled Chameleonlike Cloak. *Physical Review X*, **2017**, 7,	9.1	15
105	Surface-Plasmon-Mediated Gradient Force Enhancement and Mechanical State Transitions of Graphene Sheets. *ACS Photonics*, **2017**, 4, 181-187	6.3	16
104	Near-Infrared and Optical Beam Steering and Frequency Splitting in Air-Holes-in-Silicon Inverse Photonic Crystals. *ACS Photonics*, **2017**, 4, 2782-2788	6.3	17
103	Hyperbolic spoof plasmonic metasurfaces. *NPG Asia Materials*, **2017**, 9, e428-e428	10.3	77
102	Metamaterials in microwaves, optics, mechanics, thermodynamics, and transport. *Journal of Optics (United Kingdom)*, **2017**, 19, 084005	1.7	19
101	Fundamentals of metasurface lasers based on resonant dark states. *Physical Review B*, **2017**, 96,	3.3	14
100	. *Journal of Microelectromechanical Systems*, **2017**, 26, 1371-1380	2.5	10
99	Unusual infrared absorption increases in photo-degraded organic films. *Nanoscale*, **2017**, 9, 8665-8673	7.7	6
98	Electrically Tunable Goos□□chen Effect with Graphene in the Terahertz Regime. *Advanced Optical Materials*, **2016**, 4, 1824-1828	8.1	126
97	Metamaterial-based lossy anisotropic epsilon-near-zero medium for energy collimation. *Physical Review B*, **2016**, 93,	3.3	12
96	Electrodynamic Modeling of Quantum Dot Luminescence in Plasmonic Metamaterials. *ACS Photonics*, **2016**, 3, 558-563	6.3	14
95	Broadband metasurfaces enabling arbitrarily large delay-bandwidth products. *Applied Physics Letters*, **2016**, 108, 031601	3.4	10
94	Graded-index optical dimer formed by optical force. *Optics Express*, **2016**, 24, 11376-86	3.3	2
93	A New Perspective on Plasmonics: Confinement and Propagation Length of Surface Plasmons for Different Materials and Geometries. *Advanced Optical Materials*, **2016**, 4, 177-184	8.1	79
92	Tunable terahertz frequency comb generation using time-dependent graphene sheets. *Physical Review B*, **2015**, 91,	3.3	10
91	Numerical investigation of the flat band Bloch modes in a 2D photonic crystal with Dirac cones. *Optics Express*, **2015**, 23, 10444-52	3.3	9

90	Frequency splitter based on the directional emission from surface modes in dielectric photonic crystal structures. *Optics Express*, **2015**, 23, 13972-82	3.3	15
89	Tunable Terahertz Meta-Surface with Graphene Cut-Wires. *ACS Photonics*, **2015**, 2, 151-156	6.3	184
88	What is a good conductor for metamaterials or plasmonics. *Nanophotonics*, **2015**, 4, 69-74	6.3	8
87	Metamaterials: Tailorable Zero-Phase Delay of Subwavelength Particles toward Miniaturized Wave Manipulation Devices (Adv. Mater. 40/2015). *Advanced Materials*, **2015**, 27, 6304-6304	24	
86	Tunable meta-atom using liquid metal embedded in stretchable polymer. *Journal of Applied Physics*, **2015**, 118, 014504	2.5	39
85	Electric and Magnetic Response in Dielectric Dark States for Low Loss Subwavelength Optical Meta Atoms. *Advanced Optical Materials*, **2015**, 3, 1431-1438	8.1	30
84	Tailorable Zero-Phase Delay of Subwavelength Particles toward Miniaturized Wave Manipulation Devices. *Advanced Materials*, **2015**, 27, 6187-94	24	24
83	Field Enhancement with Classical Electromagnetically Induced Transparency. *Springer Series in Materials Science*, **2015**, 303-319	0.9	1
82	WHO grade related expression of TRAIL-receptors and apoptosis regulators in meningioma. *Pathology Research and Practice*, **2015**, 211, 109-16	3.4	10
81	Broadband terahertz generation from metamaterials. *Nature Communications*, **2014**, 5, 3055	17.4	120
80	Comparison of gold- and graphene-based resonant nanostructures for terahertz metamaterials and an ultrathin graphene-based modulator. *Physical Review B*, **2014**, 90,	3.3	31
79	Lasing threshold control in two-dimensional photonic crystals with gain. *Optics Express*, **2014**, 22, 19242-51	3.3	5
78	Mechanism of the metallic metamaterials coupled to the gain material. *Optics Express*, **2014**, 22, 28596-605	3.3	7
77	Large quality factor in sheet metamaterials made from dark dielectric meta-atoms. *Physical Review Letters*, **2014**, 112, 117403	7.4	27
76	Strong group-velocity dispersion compensation with phase-engineered sheet metamaterials. *Physical Review B*, **2014**, 89,	3.3	23
75	Experimentally excellent beaming in a two-layer dielectric structure. *Optics Express*, **2014**, 22, 23147-52	3.3	11
74	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, 1034-46	3.1	16
73	One- and two-dimensional photo-imprinted diffraction gratings for manipulating terahertz waves. *Applied Physics Letters*, **2013**, 103, 043101	3.4	33

72	Applied physics. Graphene for terahertz applications. *Science*, **2013**, 341, 620-1	33.3	166
71	Creating double negative index materials using the Babinet principle with one metasurface. *Physical Review B*, **2013**, 87,	3.3	32
70	Robust wedge demonstration to optical negative index metamaterials. *Applied Physics Letters*, **2013**, 102, 241915	3.4	2
69	Loss compensated negative index material at optical wavelengths. *Photonics and Nanostructures - Fundamentals and Applications*, **2012**, 10, 276-280	2.6	3
68	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	2.8	51
67	Young's double-slit experiment in photonic crystals. *Physica B: Condensed Matter*, **2012**, 407, 4048-4050	2.8	1
66	Discontinuous design of negative index metamaterials based on mode hybridization. *Applied Physics Letters*, **2012**, 101, 081913	3.4	5
65	Electromagnetically induced transparency and absorption in metamaterials: the radiating two-oscillator model and its experimental confirmation. *Physical Review Letters*, **2012**, 109, 187401	7.4	256
64	Reversible modulation and ultrafast dynamics of terahertz resonances in strongly photoexcited metamaterials. *Physical Review B*, **2012**, 86,	3.3	23
63	Theory of pump-probe experiments of metallic metamaterials coupled to a gain medium. *Physical Review Letters*, **2012**, 108, 187402	7.4	40
62	A comparison of graphene, superconductors and metals as conductors for metamaterials and plasmonics. *Nature Photonics*, **2012**, 6, 259-264	33.9	309
61	Optical metamaterials with different metals. *Physical Review B*, **2012**, 85,	3.3	23
60	Interaction between graphene and metamaterials: split rings vs. wire pairs. *Optics Express*, **2012**, 20, 12198-204	3.3	53
59	Switching nonlinearity in a superconductor-enhanced metamaterial. *Applied Physics Letters*, **2012**, 100, 121906	3.4	37
58	Conjugated gammadion chiral metamaterial with uniaxial optical activity and negative refractive index. *Physical Review B*, **2011**, 83,	3.3	163
57	Classical analogue of electromagnetically induced transparency with a metal-superconductor hybrid metamaterial. *Physical Review Letters*, **2011**, 107, 043901	7.4	206
56	Overcoming the losses of a split ring resonator array with gain. *Optics Express*, **2011**, 19, 12688-99	3.3	42
55	Optically implemented broadband blueshift switch in the terahertz regime. *Physical Review Letters*, **2011**, 106, 037403	7.4	190

54	Surface plasmon driven electric and magnetic resonators for metamaterials. *Physical Review B*, **2011**, 83,	3.3	21
53	Repulsive Casimir forces with finite-thickness slabs. *Physical Review B*, **2011**, 83,	3.3	32
52	Comparison of chiral metamaterial designs for repulsive Casimir force. *Physical Review B*, **2010**, 81,	3.3	48
51	Lasing in metamaterial nanostructures. *Journal of Optics (United Kingdom)*, **2010**, 12, 024013	1.7	78
50	Intra-connected three-dimensionally isotropic bulk negative index photonic metamaterial. *Optics Express*, **2010**, 18, 12348-53	3.3	44
49	Chiral metamaterials: retrieval of the effective parameters with and without substrate. *Optics Express*, **2010**, 18, 14553-67	3.3	165
48	Optical forces in nanowire pairs and metamaterials. *Optics Express*, **2010**, 18, 25665-76	3.3	58
47	Chiral metamaterials with negative refractive index based on four "U" split ring resonators. *Applied Physics Letters*, **2010**, 97, 081901	3.4	157
46	Zhao et al. Reply:. *Physical Review Letters*, **2010**, 105,	7.4	4
45	Magnetic response of nanoscale left-handed metamaterials. *Physical Review B*, **2010**, 81,	3.3	39
44	Large group delay in a microwave metamaterial analog of electromagnetically induced transparency. *Applied Physics Letters*, **2010**, 97, 241904	3.4	119
43	Self-consistent calculations of loss-compensated fishnet metamaterials. *Physical Review B*, **2010**, 82,	3.3	69
42	WHO grade-specific comparative genomic hybridization pattern of astrocytoma - a meta-analysis. *Pathology Research and Practice*, **2010**, 206, 663-8	3.4	9
41	Transmission in the vicinity of the Dirac point in hexagonal photonic crystals. *Physica B: Condensed Matter*, **2010**, 405, 2990-2995	2.8	40
40	Reducing ohmic losses in metamaterials by geometric tailoring. *Physical Review B*, **2009**, 80,	3.3	67
39	Wide-angle and polarization-independent chiral metamaterial absorber. *Physical Review B*, **2009**, 80,	3.3	185
38	Connected bulk negative index photonic metamaterials. *Optics Letters*, **2009**, 34, 506-8	3	34
37	Planar designs for electromagnetically induced transparency in metamaterials. *Optics Express*, **2009**, 17, 5595-605	3.3	161

36	Bi-layer cross chiral structure with strong optical activity and negative refractive index. *Optics Express*, **2009**, 17, 14172-9	3.3	83
35	Negative refractive index due to chirality. *Physical Review B*, **2009**, 79,	3.3	293
34	Compact planar far-field superlens based on anisotropic left-handed metamaterials. *Physical Review B*, **2009**, 80,	3.3	22
33	Optical anisotropic metamaterials: Negative refraction and focusing. *Physical Review B*, **2009**, 79,	3.3	132
32	Metamaterial with negative index due to chirality. *Physical Review B*, **2009**, 79,	3.3	568
31	Chiral metamaterials: simulations and experiments. *Journal of Optics*, **2009**, 11, 114003		217
30	Broadband blueshift tunable metamaterials and dual-band switches. *Physical Review B*, **2009**, 79,	3.3	81
29	Negative refractive index response of weakly and strongly coupled optical metamaterials. *Physical Review B*, **2009**, 80,	3.3	76
28	Repulsive Casimir force in chiral metamaterials. *Physical Review Letters*, **2009**, 103, 103602	7.4	175
27	Low-loss metamaterials based on classical electromagnetically induced transparency. *Physical Review Letters*, **2009**, 102, 053901	7.4	530
26	Wide-angle perfect absorber/thermal emitter in the terahertz regime. *Physical Review B*, **2009**, 79,	3.3	377
25	Nonplanar chiral metamaterials with negative index. *Applied Physics Letters*, **2009**, 94, 151112	3.4	121
24	An efficient way to reduce losses of left-handed metamaterials. *Optics Express*, **2008**, 16, 11147-52	3.3	90
23	Nonlinear properties of split-ring resonators. *Optics Express*, **2008**, 16, 16058-63	3.3	101
22	Multi-gap individual and coupled split-ring resonator structures. *Optics Express*, **2008**, 16, 18131-44	3.3	78
21	The science of negative index materials. *Journal of Physics Condensed Matter*, **2008**, 20, 304217	1.8	52
20	Size dependence and convergence of the retrieval parameters of metamaterials. *Photonics and Nanostructures - Fundamentals and Applications*, **2008**, 6, 96-101	2.6	41
19	Magnetic response of split ring resonators at terahertz frequencies. *Physica Status Solidi (B): Basic Research*, **2007**, 244, 1181-1187	1.3	34

18	Magnetic and electric excitations in split ring resonators. *Optics Express*, **2007**, 15, 17881-90	3.3	99
17	Experimental demonstration of negative index of refraction. *Applied Physics Letters*, **2006**, 88, 221103	3.4	132
16	Photonic Metamaterials: Magnetism at Optical Frequencies. *IEEE Journal of Selected Topics in Quantum Electronics*, **2006**, 12, 1097-1105	3.8	140
15	Negative index materials using simple short wire pairs. *Physical Review B*, **2006**, 73,	3.3	303
14	Unifying approach to left-handed material design. *Optics Letters*, **2006**, 31, 3620-2	3	313
13	Limits on the amplification of evanescent waves of left-handed materials. *Journal of the Optical Society of America B: Optical Physics*, **2006**, 23, 485	1.7	15
12	Comparative genomic hybridization pattern of non-anaplastic and anaplastic oligodendrogliomas--a meta-analysis. *Pathology Research and Practice*, **2006**, 202, 23-30	3.4	8
11	Magnetic response of split-ring resonators in the far-infrared frequency regime. *Optics Letters*, **2005**, 30, 1348-50	3	169
10	Saturation of the magnetic response of split-ring resonators at optical frequencies. *Physical Review Letters*, **2005**, 95, 223902	7.4	467
9	Magnetic metamaterials at telecommunication and visible frequencies. *Physical Review Letters*, **2005**, 95, 203901	7.4	590
8	Focused-Ion-Beam Nanofabrication of Near-Infrared Magnetic Metamaterials. *Advanced Materials*, **2005**, 17, 2547-2549	24	106
7	Magnetic response of metamaterials at 100 terahertz. *Science*, **2004**, 306, 1351-3	33.3	1192
6	Effective medium theory of left-handed materials. *Physical Review Letters*, **2004**, 93, 107402	7.4	260
5	Electric coupling to the magnetic resonance of split ring resonators. *Applied Physics Letters*, **2004**, 84, 2943-2945	3.4	348
4	Comparative genomic hybridization in glioma: a meta-analysis of 509 cases. *Cancer Genetics and Cytogenetics*, **2002**, 135, 147-59		74
3	Gain of chromosome 7 detected by comparative genomic hybridization accumulates with age in patients with glioblastoma multiforme. *Cancer Genetics and Cytogenetics*, **2002**, 136, 92-4		5
2	Levitation of current carrying states in the lattice model for the integer quantum Hall effect. *Physical Review Letters*, **2001**, 86, 3863-6	7.4	25
1	Experimental Demonstration of Dark-State Metasurface Laser with Controllable Radiative Coupling. *Advanced Optical Materials*,2102679	8.1	1