

Hou-Tong Chen

List of Publications by Year in descending order

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148
papers

16,518
citations

34105

52
h-index

36028

97
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151
all docs

151
docs citations

151
times ranked

9579
citing authors

#	ARTICLE	IF	CITATIONS
1	Active terahertz metamaterial devices. <i>Nature</i> , 2006, 444, 597-600.	27.8	2,066
2	Terahertz Metamaterials for Linear Polarization Conversion and Anomalous Refraction. <i>Science</i> , 2013, 340, 1304-1307.	12.6	1,678
3	A review of metasurfaces: physics and applications. <i>Reports on Progress in Physics</i> , 2016, 79, 076401.	20.1	1,524
4	Active control of electromagnetically induced transparency analogue in terahertz metamaterials. <i>Nature Communications</i> , 2012, 3, 1151.	12.8	1,008
5	A metamaterial solid-state terahertz phase modulator. <i>Nature Photonics</i> , 2009, 3, 148-151.	31.4	864
6	Interference theory of metamaterial perfect absorbers. <i>Optics Express</i> , 2012, 20, 7165.	3.4	789
7	Experimental demonstration of frequency-agile terahertz metamaterials. <i>Nature Photonics</i> , 2008, 2, 295-298.	31.4	765
8	Terahertz imaging with nanometer resolution. <i>Applied Physics Letters</i> , 2003, 83, 3009-3011.	3.3	469
9	Photoinduced handedness switching in terahertz chiral metamolecules. <i>Nature Communications</i> , 2012, 3, 942.	12.8	407
10	Experimental demonstration of terahertz metamaterial absorbers with a broad and flat high absorption band. <i>Optics Letters</i> , 2012, 37, 154.	3.3	351
11	Antireflection Coating Using Metamaterials and Identification of Its Mechanism. <i>Physical Review Letters</i> , 2010, 105, 073901.	7.8	318
12	Complementary planar terahertz metamaterials. <i>Optics Express</i> , 2007, 15, 1084.	3.4	307
13	A spatial light modulator for terahertz beams. <i>Applied Physics Letters</i> , 2009, 94, .	3.3	271
14	Ultrafast optical switching of terahertz metamaterials fabricated on ErAs/GaAs nanoisland superlattices. <i>Optics Letters</i> , 2007, 32, 1620.	3.3	250
15	Tuning the Resonance in High-Temperature Superconducting Terahertz Metamaterials. <i>Physical Review Letters</i> , 2010, 105, 247402.	7.8	240
16	Hybrid graphene metasurfaces for high-speed mid-infrared light modulation and single-pixel imaging. <i>Light: Science and Applications</i> , 2018, 7, 51.	16.6	226
17	Terahertz chiral metamaterials with giant and dynamically tunable optical activity. <i>Physical Review B</i> , 2012, 86, .	3.2	221
18	Metasurface Broadband Solar Absorber. <i>Scientific Reports</i> , 2016, 6, 20347.	3.3	220

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19	Electrically Tunable Metasurface with Independent Frequency and Amplitude Modulations. ACS Photonics, 2020, 7, 265-271.	6.6	202
20	Simultaneous Control of Light Polarization and Phase Distributions Using Plasmonic Metasurfaces. Advanced Functional Materials, 2015, 25, 704-710.	14.9	178
21	Anomalous Terahertz Reflection and Scattering by Flexible and Conformal Coding Metamaterials. Advanced Optical Materials, 2015, 3, 1374-1380.	7.3	175
22	Impact of resonator geometry and its coupling with ground plane on ultrathin metamaterial perfect absorbers. Applied Physics Letters, 2012, 101, .	3.3	170
23	Terahertz biosensing with a graphene-metamaterial heterostructure platform. Carbon, 2019, 141, 247-252.	10.3	156
24	Independently tunable dual-band perfect absorber based on graphene at mid-infrared frequencies. Scientific Reports, 2016, 5, 18463.	3.3	145
25	Thermal tunability in terahertz metamaterials fabricated on strontium titanate single-crystal substrates. Optics Letters, 2011, 36, 1230.	3.3	143
26	Optical properties of nanocrystalline Y2O3:Eu depending on its odd structure. Journal of Colloid and Interface Science, 2003, 262, 588-593.	9.4	141
27	Manipulation of terahertz radiation using metamaterials. Laser and Photonics Reviews, 2011, 5, 513-533.	8.7	141
28	High-Temperature Refractory Metasurfaces for Solar Thermophotovoltaic Energy Harvesting. Nano Letters, 2018, 18, 7665-7673.	9.1	140
29	Hybrid metamaterials enable fast electrical modulation of freely propagating terahertz waves. Applied Physics Letters, 2008, 93, .	3.3	124
30	Electronic control of extraordinary terahertz transmission through subwavelength metal hole arrays. Optics Express, 2008, 16, 7641.	3.4	119
31	Mammalian Stem Cells Reprogramming in Response to Terahertz Radiation. PLoS ONE, 2010, 5, e15806.	2.5	109
32	Terahertz superconductor metamaterial. Applied Physics Letters, 2010, 97, .	3.3	109
33	Active Terahertz Metamaterial Devices. , 2008, , .		103
34	Ultrafast manipulation of near field coupling between bright and dark modes in terahertz metamaterial. Applied Physics Letters, 2013, 102, .	3.3	94
35	Metamaterials for THz polarimetric devices. Optics Express, 2009, 17, 773.	3.4	93
36	Dynamically reconfigurable terahertz metamaterial through photo-doped semiconductor. Applied Physics Letters, 2011, 99, .	3.3	91

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37	An electrically driven terahertz metamaterial diffractive modulator with more than 20 dB of dynamic range. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	83
38	Specificity and Heterogeneity of Terahertz Radiation Effect on Gene Expression in Mouse Mesenchymal Stem Cells. <i>Scientific Reports</i> , 2013, 3, 1184.	3.3	78
39	Reconfigurable Terahertz Metasurface Pure Phase Holograms. <i>Advanced Optical Materials</i> , 2019, 7, 1801696.	7.3	76
40	Broadband Linear-to-Circular Polarization Conversion Enabled by Birefringent Off-Resonance Reflective Metasurfaces. <i>Physical Review Letters</i> , 2019, 123, 237401.	7.8	76
41	Optical tuning and ultrafast dynamics of high-temperature superconducting terahertz metamaterials. <i>Nanophotonics</i> , 2012, 1, 117-123.	6.0	75
42	Non-thermal effects of terahertz radiation on gene expression in mouse stem cells. <i>Biomedical Optics Express</i> , 2011, 2, 2679.	2.9	73
43	Surface-wave-assisted nonreciprocity in spatio-temporally modulated metasurfaces. <i>Nature Communications</i> , 2020, 11, 1469.	12.8	72
44	Ultra-thin metasurface microwave flat lens for broadband applications. <i>Applied Physics Letters</i> , 2017, 110, 224101.	3.3	64
45	Highly Plasmonic Titanium Nitride by Room-Temperature Sputtering. <i>Scientific Reports</i> , 2019, 9, 15287.	3.3	62
46	Luminescence concentration quenching of 1D ₂ state in YPO ₄ :Pr ³⁺ . <i>Journal of Physics Condensed Matter</i> , 2001, 13, 1151-1158.	1.8	61
47	Surface plasmons in terahertz metamaterials. <i>Optics Express</i> , 2008, 16, 18745.	3.4	61
48	Identification of a Resonant Imaging Process in Apertureless Near-Field Microscopy. <i>Physical Review Letters</i> , 2004, 93, 267401.	7.8	57
49	Nanoscale Artificial Plasmonic Lattice in Self-Assembled Vertically Aligned Nitride-Metal Hybrid Metamaterials. <i>Advanced Science</i> , 2018, 5, 1800416.	11.2	56
50	Self-Assembled Ordered Three-Phase Au/BaTiO ₃ /ZnO Vertically Aligned Nanocomposites Achieved by a Templating Method. <i>Advanced Materials</i> , 2019, 31, e1806529.	21.0	56
51	Demonstration of a highly efficient terahertz flat lens employing tri-layer metasurfaces. <i>Optics Letters</i> , 2017, 42, 1867.	3.3	54
52	Invited Article: Narrowband terahertz bandpass filters employing stacked bilayer metasurface antireflection structures. <i>APL Photonics</i> , 2018, 3, .	5.7	53
53	A broadband planar terahertz metamaterial with nested structure. <i>Optics Express</i> , 2011, 19, 15817.	3.4	52
54	Ultrafast optical control of terahertz surface plasmons in subwavelength hole arrays at room temperature. <i>Applied Physics Letters</i> , 2009, 95, 011105.	3.3	50

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55	Terahertz microscopy of charge carriers in semiconductors. <i>Applied Physics Letters</i> , 2006, 88, 112115.	3.3	48
56	Single-Layer Plasmonic Metasurface Half-Wave Plates with Wavelength-Independent Polarization Conversion Angle. <i>ACS Photonics</i> , 2017, 4, 2061-2069.	6.6	48
57	Metasurface optical antireflection coating. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	47
58	Bilayer Metasurfaces for Dual- and Broadband Optical Antireflection. <i>ACS Photonics</i> , 2017, 4, 2111-2116.	6.6	47
59	Apertureless terahertz near-field microscopy. <i>Semiconductor Science and Technology</i> , 2005, 20, S286-S292.	2.0	43
60	Facile Synthesis and Electrical Properties of Silver Wires through Chemical Reduction by Polyaniline. <i>Journal of Physical Chemistry C</i> , 2010, 114, 22147-22154.	3.1	41
61	Effects of Microstructure Variations on Macroscopic Terahertz Metafilm Properties. <i>Active and Passive Electronic Components</i> , 2007, 2007, 1-10.	0.3	40
62	Hybrid metasurface for ultra-broadband terahertz modulation. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	38
63	Nonlinear high-temperature superconducting terahertz metamaterials. <i>New Journal of Physics</i> , 2013, 15, 105016.	2.9	35
64	Photoluminescence Properties of Surface-Modified Nanocrystalline ZnS : Mn. <i>Journal of Colloid and Interface Science</i> , 2000, 229, 534-539.	9.4	33
65	Tailorable Optical Response of Au@LiNbO ₃ Hybrid Metamaterial Thin Films for Optical Waveguide Applications. <i>Advanced Optical Materials</i> , 2018, 6, 1800510.	7.3	32
66	Nonlinear terahertz metamaterials with active electrical control. <i>Applied Physics Letters</i> , 2017, 111, .	3.3	31
67	Resonance coupling and polarization conversion in terahertz metasurfaces with twisted split-ring resonator pairs. <i>Optics Express</i> , 2017, 25, 25842.	3.4	31
68	Self-Assembled Ag@TiN Hybrid Plasmonic Metamaterial: Tailorable Tilted Nanopillar and Optical Properties. <i>Advanced Optical Materials</i> , 2019, 7, 1801180.	7.3	31
69	Properties of Planar Electric Metamaterials for Novel TeraHertz Applications. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2007, 2, 90-95.	0.5	30
70	A review of terahertz plasmonics in subwavelength holes on conducting films. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2013, 19, 8400416-8400416.	2.9	29
71	Influence of film thickness in THz active metamaterial devices: A comparison between superconductor and metal split-ring resonators. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	25
72	Substrate-insensitive atomic layer deposition of plasmonic titanium nitride films. <i>Optical Materials Express</i> , 2017, 7, 777.	3.0	25

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73	Near-infrared surface plasmon polariton dispersion control with hyperbolic metamaterials. Optics Express, 2013, 21, 11107.	3.4	24
74	Coupling Schemes in Terahertz Planar Metamaterials. International Journal of Optics, 2012, 2012, 1-12.	1.4	18
75	3D Hybrid Plasmonic Framework with Au Nanopillars Embedded in Nitride Multilayers Integrated on Si. Advanced Materials Interfaces, 2020, 7, 2000493.	3.7	18
76	Terahertz microscopy with submicrometre resolution. Journal of Optics, 2005, 7, S184-S189.	1.5	16
77	External modulators for TeraHertz Quantum Cascade Lasers based on electrically-driven active metamaterials. Metamaterials, 2010, 4, 83-88.	2.2	16
78	Manipulating multiple order parameters via oxygen vacancies: The case of $E_u^{0.5}B_a$	3.2	15
79	The role of magnetic dipoles and non-zero-order Bragg waves in metamaterial perfect absorbers. Optics Express, 2013, 21, 3540.	3.4	14
80	Morphology Control of Self-Assembled Three-Phase Au-BaTiO ₃ –ZnO Hybrid Metamaterial for Tunable Optical Properties. Crystal Growth and Design, 2020, 20, 6101-6108.	3.0	14
81	Core-shell metallic alloy nanopillars-in-dielectric hybrid metamaterials with magneto-plasmonic coupling. Materials Today, 2021, 51, 39-47.	14.2	14
82	Characterization of an active metasurface using terahertz ellipsometry. Applied Physics Letters, 2017, 111, .	3.3	13
83	Observation of Intersubband Polaritons in a Single Nanoantenna Using Nano-FTIR Spectroscopy. Nano Letters, 2019, 19, 4620-4626.	9.1	12
84	Energy transfer in PbWO ₄ /Dy ³⁺ luminescence. Journal of Alloys and Compounds, 2001, 322, 298-301.	5.5	11
85	Metamaterials: Anomalous Terahertz Reflection and Scattering by Flexible and Conformal Coding Metamaterials (Advanced Optical Materials 10/2015). Advanced Optical Materials, 2015, 3, 1373-1373.	7.3	11
86	Semiconductor activated terahertz metamaterials. Frontiers of Optoelectronics, 2015, 8, 27-43.	3.7	10
87	Broadband titanium nitride disordered metasurface absorbers. Optics Express, 2021, 29, 42813.	3.4	9
88	Metasurface-based ultra-lightweight high-gain off-axis flat parabolic reflectarray for microwave beam collimation/focusing. Scientific Reports, 2019, 9, 18984.	3.3	8
89	Terahertz metamaterial devices. , 2007, , .		7
90	Electric-field tuning of a planar terahertz metamaterial based on strained SrTiO ₃ layers. Journal Physics D: Applied Physics, 2018, 51, 054001.	2.8	7

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91	Crystallization of liquid Cu nanodroplets on single crystal Cu substrates prefers closest-packed planes regardless of the substrate orientations. Journal of Crystal Growth, 2012, 345, 34-38.	1.5	6
92	Room-Temperature Ferroelectric $\text{LiNb}_6\text{Ba}_5\text{Ti}_4\text{O}_{30}$ Spinel Phase in a Nanocomposite Thin Film Form for Nonlinear Photonics. ACS Applied Materials & Interfaces, 2020, 12, 23076-23083.	8.0	6
93	Split-Ring Resonator Enhanced Terahertz Antenna. , 2007, , .		5
94	Active terahertz metamaterials. Optics and Spectroscopy (English Translation of Optika i Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 622 Td (0.6	4
95	Ultrafast phenomena and terahertz waves: introduction. Journal of the Optical Society of America B: Optical Physics, 2022, 39, UPT1.	2.1	3
96	Terahertz metamaterials for active, tunable, and dynamic devices. , 2007, , .		2
97	A novel approach to further decrease the thickness of ultrathin perfect metamaterial absorbers. , 2012, , .		2
98	Thermal and ultrafast optical tuning of ultrathin high-temperature superconducting terahertz metamaterials. Proceedings of SPIE, 2012, , .	0.8	2
99	Strong Purcell enhancement at telecom wavelengths afforded by spinel Fe_3O_4 nanocrystals with size-tunable plasmonic properties. Nanoscale Horizons, 2021, , .	8.0	2
100	Properties of Novel Terahertz Electric Metamaterials. , 2007, , .		1
101	Metamaterials for Novel Terahertz and Millimeter Wave Devices. , 2007, , .		1
102	Taming the terahertz. Nature Photonics, 2008, 2, 324-324.	31.4	1
103	Multi-layer planar terahertz electric metamaterials on flexible substrates. , 2008, , .		1
104	Terahertz metamaterials. , 2009, , .		1
105	Terahertz spectroscopy of two-dimensional subwavelength plasmonic structures. , 2009, , .		1
106	Metamaterial based devices for terahertz imaging. , 2010, , .		1
107	Efficient terahertz metasurface-based flat lens. , 2017, , .		1
108	A Novel Approach of Antireflection Coating Using Planar Metamaterials. , 2010, , .		1

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109	Development of near-field microscopy for THz imaging. , 0, , .		0
110	Active metamaterials: A novel approach to manipulate terahertz waves. , 2007, , .		0
111	Metamaterials and their THz applications. , 2007, , .		0
112	Opto-electronic control of terahertz metamaterials. , 2007, , .		0
113	Electrical Control of Terahertz Metamaterials. , 2007, , .		0
114	Perfect Terahertz Absorber Using Fishnet Based Metafilm. , 2010, , .		0
115	Tunable and Nonlinear Microwave and Terahertz Metamaterials. , 2011, , .		0
116	Ultrafast optical control of terahertz surface plasmons in subwavelength hole-arrays at room temperature. Proceedings of SPIE, 2011, , .	0.8	0
117	New Directions in Active and Tunable Metamaterials. , 2013, , .		0
118	Active Metamaterial Diffraction Grating. , 2013, , .		0
119	An electrically driven terahertz modulator with over 20 dB of dynamic range. , 2013, , .		0
120	Active Metamaterial Diffraction Grating. , 2013, , .		0
121	Efficient metamaterial flat lenses. , 2014, , .		0
122	Ultra-broadband terahertz modulation by active hybrid metamaterials. , 2014, , .		0
123	Terahertz metasurfaces for antireflection coatings. , 2015, , .		0
124	Tuning of terahertz metamaterialsâ€™ resonances via near field coupling. Proceedings of SPIE, 2015, , .	0.8	0
125	Terahertz Surface Wave Modulation in a Dielectric Slab Metasurface. , 2015, , .		0
126	Theoretical and experimental determination of surface susceptibility of switchable terahertz metasurfaces. , 2016, , .		0

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127	Electrically modulated nonlinear terahertz metamaterials. , 2016, , .		0
128	Active terahertz metasurface devices. , 2016, , .		0
129	Intrinsic left-handed electromagnetic properties in anisotropic superconductors. Applied Physics Letters, 2017, 110, 172602.	3.3	0
130	Metasurfaces for broadband terahertz linear polarization rotation and linear-to-circular polarization conversion. , 2018, , .		0
131	THz microscopy of charge carrier distributions. , 2005, , .		0
132	Terahertz Access to the Nanoworld. Springer Series in Chemical Physics, 2005, , 693-695.	0.2	0
133	Dynamically Frequency Tunable Terahertz Metamaterials. , 2007, , .		0
134	Terahertz near field microscopy of metamaterials. , 2008, , .		0
135	Active Terahertz Metamaterials. , 2009, , .		0
136	A Spatial Light Modulator for Terahertz Radiation. , 2009, , .		0
137	Active Terahertz Metamaterials. , 2009, , .		0
138	A Broadband Terahertz Metamaterial Electrical Modulator. , 2009, , .		0
139	External Modulation of Terahertz Quantum Cascade Lasers Using Electrically-Driven Active Metamaterials. , 2009, , .		0
140	Superconductor Terahertz Metamaterials. , 2010, , .		0
141	Ultrafast control of near field coupling in terahertz metamaterials. , 2013, , .		0
142	Metasurface Optical Antireflection Coatings. , 2015, , .		0
143	Electrically Modulated Nonlinear Terahertz Metamaterials. , 2017, , .		0
144	Characterization of Switchable Terahertz Metasurfaces. , 2017, , .		0

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145	Broadband terahertz linear polarization rotation and linear-to-circular polarization conversion using metasurfaces. , 2018, , .		0
146	Linear and nonlinear optics of switchable terahertz metasurfaces. , 2018, , .		0
147	Intersubband Polaritons and Strong Coupling in Single Nanoantenna Observed by Near-field Microscopy. , 2020, , .		0
148	Broadband Linear-to-Circular Polarization Conversion Enabled by Birefringent Reflective Metasurfaces. , 2020, , .		0