

# Thomas Koschny

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Magnetic response of metamaterials at 100 terahertz. <i>Science</i> , <b>2004</b> , 306, 1351-3	33.3	1192
124	Magnetic metamaterials at telecommunication and visible frequencies. <i>Physical Review Letters</i> , <b>2005</b> , 95, 203901	7.4	590
123	Metamaterial with negative index due to chirality. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	568
122	Low-loss metamaterials based on classical electromagnetically induced transparency. <i>Physical Review Letters</i> , <b>2009</b> , 102, 053901	7.4	530
121	Saturation of the magnetic response of split-ring resonators at optical frequencies. <i>Physical Review Letters</i> , <b>2005</b> , 95, 223902	7.4	467
120	Wide-angle perfect absorber/thermal emitter in the terahertz regime. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	377
119	Electric coupling to the magnetic resonance of split ring resonators. <i>Applied Physics Letters</i> , <b>2004</b> , 84, 2943-2945	3.4	348
118	Unifying approach to left-handed material design. <i>Optics Letters</i> , <b>2006</b> , 31, 3620-2	3	313
117	A comparison of graphene, superconductors and metals as conductors for metamaterials and plasmonics. <i>Nature Photonics</i> , <b>2012</b> , 6, 259-264	33.9	309
116	Negative index materials using simple short wire pairs. <i>Physical Review B</i> , <b>2006</b> , 73,	3.3	303
115	Negative refractive index due to chirality. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	293
114	Effective medium theory of left-handed materials. <i>Physical Review Letters</i> , <b>2004</b> , 93, 107402	7.4	260
113	Electromagnetically induced transparency and absorption in metamaterials: the radiating two-oscillator model and its experimental confirmation. <i>Physical Review Letters</i> , <b>2012</b> , 109, 187401	7.4	256
112	Chiral metamaterials: simulations and experiments. <i>Journal of Optics</i> , <b>2009</b> , 11, 114003		217
111	Classical analogue of electromagnetically induced transparency with a metal-superconductor hybrid metamaterial. <i>Physical Review Letters</i> , <b>2011</b> , 107, 043901	7.4	206
110	Optically implemented broadband blueshift switch in the terahertz regime. <i>Physical Review Letters</i> , <b>2011</b> , 106, 037403	7.4	190
109	Wide-angle and polarization-independent chiral metamaterial absorber. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	185

108	Tunable Terahertz Meta-Surface with Graphene Cut-Wires. <i>ACS Photonics</i> , <b>2015</b> , 2, 151-156	6.3	184
107	Repulsive Casimir force in chiral metamaterials. <i>Physical Review Letters</i> , <b>2009</b> , 103, 103602	7.4	175
106	Magnetic response of split-ring resonators in the far-infrared frequency regime. <i>Optics Letters</i> , <b>2005</b> , 30, 1348-50	3	169
105	Applied physics. Graphene for terahertz applications. <i>Science</i> , <b>2013</b> , 341, 620-1	33.3	166
104	Chiral metamaterials: retrieval of the effective parameters with and without substrate. <i>Optics Express</i> , <b>2010</b> , 18, 14553-67	3.3	165
103	Conjugated gammadion chiral metamaterial with uniaxial optical activity and negative refractive index. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	163
102	Planar designs for electromagnetically induced transparency in metamaterials. <i>Optics Express</i> , <b>2009</b> , 17, 5595-605	3.3	161
101	Chiral metamaterials with negative refractive index based on four split ring resonators. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 081901	3.4	157
100	Photonic Metamaterials: Magnetism at Optical Frequencies. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2006</b> , 12, 1097-1105	3.8	140
99	Optical anisotropic metamaterials: Negative refraction and focusing. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	132
98	Experimental demonstration of negative index of refraction. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 221103	3.4	132
97	Electrically Tunable Goos-Hänchen Effect with Graphene in the Terahertz Regime. <i>Advanced Optical Materials</i> , <b>2016</b> , 4, 1824-1828	8.1	126
96	Nonplanar chiral metamaterials with negative index. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 151112	3.4	121
95	Broadband terahertz generation from metamaterials. <i>Nature Communications</i> , <b>2014</b> , 5, 3055	17.4	120
94	Large group delay in a microwave metamaterial analog of electromagnetically induced transparency. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 241904	3.4	119
93	Focused-Ion-Beam Nanofabrication of Near-Infrared Magnetic Metamaterials. <i>Advanced Materials</i> , <b>2005</b> , 17, 2547-2549	24	106
92	Nonlinear properties of split-ring resonators. <i>Optics Express</i> , <b>2008</b> , 16, 16058-63	3.3	101
91	Magnetic and electric excitations in split ring resonators. <i>Optics Express</i> , <b>2007</b> , 15, 17881-90	3.3	99

90	An efficient way to reduce losses of left-handed metamaterials. <i>Optics Express</i> , <b>2008</b> , 16, 11147-52	3.3	90
89	Bi-layer cross chiral structure with strong optical activity and negative refractive index. <i>Optics Express</i> , <b>2009</b> , 17, 14172-9	3.3	83
88	Broadband blueshift tunable metamaterials and dual-band switches. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	81
87	A New Perspective on Plasmonics: Confinement and Propagation Length of Surface Plasmons for Different Materials and Geometries. <i>Advanced Optical Materials</i> , <b>2016</b> , 4, 177-184	8.1	79
86	Lasing in metamaterial nanostructures. <i>Journal of Optics (United Kingdom)</i> , <b>2010</b> , 12, 024013	1.7	78
85	Multi-gap individual and coupled split-ring resonator structures. <i>Optics Express</i> , <b>2008</b> , 16, 18131-44	3.3	78
84	Hyperbolic spoof plasmonic metasurfaces. <i>NPG Asia Materials</i> , <b>2017</b> , 9, e428-e428	10.3	77
83	Negative refractive index response of weakly and strongly coupled optical metamaterials. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	76
82	Comparative genomic hybridization in glioma: a meta-analysis of 509 cases. <i>Cancer Genetics and Cytogenetics</i> , <b>2002</b> , 135, 147-59		74
81	Self-consistent calculations of loss-compensated fishnet metamaterials. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	69
80	Reducing ohmic losses in metamaterials by geometric tailoring. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	67
79	Optical forces in nanowire pairs and metamaterials. <i>Optics Express</i> , <b>2010</b> , 18, 25665-76	3.3	58
78	Interaction between graphene and metamaterials: split rings vs. wire pairs. <i>Optics Express</i> , <b>2012</b> , 20, 12198-20453	3.3	58
77	The science of negative index materials. <i>Journal of Physics Condensed Matter</i> , <b>2008</b> , 20, 304217	1.8	52
76	Effective material parameter retrieval for thin sheets: Theory and application to graphene, thin silver films, and single-layer metamaterials. <i>Physica B: Condensed Matter</i> , <b>2012</b> , 407, 4062-4065	2.8	51
75	Comparison of chiral metamaterial designs for repulsive Casimir force. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	48
74	Intra-connected three-dimensionally isotropic bulk negative index photonic metamaterial. <i>Optics Express</i> , <b>2010</b> , 18, 12348-53	3.3	44
73	Pairing Toroidal and Magnetic Dipole Resonances in Elliptic Dielectric Rod Metasurfaces for Reconfigurable Wavefront Manipulation in Reflection. <i>Advanced Optical Materials</i> , <b>2018</b> , 6, 1800633	8.1	44

72	Overcoming the losses of a split ring resonator array with gain. <i>Optics Express</i> , <b>2011</b> , 19, 12688-99	3.3	42
71	Size dependence and convergence of the retrieval parameters of metamaterials. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , <b>2008</b> , 6, 96-101	2.6	41
70	Theory of pump-probe experiments of metallic metamaterials coupled to a gain medium. <i>Physical Review Letters</i> , <b>2012</b> , 108, 187402	7.4	40
69	Transmission in the vicinity of the Dirac point in hexagonal photonic crystals. <i>Physica B: Condensed Matter</i> , <b>2010</b> , 405, 2990-2995	2.8	40
68	Tunable meta-atom using liquid metal embedded in stretchable polymer. <i>Journal of Applied Physics</i> , <b>2015</b> , 118, 014504	2.5	39
67	Magnetic response of nanoscale left-handed metamaterials. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	39
66	Switching nonlinearity in a superconductor-enhanced metamaterial. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 121906	3.4	37
65	Connected bulk negative index photonic metamaterials. <i>Optics Letters</i> , <b>2009</b> , 34, 506-8	3	34
64	Magnetic response of split ring resonators at terahertz frequencies. <i>Physica Status Solidi (B): Basic Research</i> , <b>2007</b> , 244, 1181-1187	1.3	34
63	One- and two-dimensional photo-imprinted diffraction gratings for manipulating terahertz waves. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 043101	3.4	33
62	Creating double negative index materials using the Babinet principle with one metasurface. <i>Physical Review B</i> , <b>2013</b> , 87,	3.3	32
61	Repulsive Casimir forces with finite-thickness slabs. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	32
60	Comparison of gold- and graphene-based resonant nanostructures for terahertz metamaterials and an ultrathin graphene-based modulator. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	31
59	Electric and Magnetic Response in Dielectric Dark States for Low Loss Subwavelength Optical Meta Atoms. <i>Advanced Optical Materials</i> , <b>2015</b> , 3, 1431-1438	8.1	30
58	Large quality factor in sheet metamaterials made from dark dielectric meta-atoms. <i>Physical Review Letters</i> , <b>2014</b> , 112, 117403	7.4	27
57	Antimatched Electromagnetic Metasurfaces for Broadband Arbitrary Phase Manipulation in Reflection. <i>ACS Photonics</i> , <b>2018</b> , 5, 1101-1107	6.3	25
56	Levitation of current carrying states in the lattice model for the integer quantum Hall effect. <i>Physical Review Letters</i> , <b>2001</b> , 86, 3863-6	7.4	25
55	Tailorable Zero-Phase Delay of Subwavelength Particles toward Miniaturized Wave Manipulation Devices. <i>Advanced Materials</i> , <b>2015</b> , 27, 6187-94	24	24

54	Strong group-velocity dispersion compensation with phase-engineered sheet metamaterials. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	23
53	Reversible modulation and ultrafast dynamics of terahertz resonances in strongly photoexcited metamaterials. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	23
52	Optical metamaterials with different metals. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	23
51	Compact planar far-field superlens based on anisotropic left-handed metamaterials. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	22
50	Surface plasmon driven electric and magnetic resonators for metamaterials. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	21
49	Novel Lasers Based on Resonant Dark States. <i>Physical Review Letters</i> , <b>2017</b> , 118, 073901	7.4	19
48	Phase-Modulated Scattering Manipulation for Exterior Cloaking in Metal-Dielectric Hybrid Metamaterials. <i>Advanced Materials</i> , <b>2019</b> , 31, e1903206	24	19
47	Metamaterials in microwaves, optics, mechanics, thermodynamics, and transport. <i>Journal of Optics (United Kingdom)</i> , <b>2017</b> , 19, 084005	1.7	19
46	Nonlinearity in the Dark: Broadband Terahertz Generation with Extremely High Efficiency. <i>Physical Review Letters</i> , <b>2019</b> , 122, 027401	7.4	19
45	Near-Infrared and Optical Beam Steering and Frequency Splitting in Air-Holes-in-Silicon Inverse Photonic Crystals. <i>ACS Photonics</i> , <b>2017</b> , 4, 2782-2788	6.3	17
44	Surface-Plasmon-Mediated Gradient Force Enhancement and Mechanical State Transitions of Graphene Sheets. <i>ACS Photonics</i> , <b>2017</b> , 4, 181-187	6.3	16
43	Bortezomib sensitizes primary meningioma cells to TRAIL-induced apoptosis by enhancing formation of the death-inducing signaling complex. <i>Journal of Neuropathology and Experimental Neurology</i> , <b>2014</b> , 73, 1034-46	3.1	16
42	Temperature-Controlled Chameleonlike Cloak. <i>Physical Review X</i> , <b>2017</b> , 7,	9.1	15
41	Frequency splitter based on the directional emission from surface modes in dielectric photonic crystal structures. <i>Optics Express</i> , <b>2015</b> , 23, 13972-82	3.3	15
40	Limits on the amplification of evanescent waves of left-handed materials. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2006</b> , 23, 485	1.7	15
39	Electrodynamic Modeling of Quantum Dot Luminescence in Plasmonic Metamaterials. <i>ACS Photonics</i> , <b>2016</b> , 3, 558-563	6.3	14
38	Investigation of broadband terahertz generation from metasurface. <i>Optics Express</i> , <b>2018</b> , 26, 14241-14250	5.0	14
37	Fundamentals of metasurface lasers based on resonant dark states. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	14

36	Metamaterial-based lossy anisotropic epsilon-near-zero medium for energy collimation. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	12
35	Finite-Size Effects in Metasurface Lasers Based on Resonant Dark States. <i>ACS Photonics</i> , <b>2018</b> , 5, 3788-3793	3.3	11
34	Experimentally excellent beaming in a two-layer dielectric structure. <i>Optics Express</i> , <b>2014</b> , 22, 23147-52	3.3	11
33	Tunable terahertz frequency comb generation using time-dependent graphene sheets. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	10
32	. <i>Journal of Microelectromechanical Systems</i> , <b>2017</b> , 26, 1371-1380	2.5	10
31	WHO grade related expression of TRAIL-receptors and apoptosis regulators in meningioma. <i>Pathology Research and Practice</i> , <b>2015</b> , 211, 109-16	3.4	10
30	Broadband metasurfaces enabling arbitrarily large delay-bandwidth products. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 031601	3.4	10
29	Numerical investigation of the flat band Bloch modes in a 2D photonic crystal with Dirac cones. <i>Optics Express</i> , <b>2015</b> , 23, 10444-52	3.3	9
28	WHO grade-specific comparative genomic hybridization pattern of astrocytoma - a meta-analysis. <i>Pathology Research and Practice</i> , <b>2010</b> , 206, 663-8	3.4	9
27	Squeezing a Prism into a Surface: Emulating Bulk Optics with Achromatic Metasurfaces. <i>Advanced Optical Materials</i> , <b>2020</b> , 8, 2000942	8.1	9
26	Experimental Implementation of Achromatic Multiresonant Metasurface for Broadband Pulse Delay. <i>ACS Photonics</i> , <b>2021</b> , 8, 1649-1655	6.3	9
25	What is a good conductor for metamaterials or plasmonics. <i>Nanophotonics</i> , <b>2015</b> , 4, 69-74	6.3	8
24	Comparative genomic hybridization pattern of non-anaplastic and anaplastic oligodendrogliomas--a meta-analysis. <i>Pathology Research and Practice</i> , <b>2006</b> , 202, 23-30	3.4	8
23	Mechanism of the metallic metamaterials coupled to the gain material. <i>Optics Express</i> , <b>2014</b> , 22, 28596-605	3.3	7
22	Local density of optical states in the three-dimensional band gap of a finite photonic crystal. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	6
21	Unusual infrared absorption increases in photo-degraded organic films. <i>Nanoscale</i> , <b>2017</b> , 9, 8665-8673	7.7	6
20	Lasing threshold control in two-dimensional photonic crystals with gain. <i>Optics Express</i> , <b>2014</b> , 22, 19242-51	3.3	5
19	Discontinuous design of negative index metamaterials based on mode hybridization. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 081913	3.4	5

18	Gain of chromosome 7 detected by comparative genomic hybridization accumulates with age in patients with glioblastoma multiforme. <i>Cancer Genetics and Cytogenetics</i> , <b>2002</b> , 136, 92-4		5
17	Photoimprinted Controllable Fano Resonance in the Terahertz Regime. <i>ACS Photonics</i> , <b>2017</b> , 4, 1785-1789	3	4
16	Zhao et al. Reply:. <i>Physical Review Letters</i> , <b>2010</b> , 105,	7.4	4
15	Loss compensated negative index material at optical wavelengths. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , <b>2012</b> , 10, 276-280	2.6	3
14	On loss compensation, amplification and lasing in metallic metamaterials. <i>Nanomaterials and Nanotechnology</i> , <b>2019</b> , 9, 184798041881794	2.9	3
13	Robust wedge demonstration to optical negative index metamaterials. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 241915	3.4	2
12	Dark-State-Based Low-Loss Metasurfaces with Simultaneous Electric and Magnetic Resonant Response. <i>ACS Photonics</i> , <b>2020</b> , 7, 241-248	6.3	2
11	Shape- and Orientation-Dependent Scattering of Isolated Gold Nanostructures Using Polarized Dark-Field Microscopy. <i>Journal of Physical Chemistry C</i> , <b>2021</b> , 125, 11478-11488	3.8	2
10	Graded-index optical dimer formed by optical force. <i>Optics Express</i> , <b>2016</b> , 24, 11376-86	3.3	2
9	Field Enhancement with Classical Electromagnetically Induced Transparency. <i>Springer Series in Materials Science</i> , <b>2015</b> , 303-319	0.9	1
8	Young's double-slit experiment in photonic crystals. <i>Physica B: Condensed Matter</i> , <b>2012</b> , 407, 4048-4050	2.8	1
7	Surface States on Photonic Crystals As Hybrid Dielectric Metasurface Bound States of the Termination Layer. <i>ACS Photonics</i> , <b>2020</b> , 7, 2842-2849	6.3	1
6	Experimental Demonstration of Dark-State Metasurface Laser with Controllable Radiative Coupling. <i>Advanced Optical Materials</i> , 2102679	8.1	1
5	Robustness of Optical Response for Self-Assembled Plasmonic Metamaterials with Morphological Disorder and Surface Roughness. <i>Advanced Optical Materials</i> , <b>2020</b> , 8, 1901794	8.1	0
4	Effects of Coherent versus Incoherent Illumination and Imaging Setup on Experimental Measurements of Scattering Amplitudes in Metamaterials. <i>ACS Photonics</i> , <b>2021</b> , 8, 1856-1862	6.3	0
3	Metamaterials: Tailorable Zero-Phase Delay of Subwavelength Particles toward Miniaturized Wave Manipulation Devices (Adv. Mater. 40/2015). <i>Advanced Materials</i> , <b>2015</b> , 27, 6304-6304	24	
2	Microwave realization of multiresonant metasurfaces for achromatic pulse delay. <i>Journal of Physics: Conference Series</i> , <b>2021</b> , 2015, 012157	0.3	
1	Topological Transition Enabled by Surface Modification of Photonic Crystals. <i>ACS Photonics</i> , <b>2021</b> , 8, 1385-1392	6.3	



