Yonatan Sivan

List of Publications by Year
in descending order

86	1,993	279487 23	264894 42
papers	citations	h-index	g-index

88	88	88	1754
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	â€œHotâ€•electrons in metallic nanostructuresâ€”non-thermal carriers or heating?. Light: Science and Applications, 2019, 8, 89.	7.7	135
2	Thermal effects â€“ an alternative mechanism for plasmon-assisted photocatalysis. Chemical Science, 2020, 11, 5017-5027.	3.7	135
3	Tracking ultrafast hot-electron diffusion in space and time by ultrafast thermomodulation microscopy. Science Advances, 2019, 5, eaav8965.	4.7	111
4	Comment on â€œQuantifying hot carrier and thermal contributions in plasmonic photocatalysisâ€• Science, 2019, 364, .	6.0	108
5	Bound states of nonlinear SchrÃ¶dinger equations with a periodic nonlinear microstructure. Physica D: Nonlinear Phenomena, 2006, 217, 31-57.	1.3	105
6	Waves in Nonlinear Lattices: Ultrashort Optical Pulses and Bose-Einstein Condensates. Physical Review Letters, 2006, 97, 193902.	2.9	96
7	Frequency-domain simulations of a negative-index material with embedded gain. Optics Express, 2009, 17, 24060.	1.7	67
8	Assistance of metal nanoparticles in photocatalysis â€“ nothing more than a classical heat source. Faraday Discussions, 2019, 214, 215-233.	1.6	67
9	Instability of bound states of a nonlinear SchrÃ¶dinger equation with a Dirac potential. Physica D: Nonlinear Phenomena, 2008, 237, 1103-1128.	1.3	66
10	Qualitative and quantitative analysis of stability and instability dynamics of positive lattice solitons. Physical Review E, 2008, 78, 046602.	0.8	64
11	Nonlinear plasmonics at high temperatures. Nanophotonics, 2017, 6, 317-328.	2.9	53
12	Control of the collapse distance in atmospheric propagation. Optics Express, 2006, 14, 4946.	1.7	45
13	Plasmonic Sinks for the Selective Removal of Long-Lived States. ACS Nano, 2011, 5, 9958-9965.	7.3	44
14	Time Reversal in Dynamically Tuned Zero-Gap Periodic Systems. Physical Review Letters, 2011, 106, 193902.	2.9	44
15	Temperature- and roughness-dependent permittivity of annealed/unannealed gold films. Optics Express, 2016, 24, 19254.	1.7	44
16	Experimental practices required to isolate thermal effects in plasmonic photo-catalysis: lessons from recent experiments. OSA Continuum, 2020, 3, 483.	1.8	38
17	Generalizing Normal Mode Expansion of Electromagnetic Greenâ€™s Tensor to Open Systems. Physical Review Applied, 2019, 11, .	1.5	37
18	Theory of hot electrons: general discussion. Faraday Discussions, 2019, 214, 245-281.	1.6	34

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19	Recent developments in plasmon-assisted photocatalysisâ€"A personal Perspective. Applied Physics Letters, 2020, 117, .	1.5	32
20	Nanoparticle-Assisted Stimulated-Emission-Depletion Nanoscopy. ACS Nano, 2012, 6, 5291-5296.	7.3	31
21	Plasmonic Nanoprobes for Stimulated Emission Depletion Nanoscopy. ACS Nano, 2016, 10, 10454-10461.	7.3	29
22	Experimental Proof of Concept of Nanoparticle-Assisted STED. Nano Letters, 2014, 14, 4449-4453.	4.5	28
23	Control of the filamentation distance and pattern in long-range atmospheric propagation. Optics Express, 2007, 15, 2779.	1.7	27
24	Ultrafast Dynamics of Optically Induced Heat Gratings in Metals. ACS Photonics, 2020, 7, 1271-1279.	3.2	26
25	Revisiting the boundary conditions for second-harmonic generation at metal-dielectric interfaces. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 1824.	0.9	24
26	Nanoparticle-Assisted STED Nanoscopy with Gold Nanospheres. ACS Photonics, 2018, 5, 2574-2583.	3.2	24
27	The Role of Heat Generation and Fluid Flow in Plasmon-Enhanced Reductionâ€"Oxidation Reactions. ACS Photonics, 2021, 8, 1183-1190.	3.2	24
28	Parametric study of temperature distribution in plasmon-assisted photocatalysis. Nanoscale, 2020, 12, 17821-17832.	2.8	23
29	Metal nanospheres under intense continuous-wave illumination: A unique case of nonperturbative nonlinear nanophotonics. Physical Review E, 2017, 96, 012212.	0.8	21
30	Dynamics of hot electron generation in metallic nanostructures: general discussion. Faraday Discussions, 2019, 214, 123-146.	1.6	21
31	Effective Electron Temperature Measurement Using Time-Resolved Anti-Stokes Photoluminescence. Journal of Physical Chemistry A, 2020, 124, 6968-6976.	1.1	21
32	Robust location of optical fiber modes via the argument principle method. Computer Physics Communications, 2017, 214, 105-116.	3.0	20
33	Size-dependence of the photothermal response of a single metal nanosphere. Journal of Applied Physics, 2019, 126, .	1.1	20
34	Broadband time-reversal of optical pulses using a switchable photonic-crystal mirror. Optics Express, 2011, 19, 14502.	1.7	19
35	Theory of wave-front reversal of short pulses in dynamically tuned zero-gap periodic systems. Physical Review A, 2011, 84, .	1.0	19
36	Thermo-optic nonlinearity of single metal nanoparticles under intense continuous wave illumination. Physical Review Materials, 2020, 4, .	0.9	16

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37	Interaction-Induced Localization of Anomalously Diffracting Nonlinear Waves. Physical Review Letters, 2006, 97, 193901.	2.9	15
38	Theory of â€œHotâ€•Photoluminescence from Drude Metals. ACS Nano, 2021, 15, 8724-8732.	7.3	15
39	Femtosecond-scale switching based on excited free-carriers. Optics Express, 2015, 23, 16416.	1.7	14
40	Coupled-mode theory for electromagnetic pulse propagation in dispersive media undergoing a spatiotemporal perturbation: Exact derivation, numerical validation, and peculiar wave mixing. Physical Review B, 2016, 93, .	1.1	14
41	Overcoming the bottleneck for quantum computations of complex nanophotonic structures: Purcell and FÃ¶rster resonant energy transfer calculations using a rigorous mode-hybridization method. Physical Review B, 2020, 101, .	1.1	13
42	Distinguishing thermal from non-thermal contributions to plasmonic hydrodefluorination. Nature Catalysis, 2022, 5, 244-246.	16.1	13
43	Performance improvement in nanoparticle-assisted stimulated-emission-depletion nanoscopy. Applied Physics Letters, 2012, 101, 021111.	1.5	12
44	Spontaneously formed autofocusing caustics in a confined self-defocusing medium. Optica, 2015, 2, 1053.	4.8	12
45	Surface second-harmonic generation from metallic-nanoparticle configurations: A transformation-optics approach. Physical Review B, 2019, 99, .	1.1	12
46	Drift instability and tunneling of lattice solitons. Physical Review E, 2008, 77, 045601.	0.8	11
47	Analytic theory of narrow lattice solitons. Nonlinearity, 2008, 21, 509-536.	0.6	10
48	Independence of plasmonic near-field enhancements to illumination beam profile. Physical Review B, 2012, 86, .	1.1	10
49	Nonlinear wave interactions between short pulses of different spatio-temporal extents. Scientific Reports, 2016, 6, 29010.	1.6	10
50	An efficient solver for the generalized normal modes of non-uniform open optical resonators. Journal of Computational Physics, 2020, 422, 109754.	1.9	10
51	Distinguishing Thermal from Nonthermal (â€œHotâ€) Carriers in Illuminated Molecular Junctions. Nano Letters, 2022, 22, 2127-2133.	4.5	10
52	Frequency-domain modeling of TM wave propagation in optical nanostructures with a third-order nonlinear response. Optics Letters, 2009, 34, 3364.	1.7	9
53	New materials for hot electron generation: general discussion. Faraday Discussions, 2019, 214, 365-386.	1.6	9
54	Resolving the Gibbs phenomenon via a discontinuous basis in a mode solver for open optical systems. Journal of Computational Physics, 2021, 429, 110004.	1.9	9

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55	Copper film deposition rates by a hot refractory anode vacuum arc and magnetically filtered vacuum arc. Surface and Coatings Technology, 2006, 201, 4145-4151.	2.2	8
56	A quantitative approach to soliton instability. Optics Letters, 2011, 36, 397.	1.7	8
57	Reply to the â€˜Comment on â€œThermal effects â€“ an alternative mechanism for plasmon-assisted photocatalysisâ€â€™ by P. Jain, Chem. Sci., 2020, 11, DOI: 10.1039/D0SC02914A. Chemical Science, 2020, 11, 9024-9025.	8.7	7
58	Second-harmonic generation from subwavelength metal heterodimers. Optics Express, 2020, 28, 31468.	1.7	7
59	Photothermal nonlinearity in plasmon-assisted photocatalysis. Nanoscale, 2022, 14, 5022-5032.	2.8	7
60	Applications in catalysis, photochemistry, and photodetection: general discussion. Faraday Discussions, 2019, 214, 479-499.	1.6	5
61	Optimization of second-harmonic generation from touching plasmonic wires. Physical Review B, 2021, 103, .	1.1	5
62	Scattering by lossy anisotropic scatterers: A modal approach. Journal of Applied Physics, 2021, 129, .	1.1	5
63	Pulse propagation in the slow and stopped light regime. Optics Express, 2018, 26, 19294.	1.7	5
64	Ns-duration transient Bragg gratings in silica fibers. Optics Letters, 2017, 42, 4748.	1.7	4
65	Generalised normal mode expansion method for open and lossy periodic structures. Journal of the Optical Society of America B: Optical Physics, 0, , .	0.9	2
66	Stopping light using a transient Bragg grating. Physical Review A, 2020, 101, .	1.0	1
67	Nanoparticle-Assisted Stimulated Emission Depletion (STED) Super-Resolution Nanoscopy. , 2017, , 247-298.		1
68	Thermal effect in plasmon assisted photocatalyst: a parametric study. , 2020, , .		1
69	Spatio-temporal Effects in Nonlinear Discrete Media. , 2006, , .		0
70	Control of the filamentation distance and pattern in long range atmospheric propagation. , 2007, , NWB2.		0
71	Interaction-induced localization of self-defocusing discrete solitons. , 2007, , .		0
72	Interaction-induced localization of self-defocusing discrete solitons. , 2007, , .		0

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73	Drift instability of multidimensional solitons in inhomogenous Kerr media. , 2007, , .		0
74	Extending Femtosecond Filamentation of High Power Laser Propagating in the Atmosphere. AIP Conference Proceedings, 2008, , .	0.3	0
75	Nanoparticle-assisted STED, theory, and experimental demonstration (presentation video). , 2014, , .		0
76	Short pulse generation based on ultrafast Transient Bragg Gratings. , 2015, , .		0
77	Nonlinear wave mixing in plasmonic structures: A transformation optics approach. , 2015, , .		0
78	Retrieving the polarizability tensor of wire media. , 2015, , .		0
79	Reinterpreting the magnetoelectric coupling of infinite cylinders using symmetry: a simple TM and TE view. Proceedings of SPIE, 2015, , .	0.8	0
80	Reinterpreting the magnetoelectric coupling of polarizability tensors of infinite cylinders using symmetry: A simple TM/TE view. Physical Review B, 2016, 94, .	1.1	0
81	Rapid simulation of lossy resonators via a robust spatial map of Green's tensor. , 2017, , .		0
82	Sum frequency generation from touching wires: a transformation optics approach. Optics Letters, 2021, 46, 2079.	1.7	0
83	Plasmonics and hot electrons: feature issue introduction. Optical Materials Express, 0, , .	1.6	0
84	Drift instability of multidimensional solitons in inhomogeneous Kerr media. , 2007, , .		0
85	Rigorous expansion of electromagnetic Greenâ€™s tensor of lossy resonators in open systems. , 2017, , .		0
86	Thermo-Optical Nonlinearity of Metallic Nanoparticle(s). , 2020, , .		0