

Yu Luo

List of Publications by Year in descending order

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143
papers

5,137
citations

81743

39
h-index

102304

66
g-index

144
all docs

144
docs citations

144
times ranked

3878
citing authors

#	ARTICLE	IF	CITATIONS
1	Macroscopic invisibility cloaking of visible light. <i>Nature Communications</i> , 2011, 2, 176.	5.8	377
2	Surface Plasmons and Nonlocality: A Simple Model. <i>Physical Review Letters</i> , 2013, 111, 093901.	2.9	223
3	An optically driven digital metasurface for programming electromagnetic functions. <i>Nature Electronics</i> , 2020, 3, 165-171.	13.1	203
4	Experimental retrieval of the effective parameters of metamaterials based on a waveguide method. <i>Optics Express</i> , 2006, 14, 12944.	1.7	138
5	Design and analytical full-wave validation of the invisibility cloaks, concentrators, and field rotators created with a general class of transformations. <i>Physical Review B</i> , 2008, 77, .	1.1	135
6	Homogeneous optical cloak constructed with uniform layered structures. <i>Optics Express</i> , 2011, 19, 8625.	1.7	133
7	Metal-Substrate-Mediated Plasmon Hybridization in a Nanoparticle Dimer for Photoluminescence Line-Width Shrinking and Intensity Enhancement. <i>ACS Nano</i> , 2017, 11, 3067-3080.	7.3	127
8	Ultrathin Dual-Band Metasurface Polarization Converter. <i>IEEE Transactions on Antennas and Propagation</i> , 2019, 67, 4636-4641.	3.1	120
9	Response of a cylindrical invisibility cloak to electromagnetic waves. <i>Physical Review B</i> , 2007, 76, .	1.1	112
10	Nonlinear Metasurface for Simultaneous Control of Spin and Orbital Angular Momentum in Second Harmonic Generation. <i>Nano Letters</i> , 2017, 17, 7974-7979.	4.5	112
11	Spoof Plasmonics: From Metamaterial Concept to Topological Description. <i>Advanced Materials</i> , 2018, 30, e1706683.	11.1	111
12	Planar bifunctional Luneburg-fisheye lens made of an anisotropic metasurface. <i>Laser and Photonics Reviews</i> , 2014, 8, 757-765.	4.4	108
13	High-order localized spoof surface plasmon resonances and experimental verifications. <i>Scientific Reports</i> , 2015, 5, 9590.	1.6	104
14	Transforming the optical landscape. <i>Science</i> , 2015, 348, 521-524.	6.0	101
15	van der Waals interactions at the nanoscale: The effects of nonlocality. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 18422-18427.	3.3	96
16	Capturing photons with transformation optics. <i>Nature Physics</i> , 2013, 9, 518-522.	6.5	90
17	A Rigorous Analysis of Plane-Transformed Invisibility Cloaks. <i>IEEE Transactions on Antennas and Propagation</i> , 2009, 57, 3926-3933.	3.1	87
18	Surface Plasmons and Singularities. <i>Nano Letters</i> , 2010, 10, 4186-4191.	4.5	85

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19	Broadband Light Harvesting Nanostructures Robust to Edge Bluntness. <i>Physical Review Letters</i> , 2012, 108, 023901.	2.9	82
20	Combined System for Efficient Excitation and Capture of LSP Resonances and Flexible Control of SPP Transmissions. <i>ACS Photonics</i> , 2015, 2, 738-743.	3.2	73
21	Manipulating DC Currents with Bilayer Bulk Natural Materials. <i>Advanced Materials</i> , 2014, 26, 3478-3483.	11.1	68
22	High-directivity antenna with small antenna aperture. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	65
23	DIRECTIVE EMISSION OBTAINED BY COORDINATE TRANSFORMATION. <i>Progress in Electromagnetics Research</i> , 2008, 81, 437-446.	1.6	60
24	Active digital spoof plasmonics. <i>National Science Review</i> , 2020, 7, 261-269.	4.6	59
25	Probing the in-Plane Near-Field Enhancement Limit in a Plasmonic Particle-on-Film Nanocavity with Surface-Enhanced Raman Spectroscopy of Graphene. <i>ACS Nano</i> , 2019, 13, 7644-7654.	7.3	54
26	Plasmonic Interaction between Overlapping Nanowires. <i>ACS Nano</i> , 2011, 5, 597-607.	7.3	53
27	Homogenous Metamaterial Description of Localized Spoof Plasmons in Spiral Geometries. <i>ACS Photonics</i> , 2016, 3, 1768-1775.	3.2	53
28	Compacted dimensions and singular plasmonic surfaces. <i>Science</i> , 2017, 358, 915-917.	6.0	53
29	Spoof plasmon hybridization. <i>Laser and Photonics Reviews</i> , 2017, 11, 1600191.	4.4	51
30	Effective Surface Plasmon Polaritons Induced by Modal Dispersion in a Waveguide. <i>Physical Review Applied</i> , 2017, 7, .	1.5	49
31	Transformation-optics insight into nonlocal effects in separated nanowires. <i>Physical Review B</i> , 2012, 86, .	1.1	48
32	Ultra-Low-Loss High-Contrast Gratings Based Spoof Surface Plasmonic Waveguide. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2017, 65, 2008-2018.	2.9	48
33	Cylindrical cloak with axial permittivity/permeability spatially invariant. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	46
34	Backward Phase Matching for Second Harmonic Generation in Negative-Index Conformal Surface Plasmonic Metamaterials. <i>Advanced Science</i> , 2018, 5, 1800661.	5.6	46
35	Cloak for multilayered and gradually changing media. <i>Physical Review B</i> , 2008, 77, .	1.1	45
36	Electromagnetic contribution to surface-enhanced Raman scattering from rough metal surfaces: A transformation optics approach. <i>Physical Review B</i> , 2011, 83, .	1.1	45

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37	Manipulating the directivity of antennas with metamaterial. <i>Optics Express</i> , 2008, 16, 10962.	1.7	42
38	Theory of Three-Dimensional Nanocrescent Light Harvesters. <i>Nano Letters</i> , 2012, 12, 5946-5953.	4.5	42
39	New Concept Conformal Antennas Utilizing Metamaterial and Transformation Optics. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2008, 7, 509-512.	2.4	41
40	Transformation-Invariant Metamaterials. <i>Physical Review Letters</i> , 2019, 123, 067701.	2.9	39
41	WAVE AND RAY ANALYSIS OF A TYPE OF CLOAK EXHIBITING MAGNIFIED AND SHIFTED SCATTERING EFFECT. <i>Progress in Electromagnetics Research</i> , 2009, 95, 167-178.	1.6	38
42	Planar Spoof SPP Transmission Lines: Applications in Microwave Circuits. <i>IEEE Microwave Magazine</i> , 2019, 20, 73-91.	0.7	38
43	Invisibility Dips of Near-Field Energy Transport in a Spoof Plasmonic Metadimer. <i>Advanced Functional Materials</i> , 2016, 26, 8307-8312.	7.8	37
44	Designer patterned functional fibers via direct imprinting in thermal drawing. <i>Nature Communications</i> , 2020, 11, 3842.	5.8	36
45	Transformation-Optics Description of Plasmonic Nanostructures Containing Blunt Edges/Corners: From Symmetric to Asymmetric Edge Rounding. <i>ACS Nano</i> , 2012, 6, 6492-6506.	7.3	35
46	Cloak of arbitrary shape. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2008, 25, 1776.	0.9	34
47	Description of Bow-Tie Nanoantennas Excited by Localized Emitters Using Conformal Transformation. <i>ACS Photonics</i> , 2016, 3, 1223-1232.	3.2	34
48	Transformation optics from macroscopic to nanoscale regimes: a review. <i>Advanced Photonics</i> , 2019, 1, 1.	6.2	34
49	Guiding waves through an invisible tunnel. <i>Optics Express</i> , 2009, 17, 6203.	1.7	33
50	On-chip sub-terahertz surface plasmon polariton transmission lines with mode converter in CMOS. <i>Scientific Reports</i> , 2016, 6, 30063.	1.6	33
51	Interaction of an electromagnetic wave with a cone-shaped invisibility cloak and polarization rotator. <i>Physical Review B</i> , 2008, 78, .	1.1	32
52	Spatiotemporal Dynamics and Control of Strong Coupling in Plasmonic Nanocavities. <i>ACS Photonics</i> , 2017, 4, 2410-2418.	3.2	32
53	Controlling the Emission of Electromagnetic Source. <i>Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium</i> , 2008, 4, 795-800.	0.4	32
54	Forward/Backward Switching of Plasmonic Wave Propagation Using Signal Reversal Coupling. <i>Advanced Materials</i> , 2017, 29, 1700018.	11.1	31

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55	Second-harmonic generation and spectrum modulation by an active nonlinear metamaterial. Applied Physics Letters, 2009, 94, .	1.5	30
56	Polarization-Controlled Plasmonic Structured Illumination. Nano Letters, 2020, 20, 2602-2608.	4.5	29
57	FREE-ELECTRON RADIATION ENGINEERING VIA STRUCTURED ENVIRONMENTS. Progress in Electromagnetics Research, 2021, 171, 75-88.	1.6	29
58	Surface Dyakonovâ€“Cherenkov radiation. ELight, 2022, 2, .	11.9	29
59	Strong Plasmonâ€“Exciton Interactions on Nanoantenna Arrayâ€“Monolayer WS ₂ Hybrid System. Advanced Optical Materials, 2020, 8, 1901002.	3.6	28
60	Nonlocality Induced Cherenkov Threshold. Laser and Photonics Reviews, 2020, 14, 2000149.	4.4	27
61	Recent Progress and Future Opportunities for Hot Carrier Photodetectors: From Ultraviolet to Infrared Bands. Laser and Photonics Reviews, 2022, 16, .	4.4	26
62	Minimizing the scattering of a nonmagnetic cloak. Applied Physics Letters, 2010, 96, 113511.	1.5	25
63	Mimicking Localized Surface Plasmons with Structural Dispersion. Advanced Optical Materials, 2019, 7, 1900118.	3.6	25
64	Designing Plasmonic Gratings with Transformation Optics. Physical Review X, 2015, 5, .	2.8	24
65	Observation of the Kinetic Inductance Limitation for the Fundamental Magnetic Resonance in Ultrasmall Gold <i>v</i> - <i>i</i> â€“Shape Split Ring Resonators. Advanced Optical Materials, 2016, 4, 1047-1052.	3.6	24
66	A Wide-Angle Broadband Converter: From Odd-Mode Spoof Surface Plasmon Polaritons to Spatial Waves. IEEE Transactions on Antennas and Propagation, 2019, 67, 7425-7432.	3.1	24
67	A Brewster route to Cherenkov detectors. Nature Communications, 2021, 12, 5554.	5.8	24
68	DESIGN AND APPLICATION OF A BEAM SHIFTER BY TRANSFORMATION MEDIA. Progress in Electromagnetics Research, 2008, 83, 147-155.	1.6	23
69	Transformation optics and hidden symmetries. Physical Review B, 2014, 89, .	1.1	23
70	Reverse surface-polariton cherenkov radiation. Scientific Reports, 2016, 6, 30704.	1.6	23
71	Tuning the dispersion of effective surface plasmon polaritons with multilayer systems. Optics Express, 2018, 26, 4686.	1.7	23
72	Mid-infrared sensing of molecular vibrational modes with tunable graphene plasmons. Optics Letters, 2017, 42, 2066.	1.7	22

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73	Observation of Topological Edge States in Thermal Diffusion. <i>Advanced Materials</i> , 2022, 34, .	11.1	22
74	Description of van der Waals Interactions Using Transformation Optics. <i>Physical Review Letters</i> , 2013, 111, 033602.	2.9	21
75	Polarization invariant plasmonic nanostructures for sensing applications. <i>Scientific Reports</i> , 2017, 7, 7539.	1.6	21
76	Phase-matching and Peak Nonlinearity Enhanced Third-Harmonic Generation in Graphene Plasmonic Coupler. <i>Physical Review Applied</i> , 2019, 11, .	1.5	21
77	Reconfigurable Parametric Amplifications of Spoof Surface Plasmons. <i>Advanced Science</i> , 2021, 8, e2100795.	5.6	21
78	SENSITIVITY OF TRANSFORMATION CLOAK IN ENGINEERING. <i>Progress in Electromagnetics Research</i> , 2008, 84, 93-104.	1.6	20
79	Harvesting light with transformation optics. <i>Science China Information Sciences</i> , 2013, 56, 1-13.	2.7	20
80	An ultrahigh-accuracy Miniature Dew Point Sensor based on an Integrated Photonics Platform. <i>Scientific Reports</i> , 2016, 6, 29672.	1.6	20
81	Lorentz force and radiation pressure on a spherical cloak. <i>Physical Review A</i> , 2009, 80, .	1.0	19
82	Direct current remote cloak for arbitrary objects. <i>Light: Science and Applications</i> , 2019, 8, 30.	7.7	19
83	Full-wave analysis of prolate spheroidal and hyperboloidal cloaks. <i>Journal Physics D: Applied Physics</i> , 2008, 41, 235101.	1.3	17
84	Transmission of electromagnetic waves through sub-wavelength channels. <i>Optics Express</i> , 2010, 18, 3864.	1.7	17
85	Transformation optics applied to van der Waals interactions. <i>Science Bulletin</i> , 2016, 61, 59-67.	4.3	17
86	Enhancing Third-Harmonic Generation with Spatial Nonlocality. <i>ACS Photonics</i> , 2018, 5, 592-598.	3.2	17
87	Loss Analysis of Plasmonic Metasurfaces Using Field-Network-Joint Method. <i>IEEE Transactions on Antennas and Propagation</i> , 2019, 67, 3521-3526.	3.1	17
88	Harmonic Image Reconstruction Assisted by a Nonlinear Metmaterial Surface. <i>Physical Review Letters</i> , 2011, 106, 047402.	2.9	16
89	Flexible Photonic Topological Insulator. <i>Advanced Optical Materials</i> , 2018, 6, 1800532.	3.6	16
90	Nonmagnetic Spoof Plasmonic Isolator Based on Parametric Amplification. <i>Laser and Photonics Reviews</i> , 2022, 16, .	4.4	16

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91	Experimental characterization and cell interactions of a two-dimensional isotropic left-handed metamaterial. Applied Physics Letters, 2008, 92, 084108.	1.5	14
92	Bianisotropy and Magnetism in Plasmonic Gratings. ACS Photonics, 2016, 3, 764-769.	3.2	14
93	Single Plasmonic Structure Enhanced Dual-band Room Temperature Infrared Photodetection. Scientific Reports, 2018, 8, 1548.	1.6	14
94	Aluminum Nanotriplets for Light-Matter Coupling Robust to Nanoemitter Orientation. Laser and Photonics Reviews, 2017, 11, 1700051.	4.4	13
95	Surface-Wave Pulse Routing around Sharp Right Angles. Physical Review Applied, 2018, 9, .	1.5	13
96	Ultrawideband Surface Enhanced Raman Scattering in Hybrid Graphene Fragmented-Gold Substrates via Cold-Etching. Advanced Optical Materials, 2019, 7, 1900905.	3.6	13
97	Strain sensitivity enhancement based on periodic deformation in hollow core fiber. Optics Letters, 2020, 45, 3997.	1.7	13
98	Wideband backward coupling based on anisotropic left-handed metamaterial. Applied Physics Letters, 2007, 90, 043506.	1.5	12
99	Left-handed material based on ferroelectric medium. Optics Express, 2007, 15, 8284.	1.7	12
100	Transformation Optics: A Time- and Frequency-Domain Analysis of Electron-Energy Loss Spectroscopy. Nano Letters, 2016, 16, 5156-5162.	4.5	12
101	Plasmon-induced thermal tuning of few-exciton strong coupling in 2D atomic crystals. Optica, 2021, 8, 1416.	4.8	12
102	Directing Cherenkov photons with spatial nonlocality. Nanophotonics, 2020, 9, 3435-3442.	2.9	10
103	Controlling the field distribution in waveguides with transformation optics. Applied Physics Letters, 2009, 94, 234101.	1.5	8
104	Rainbow-like radiation from an omni-directional source placed in a uniaxial metamaterial slab. Optics Express, 2009, 17, 7068.	1.7	8
105	A metamaterial-free fluid-flow cloak. National Science Review, 2022, 9, .	4.6	8
106	Hiding levitating objects above a ground plane. Applied Physics Letters, 2010, 97, 133501.	1.5	7
107	Interaction between graphene-coated nanowires revisited with transformation optics. Optics Letters, 2017, 42, 2890.	1.7	7
108	Designing Spatial Kramers-Kronig Media Using Transformation Optics. IEEE Transactions on Antennas and Propagation, 2020, 68, 2945-2949.	3.1	6

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109	Ultracompact Effective Localized Surface Plasmonic Bandpass Filter for 5G Applications. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 2220-2228.	2.9	5
110	A Miniaturized Anechoic Chamber: Omnidirectional Impedance Matching Based on Truncated Spatial Kramersâ€Kronig Medium. Advanced Optical Materials, 2022, 10, .	3.6	5
111	Luo<i>etÂal.</i>Reply. Physical Review Letters, 2015, 115, 239402.	2.9	4
112	Polarization-robust mid-infrared carpet cloak with minimized lateral shift. Photonics Research, 2021, 9, 944.	3.4	4
113	A conformal transformation approach to wide-angle illusion device and absorber. Nanophotonics, 2020, 9, 3243-3249.	2.9	4
114	Two-dimensional Cross Embedded Metamaterials. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2007, 3, 241-245.	0.4	3
115	Cloak Changing with Background. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2008, 4, 596-600.	0.4	3
116	Experimental demonstration of broadband reflectionless diffraction-free electromagnetic wave routing. Physical Review B, 2016, 94, .	1.1	2
117	Towards a practical compact magnifying superlensâ€”a simple simplicial design. Journal of Optics (United Kingdom), 2016, 18, 044011.	1.0	2
118	Analysis on a perfect cylindrical cloak realizable with two dimensional metamaterials. , 2008, , .		1
119	Gainâ€Assisted metamaterial embedded with gain elements. Microwave and Optical Technology Letters, 2010, 52, 92-95.	0.9	1
120	The Carpet Cloak. World Scientific Series in Nanoscience and Nanotechnology, 2017, , 461-480.	0.1	1
121	Vertical growth of plasmonic nanostructures via electrodeposition on a conductive oxide. Procedia Engineering, 2017, 215, 60-65.	1.2	1
122	A general method for extending a lossy network to a lossless network using the matrix decomposition. , 2018, , .		1
123	Broadband Electromagnetic Waves Harvesting Based on Effective Surface Plasmon Polaritons. , 2018, , .		1
124	GeSn/GaAs Hetero-Structure by Magnetron Sputtering. IEEE Journal of Quantum Electronics, 2020, 56, 1-5.	1.0	1
125	A General Method for Cloaking Design. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2008, 4, 495-500.	0.4	1
126	Guiding and routing surface plasmons with transformation-invariant metamaterials. Journal of Optics (United Kingdom), 2022, 24, 015003.	1.0	1

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127	Full-wave analysis of conical cloaking structures. , 2008, , .		0
128	Rigorous analysis of non-magnetic cloaks. Proceedings of SPIE, 2010, , .	0.8	0
129	Localized emitters close to nano-bowties: Insight via conformal transformation. , 2015, , .		0
130	Controlling light at the subwavelength scale. , 2015, , .		0
131	Towards a practical super phase array. , 2015, , .		0
132	Transformation optics and EELS, a frequency- and time-domain analysis. , 2016, , .		0
133	Transformation optics description of spontaneous emission rate in plasmonics. , 2016, , .		0
134	Plasmonics and Transformation Optics. World Scientific Series in Nanoscience and Nanotechnology, 2017, , 147-196.	0.1	0
135	Mid-infrared molecular refractive index and vibrational modes sensing. , 2017, , .		0
136	Room temperature strong coupling of monolayer WS ₂ with gold nanoantennae. , 2017, , .		0
137	Understanding bowtie nanoantennas excited by a localized emitter. , 2017, , .		0
138	Third-harmonic generation enhanced by nonlocal effect. , 2017, , .		0
139	Dispersion and Loss of Complex Structured Plasmonic Surface. , 2018, , .		0
140	Realizing Deep-Subwavelength Negative-Index Waveguiding by a Single-Side Conformal Surface Plasmons. , 2018, , .		0
141	Revisit Cherenkov Radiation in the Hyperbolic Metamaterials. , 2019, , .		0
142	A Numerical Study of the Localization Uncertainty for Enhancing the EM Source Localization Accuracy. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2005, 1, 740-744.	0.4	0
143	Asymmetric transmission in tunable spoof plasmonic meta-waveguide and its applications in High-Efficiency Biological Temperature Sensing and Imaging. , 2022, , .		0