Thomas Weiss

List of Publications by Year
in descending order

84 papers	9,884 citations	94269 37 h-index	56606 83 g-index
84 all docs	84 docs citations	84 times ranked	8524 citing authors

#	Article	IF	Citations
1	Infrared Perfect Absorber and Its Application As Plasmonic Sensor. Nano Letters, 2010, 10, 2342-2348.	4.5	2,513
2	Plasmonic analogue of electromagnetically induced transparency at the Drude damping limit. Nature Materials, 2009, 8, 758-762.	13.3	1,651
3	Planar Metamaterial Analogue of Electromagnetically Induced Transparency for Plasmonic Sensing. Nano Letters, 2010, 10, 1103-1107.	4.5	1,135
4	Three-Dimensional Plasmon Rulers. Science, 2011, 332, 1407-1410.	6.0	522
5	Nonreciprocal plasmonics enables giant enhancement of thin-film Faraday rotation. Nature Communications, 2013, 4, 1599.	5.8	353
6	Three-Dimensional Chiral Plasmonic Oligomers. Nano Letters, 2012, 12, 2542-2547.	4.5	342
7	Multichannel vectorial holographic display and encryption. Light: Science and Applications, 2018, 7, 95.	7.7	291
8	Excitation of Orbital Angular Momentum Resonances in Helically Twisted Photonic Crystal Fiber. Science, 2012, 337, 446-449.	6.0	271
9	The Role of Plasmon-Generated Near Fields for Enhanced Circular Dichroism Spectroscopy. ACS Photonics, 2016, 3, 578-583.	3.2	172
10	Matched coordinates and adaptive spatial resolution in the Fourier modal method. Optics Express, 2009, 17, 8051.	1.7	115
11	Fabrication of Square-Centimeter Plasmonic Nanoantenna Arrays by Femtosecond Direct Laser Writing Lithography: Effects of Collective Excitations on SEIRA Enhancement. ACS Photonics, 2015, 2, 779-786.	3.2	113
12	Optical Activity in Twisted Solid-Core Photonic Crystal Fibers. Physical Review Letters, 2013, 110, 143903.	2.9	94
13	Measuring mechanical strain and twist using helical photonic crystal fiber. Optics Letters, 2013, 38, 5401.	1.7	93
14	Metasurface interferometry toward quantum sensors. Light: Science and Applications, 2019, 8, 70.	7.7	93
15	Babinet to the Half: Coupling of Solid and Inverse Plasmonic Structures. Nano Letters, 2013, 13, 4428-4433.	4.5	92
16	Tunable and switchable polarization rotation with non-reciprocal plasmonic thin films at designated wavelengths. Light: Science and Applications, 2015, 4, e284-e284.	7.7	84
17	Largeâ€Area Lowâ€Cost Tunable Plasmonic Perfect Absorber in the Near Infrared by Colloidal Etching Lithography. Advanced Optical Materials, 2015, 3, 398-403.	3.6	77
18	Short-range surface plasmonics: Localized electron emission dynamics from a 60-nm spot on an atomically flat single-crystalline gold surface. Science Advances, 2017, 3, e1700721.	4.7	77

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19	Chiral Plasmonic Hydrogen Sensors. Small, 2018, 14, 1702990.	5.2	76
20	From Dark to Bright: First-Order Perturbation Theory with Analytical Mode Normalization for Plasmonic Nanoantenna Arrays Applied to Refractive Index Sensing. Physical Review Letters, 2016, 116, 237401.	2.9	73
21	Quasinormal mode solvers for resonators with dispersive materials. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2019, 36, 686.	0.8	73
22	Reducing the Complexity: Enantioselective Chiral Near-Fields by Diagonal Slit and Mirror Configuration. ACS Photonics, 2016, 3, 1076-1084.	3.2	64
23	From Near-Field to Far-Field Coupling in the Third Dimension: Retarded Interaction of Particle Plasmons. Nano Letters, 2011, 11, 4421-4424.	4.5	58
24	Periodic Nanostructures: Spatial Dispersion Mimics Chirality. Physical Review Letters, 2011, 106, 185501.	2.9	56
25	All-dielectric silicon metalens for two-dimensional particle manipulation in optical tweezers. Photonics Research, 2020, 8, 1435.	3.4	56
26	Resonant mode coupling of optical resonances in stacked nanostructures. Optics Express, 2010, 18, 7569.	1.7	51
27	Gold nanocrystal-mediated sliding of doublet DNA origami filaments. Nature Communications, 2018, 9, 1454.	5.8	51
28	Derivation of plasmonic resonances in the Fourier modal method with adaptive spatial resolution and matched coordinates. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 238.	0.8	50
29	Damage-free single-mode transmission of deep-UV light in hollow-core PCF. Optics Express, 2014, 22, 15388.	1.7	49
30	Highly Sensitive Refractive Index Sensors with Plasmonic Nanoantennasâ^'Utilization of Optimal Spectral Detuning of Fano Resonances. ACS Sensors, 2018, 3, 960-966.	4.0	47
31	Resonant-state expansion for open optical systems: generalization to magnetic, chiral, and bi-anisotropic materials. Optics Letters, 2018, 43, 1978.	1.7	45
32	Accuracy of the capillary approximation for gas-filled kagomÃ©-style photonic crystal fibers. Optics Letters, 2014, 39, 821.	1.7	44
33	Topological Zeeman effect and circular birefringence in twisted photonic crystal fibers. Journal of the Optical Society of America B: Optical Physics, 2013, 30, 2921.	0.9	43
34	Surface- and tip-enhanced resonant Raman scattering from CdSe nanocrystals. Physical Chemistry Chemical Physics, 2015, 17, 21198-21203.	1.3	40
35	Analytical normalization of resonant states in photonic crystal slabs and periodic arrays of nanoantennas at oblique incidence. Physical Review B, 2017, 96, .	1.1	40
36	Analytic Optimization of Near-Field Optical Chirality Enhancement. ACS Photonics, 2017, 4, 396-406.	3.2	39

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37	Design Principles for Sensitivity Optimization in Plasmonic Hydrogen Sensors. ACS Sensors, 2020, 5, 917-927.	4.0	39
38	Efficient calculation of the optical properties of stacked metamaterials with a Fourier modal method. Journal of Optics, 2009, 11, 114019.	1.5	38
39	DNA-assembled nanoarchitectures with multiple components in regulated and coordinated motion. Science Advances, 2019, 5, eaax6023.	4.7	37
40	Controlling circular polarization of light emitted by quantum dots using chiral photonic crystal slabs. Physical Review B, 2015, 92, .	1.1	36
41	Aluminum and copper nanostructures for surface-enhanced Raman spectroscopy: A one-to-one comparison to silver and gold. Sensors and Actuators B: Chemical, 2018, 262, 922-927.	4.0	35
42	Watching a Single Fluorophore Molecule Walk into a Plasmonic Hotspot. ACS Photonics, 2019, 6, 985-993.	3.2	34
43	Plasmonic Analog of Electromagnetically Induced Absorption Leads to Giant Thin Film Faraday Rotation of 14Â°. Physical Review X, 2017, 7, .	2.8	33
44	Watching in situ the hydrogen diffusion dynamics in magnesium on the nanoscale. Science Advances, 2020, 6, eaaz0566.	4.7	33
45	Optical transmission through subwavelength hole arrays in ultrathin metal films. Physical Review B, 2011, 84, .	1.1	31
46	Emission properties of an oscillating point dipole from a gold Yagi-Uda nanoantenna array. Physical Review B, 2012, 85, .	1.1	31
47	Optical properties of metallic meanders. Journal of the Optical Society of America B: Optical Physics, 2009, 26, B111.	0.9	30
48	How to calculate the pole expansion of the optical scattering matrix from the resonant states. Physical Review B, 2018, 98, .	1.1	30
49	Nanophotonic Chiral Sensing: How Does It Actually Work?. ACS Nano, 2022, 16, 2822-2832.	7.3	30
50	Polarization control of quantum dot emission by chiral photonic crystal slabs. Optics Letters, 2015, 40, 1528.	1.7	28
51	Wavelength Scaling in Antenna-Enhanced Infrared Spectroscopy: Toward the Far-IR and THz Region. ACS Photonics, 2017, 4, 45-51.	3.2	28
52	Nonlinear Born-Kuhn Analog for Chiral Plasmonics. ACS Photonics, 2019, 6, 3306-3314.	3.2	25
53	Five-ring hollow-core photonic crystal fiber with 18ÂdB/km loss. Optics Letters, 2013, 38, 2215.	1.7	23
54	Shaping the Color and Angular Appearance of Plasmonic Metasurfaces with Tailored Disorder. ACS Nano, 2021, 15, 10318-10327.	7.3	21

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55	Lorentz Nonreciprocal Model for Hybrid Magnetoplasmonics. Physical Review Letters, 2016, 117, 063901.	2.9	18
56	DNA Assembly of Modular Components into a Rotary Nanodevice. ACS Nano, 2022, 16, 5284-5291.	7.3	18
57	Strong resonant mode coupling of Fabryâ€“Perot and grating resonances in stacked two-layer systems. Photonics and Nanostructures - Fundamentals and Applications, 2011, 9, 390-397.	1.0	17
58	Optical anisotropies of single-meander plasmonic metasurfaces analyzed by Mueller matrix spectroscopy. Physical Review B, 2014, 89, .	1.1	17
59	Mode coupling and interaction in a plasmonic microcavity with resonant mirrors. Physical Review B, 2011, 84, .	1.1	16
60	Metalâ€“dielectric photonic crystal superlattice: 1D and 2D models and empty lattice approximation. Physica B: Condensed Matter, 2012, 407, 4037-4042.	1.3	16
61	Circularly polarized lasing in chiral modulated semiconductor microcavity with GaAs quantum wells. Applied Physics Letters, 2016, 109, .	1.5	16
62	The Optofluidic Light Cage â€“ On-Chip Integrated Spectroscopy Using an Antiresonance Hollow Core Waveguide. Analytical Chemistry, 2021, 93, 752-760.	3.2	16
63	Resonant states and their role in nanophotonics. Semiconductor Science and Technology, 2022, 37, 013002.	1.0	15
64	Analytical mode normalization and resonant state expansion for bound and leaky modes in optical fibers - an efficient tool to model transverse disorder. Optics Express, 2018, 26, 22536.	1.7	13
65	DNA-Assembled Multilayer Sliding Nanosystems. Nano Letters, 2019, 19, 6385-6390.	4.5	12
66	First-order perturbation theory for changes in the surrounding of open optical resonators. Optics Letters, 2019, 44, 5917.	1.7	12
67	Analytic Mode Normalization for the Kerr Nonlinearity Parameter: Prediction of Nonlinear Gain for Leaky Modes. Physical Review Letters, 2018, 121, 213905.	2.9	11
68	Polariton laser based on a ZnO photonic crystal slab. Applied Physics Letters, 2011, 99, 111110.	1.5	10
69	On the pole expansion of electromagnetic fields. Optics Express, 2020, 28, 32363.	1.7	10
70	All-carbon diamond/graphite metasurface: Experiment and modeling. Applied Physics Letters, 2018, 113, 041101.	1.5	8
71	Nonlinear Spectroscopy on the Plasmonic Analog of Electromagnetically Induced Absorption: Revealing Minute Structural Asymmetries. ACS Photonics, 2019, 6, 2850-2859.	3.2	8
72	Theory of four-wave mixing for bound and leaky modes. Physical Review A, 2020, 101, .	1.0	7

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73	Fiber-integrated hollow-core light cage for gas spectroscopy. APL Photonics, 2021, 6, .	3.0	6
74	Realization of a tunable fiber-based double cavity system. Physical Review B, 2020, 102, .	1.1	5
75	Surface plasmon polaritons in metallo-dielectric meander-type gratings. JETP Letters, 2009, 90, 355-358.	0.4	4
76	Resonant multimeanderâ€metasurfaces: A model system for superlenses and communication devices. Physica Status Solidi (B): Basic Research, 2012, 249, 1415-1421.	0.7	4
77	Line-current model for deriving the wavelength scaling of linear and nonlinear optical properties of thin elongated metallic rod antennas. Journal of the Optical Society of America B: Optical Physics, 2018, 35, 1482.	0.9	4
78	Modeling of second-harmonic generation in periodic nanostructures by the Fourier modal method with matched coordinates. Optics Express, 2018, 26, 13746.	1.7	4
79	Orders of magnitude loss reduction in photonic bandgap fibers by engineering the core surround. Optics Express, 2021, 29, 8606.	1.7	3
80	What optical fiber modes reveal: group velocity and effective index for external perturbations. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 1097.	0.9	3
81	Influence of disorder on a Bragg microcavity. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 139.	0.9	3
82	Interpreting light guidance in antiresonant and photonic bandgap waveguides and fibers by light scattering: analytical model and ultra-low guidance. Optics Express, 2022, 30, 2768.	1.7	2
83	Radiation from an oscillating point dipole from a photonic crystal layer of dielectric nanocolumns. JETP Letters, 2011, 93, 555-558.	0.4	1
84	Acceleration of Parameter Studies in the Fourier Modal Method by Introducing Lateral Shift Matrices. Journal of Computational and Theoretical Nanoscience, 2011, 8, 1625-1630.	0.4	0