Oren Cohen

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3157912/publications.pdf

Version: 2024-02-01

166 papers	8,256 citations	61857 43 h-index	45213 90 g-index
168 all docs	168 docs citations	168 times ranked	4493 citing authors

#	Article	IF	Citations
1	Detecting multiple chiral centers in chiral molecules with high harmonic generation. Optics Express, 2022, 30, 3729.	1.7	16
2	Unambiguous definition of handedness for locally chiral light. Physical Review A, 2022, 105, .	1.0	5
3	Selection rules in symmetry-broken systems by symmetries in synthetic dimensions. Nature Communications, 2022, 13, 1312.	5.8	8
4	Circularly polarized high harmonic generation through virtual circular birefringence. Applied Physics Letters, 2021, 118, 221106.	1.5	2
5	V-FROGâ€"single-scan vectorial FROG. JPhys Photonics, 2021, 3, 034017.	2.2	2
6	Selection rules for breaking selection rules. New Journal of Physics, 2021, 23, 103039.	1.2	4
7	Nonlinear Optics Selection Rules by Dynamical Symmetries in Synthetic Dimensions. , 2021, , .		0
8	Diffraction-limited Quantitative Phase Microscopy at peta-Hertz Rates. , 2021, , .		0
9	Selection rules by multi-scale dynamical symmetries & symmetries in synthetic dimensions. , 2021, , .		0
10	The quantum-optical nature of high harmonic generation. Nature Communications, 2020, 11, 4598.	5.8	49
11	Degree of chirality of electromagnetic fields and maximally chiral light. Physical Review A, 2020, 101, .	1.0	12
12	High-resolution (diffraction limited) single-shot multiplexed coded-aperture ptychography. Journal of Optics (United Kingdom), 2020, 22, 075608.	1.0	4
13	A dynamical symmetry triad in high-harmonic generation revealed by attosecond recollision control. New Journal of Physics, 2020, 22, 053017.	1.2	6
14	Interlocked attosecond pulse trains in slightly bi-elliptical high harmonic generation. JPhys Photonics, 2020, 2, 034005.	2.2	9
15	Probing ultrafast electron correlations in high harmonic generation. Physical Review Research, 2020, 2, .	1.3	12
16	Deep learning reconstruction of ultrashort pulses from 2D spatial intensity patterns recorded by an all-in-line system in a single-shot. Optics Express, 2020, 28, 7528.	1.7	21
17	Deep neural networks in single-shot ptychography. Optics Express, 2020, 28, 17511.	1.7	15
18	Deep Learning Single-Shot Ptychography: Algorithm and Experiment. , 2020, , .		0

#	Article	IF	Citations
19	Maximizing and Controlling the Degree of Local Chirality of Electromagnetic Fields. , 2020, , .		0
20	Single-Shot Ultrafast Pulse Reconstruction with Deep Learning. , 2020, , .		0
21	Ultrasensitive Chiral Spectroscopy by Dynamical Symmetry Breaking in High Harmonic Generation. Physical Review X, 2019, 9, .	2.8	55
22	Multi-Scale Symmetries and Selection Rules in High Harmonic Generation. , 2019, , .		0
23	Polarization-Resolved High Harmonic Spectroscopy of Interlocked Attosecond Bursts. , 2019, , .		0
24	Interferometric Attosecond Lock-in Measurement of Extreme Ultraviolet Circular Diehroism. , 2019, , .		0
25	Bi-Elliptical High Harmonic Spectroscopy of Atomic Potentials. , 2019, , .		0
26	All-Optical Background-Free Detection of Ring Currents by Dynamical Symmetry Breaking High Harmonic Spectroscopy. , 2019, , .		0
27	Synthetic chiral light for efficient control of chiral lightâ€“matter interaction. Nature Photonics, 2019, 13, 866-871.	15.6	132
28	Spectroscopy of atomic orbital sizes using bi-elliptical high-order harmonic generation. Physical Review A, 2019, 100, .	1.0	11
29	Carrier Envelope Phase Dependence of High Harmonic Generation from Long Duration Multi-Cycle Multi-Timescale Pump Pulses. , 2019, , .		0
30	Background-Free Measurement of Ring Currents by Symmetry-Breaking High-Harmonic Spectroscopy. Physical Review Letters, 2019, 123, 103202.	2.9	36
31	Floquet group theory and its application to selection rules in harmonic generation. Nature Communications, 2019, 10, 405.	5.8	135
32	Interferometric attosecond lock-in measurement of extreme-ultraviolet circular dichroism. Nature Photonics, 2019, 13, 198-204.	15.6	37
33	Electric-Dipole Based Chiral Sensitivity in High Harmonic Generation by Dynamical Symmetry Breaking Spectroscopy. , 2019, , .		0
34	High-order harmonic generation of pulses with multiple timescales: selection rules, carrier envelope phase and cutoff energy. Molecular Physics, 2019, 117, 1956-1963.	0.8	6
35	Experimental time-resolved imaging by multiplexed ptychography. Optics Express, 2019, 27, 24568.	1.7	21
36	General Group Theory Derivation for Selection Rules in Nonlinear Light-Matter Interactions. , 2019, , .		0

#	Article	IF	Citations
37	Universal scaling laws of symmetry breaking in Floquet systems: application to harmonic generation. , 2019, , .		0
38	Experimental Demonstration of Time-Resolved Imaging by Multiplexed Ptychography (TIMP). , 2019, , .		0
39	Ultrafast All-Optical Detection of Chiral Degrees of Freedom by Symmetry Breaking High Harmonic Spectroscopy. , 2019, , .		0
40	Optical Chirality in Nonlinear Optics: Application to High Harmonic Generation. Physical Review Letters, 2018, 120, 133206.	2.9	57
41	Deep learning reconstruction of ultrashort pulses. Optica, 2018, 5, 666.	4.8	124
42	Multiplexed single-shot ptychography. Optics Letters, 2018, 43, 5379.	1.7	22
43	Polarization-fan high-order harmonics. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 034001.	0.6	6
44	High harmonic generation with fully tunable polarization by train of linearly polarized pulses. New Journal of Physics, 2017, 19, 023051.	1.2	7
45	Three-Dimensional Spatiotemporal Pulse-Train Solitons. Physical Review X, 2017, 7, .	2.8	6
46	Nanoscale magnetic imaging using a compact high-harmonic source. , 2017, , .		0
47	Nanoscale magnetic imaging using circularly polarized high-harmonic radiation. Science Advances, 2017, 3, eaao4641.	4.7	85
48	Attosecond-precision coherent control of electron recombination in the polarization plane. , 2017, , .		0
49	Multiplexed FROG. Optics Express, 2017, 25, 33007.	1.7	9
50	Ptychographic ultrahigh-speed imaging. Optics Express, 2017, 25, 10997.	1.7	33
51	Ultra-High Speed Microscopy of Complex (Amplitude and Phase) Samples Using a Single Camera Snapshot. , 2017, , .		0
52	Selective suppression of high-order harmonics within phase-matched spectral regions. Optics Letters, 2017, 42, 1349.	1.7	14
53	High Harmonics with Controllable Polarization by a Burst of Linearly-Polarized Driver Pulses. Photonics, 2017, 4, 31.	0.9	3
54	Attosecond-precision Coherent Control of Electron Recombination in the Polarization Plane. , 2017, , .		2

#	Article	IF	Citations
55	Reconstruction of an isolated burst of (non-repetitive) pulses from a single FROG trace. , 2017, , .		1
56	Nanoscale Imaging of Magnetic Domains using a High-Harmonic Source. , 2017, , .		1
57	Three-Dimensional Spatiotemporal Pulse-Train Solitons. , 2017, , .		1
58	General Formalism for Dynamical Symmetries and Selection Rules in High Harmonic Generation. , 2017, , .		0
59	Single-shot ptychography. Optica, 2016, 3, 9.	4.8	115
60	Ptychographic reconstruction algorithm for frequency-resolved optical gating: super-resolution and supreme robustness. Optica, 2016, 3, 1320.	4.8	86
61	Spatiotemporal Self-Localization of Pulse-Train Beams: Toward 3D Solitons in Homogeneous Media. , 2016, , .		0
62	Tomographic reconstruction of circularly polarized high-harmonic fields: 3D attosecond metrology. Science Advances, 2016, 2, e1501333.	4.7	103
63	In-line production of a bi-circular field for generation of helically polarized high-order harmonics. Applied Physics Letters, 2016, 108, .	1.5	55
64	Helicity-selective phase-matching and quasi-phase matching of circularly polarized high-order harmonics: towards chiral attosecond pulses. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 123501.	0.6	41
65	Towards ultrafast subwavelength microscopy. , 2016, , .		0
66	Simple Apparatus for Converting Standard Sources of Linearly-Polarized High Harmonics into Sources of Circularly-Polarized High Harmonics. , 2016, , .		0
67	Phase modulation in polarization beating quasi-phase-matching of high-order-harmonic generation. Physical Review A, 2015, 92, .	1.0	5
68	Bright High Harmonics with Tunable Polarization. , 2015, , .		0
69	Bright circularly polarized soft X-ray high harmonics for X-ray magnetic circular dichroism. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14206-14211.	3.3	235
70	Phase Retrieval with Application to Optical Imaging: A contemporary overview. IEEE Signal Processing Magazine, 2015, 32, 87-109.	4.6	735
71	Strong-field ionization with two-color circularly polarized laser fields. Physical Review A, 2015, 91, .	1.0	124
72	Bright Circularly Polarized Soft X-Ray High Harmonics for X-Ray Magnetic Circular Dichroism. , 2015, , .		3

#	Article	IF	Citations
73	Sparsity-based Ankylography for Recovering 3D molecular structures from single-shot 2D scattered light intensity. Nature Communications, 2015, 6, 7950.	5.8	12
74	Circularly Polarized Soft X-Ray High Harmonics and XMCD on a Tabletop. , 2015, , .		0
75	Sparsity-based super-resolved coherent diffraction imaging of one-dimensional objects. Nature Communications, 2015, 6, 8209.	5.8	32
76	Generation of bright phase-matched circularly-polarized extreme ultraviolet high harmonics. Nature Photonics, 2015, 9, 99-105.	15.6	403
77	Sparse Phase Retrieval from Short-Time Fourier Measurements. IEEE Signal Processing Letters, 2015, 22, 638-642.	2.1	79
78	X-Ray Magnetic Circular Dichroism Probed Using High Harmonics. Springer Proceedings in Physics, 2015, , 60-63.	0.1	1
79	Direct Observation of Rescattering from Strong Field Ionization by Two-Color Circularly Polarized Laser Fields. , 2015, , .		0
80	Probing Ultrafast Magnetization Dynamics using Bright Circularly Polarized High Harmonics. , 2015, , .		0
81	Single-shot ptychography & sparsity-based subwavelength ptychography. , 2015, , .		0
82	Quasi-phase-matching of only even-order high harmonics. Optics Express, 2014, 22, 7145.	1.7	10
83	Long-lived waveguides and sound-wave generation by laser filamentation. Physical Review A, 2014, 90, .	1.0	42
84	Spin angular momentum and tunable polarization in high-harmonic generation. Nature Photonics, 2014, 8, 543-549.	15.6	477
85	Generation of high-order harmonics with controllable elliptical polarization. Optics Letters, 2013, 38, 223.	1.7	18
86	Efficient coherent diffractive imaging for sparsely varying objects. Optics Express, 2013, 21, 6327.	1.7	12
87	Self-trapped leaky waves in lattices: discrete and Bragg soleakons. Optics Express, 2013, 21, 19690.	1.7	2
88	Finite element simulation of a perturbed axial-symmetric whispering-gallery mode and its use for intensity enhancement with a nanoparticle coupled to a microtoroid. Optics Express, 2013, 21, 14169.	1.7	43
89	Scalar and vector localized leaky waves through self-defocusing nonlinearity. Physical Review A, 2013, 88, .	1.0	0
90	High-Order Harmonics of Bichromatic Counter-Rotating Elliptically-Polarized Drivers: Fully Controlled Polarization State and Novel Selection Rules. , 2013, , .		1

#	Article	IF	Citations
91	Sparsity-based super-resolution coherent diffractive imaging of (practically) 1D images using extreme UV radiation.. , 2013, , .		2
92	Narrow-bandwidth high-order harmonics driven by long-duration hot spots. New Journal of Physics, 2012, 14, 063036.	1.2	5
93	Self-phase modulation spectral broadening in two-dimensional spatial solitons: toward three-dimensional spatiotemporal pulse-train solitons. Optics Letters, 2012, 37, 5196.	1.7	8
94	Sparsity-based single-shot sub-wavelength coherent diffractive imaging. , 2012, , .		1
95	Sparsity-based single-shot subwavelength coherent diffractive imaging. Nature Materials, 2012, 11, 455-459.	13.3	175
96	Attosecond pulses with sophisticated spatio-spectral waveforms: spatio-spectral Airy and auto-focusing beams. Optics Express, 2011, 19, 21730.	1.7	1
97	Sawtooth grating-assisted phase-matching. Optics Express, 2010, 18, 22686.	1.7	12
98	Introduction to Solitons in Photonic Lattices. Springer Series in Optical Sciences, 2010, , 73-99.	0.5	2
99	Sawtooth grating-assisted phase-matching. Optics Express, 2010, 18, 21583.	1.7	0
100	Enhanced High Harmonic Generation from Multiply Ionized Argon above 500ÂeV through Laser Pulse Self-Compression. Physical Review Letters, 2009, 103, 143901.	2.9	41
101	Self-trapped leaky waves and their interactions. Physical Review A, 2009, 80, .	1.0	12
102	Phase matching of high harmonic generation in the soft and hard X-ray regions of the spectrum. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 10516-10521.	3.3	334
103	Spatiotemporal pulse-train solitons. Optics Express, 2009, 17, 7052.	1.7	24
104	Sawtooth grating-assisted-phase-matching. , 2009, , .		0
105	Spatiotemporal Pulse-Train Solitons. , 2009, , .		0
106	Application of Quasiperiodic and Random Quasi-Phase-Matching to High-Harmonic-Generation. , 2009, , .		0
107	Incoherent spatial solitons in effectively instantaneous nonlinear media. Nature Photonics, 2008, 2, 371-376.	15.6	73
108	Quasi-phase matching of high-order harmonic generation at high photon energies using counterpropagating pulses. Optics Letters, 2008, 33, 174.	1.7	19

#	Article	IF	Citations
109	Talbot solitons. Optics Letters, 2008, 33, 830.	1.7	1
110	Quasi-periodic and random quasi-phase matching of high harmonic generation. Optics Letters, 2008, 33, 1936.	1.7	15
111	Extended phase matching of high harmonics driven by mid-infrared light. Optics Letters, 2008, 33, 2128.	1.7	156
112	Quasi-phase matching and characterization of high-order harmonic generation in hollow waveguides using counterpropagating light. Optics Express, 2008, 16, 6544.	1.7	35
113	Quasi-phase-matching and dispersion characterization of harmonic generation in the perturbative regime using counterpropagating beams. Optics Express, 2008, 16, 15923.	1.7	20
114	Quantum-path control in high-order harmonic generation at high photon energies. New Journal of Physics, 2008, 10, 025021.	1.2	11
115	Optically-induced Quasi-Phase-Matching in high-harmonic generation. , 2008, , .		0
116	Incoherent solitons in effectively-instantaneous nonlocal nonlinear media. , 2007, , .		0
117	Probe of High-Order Harmonic Generation in a Hollow Waveguide Geometry using Counterpropagating Light. Physical Review Letters, 2007, 98, 123904.	2.9	37
118	Unified Microscopic-Macroscopic Formulation of High-Order Difference-Frequency Mixing in Plasmas. Physical Review Letters, 2007, 98, 043903.	2.9	16
119	Grating-Assisted Phase Matching in Extreme Nonlinear Optics. Physical Review Letters, 2007, 99, 053902.	2.9	51
120	Ultrafast extreme ultraviolet holography: dynamic monitoring of surface deformation. Optics Letters, 2007, 32, 286.	1.7	80
121	Optimizing quasi-phase matching of high harmonic generation using counterpropagating pulse trains. Optics Letters, 2007, 32, 2975.	1.7	23
122	Attosecond Nonlinear Optics in Plasmas for Coherent X-ray Generation. AIP Conference Proceedings, 2007, , .	0.3	0
123	Harnessing Attosecond Science in the Quest for Coherent X-rays. Science, 2007, 317, 775-778.	6.0	141
124	Lensless Diffractive Imaging Using Tabletop Coherent High-Harmonic Soft-X-Ray Beams. Physical Review Letters, 2007, 99, 098103.	2.9	267
125	Quasi-phase-matching and quantum-path control of high-harmonic generation using counterpropagating light. Nature Physics, 2007, 3, 270-275.	6.5	211
126	Random-phase spatial solitons in effectively-instantaneous nonlocal nonlinear media. , 2007, , .		0

#	Article	IF	Citations
127	High-Order Harmonic Generation from Ions in a Capillary Discharge. Physical Review Letters, 2006, 96, 203001.	2.9	65
128	Observation of random-phase gap solitons in photonic lattices. Optics Letters, 2006, 31, 483.	1.7	11
129	Cross-phase-modulation nonlinearities and holographic solitons in periodically poled photovoltaic photorefractives. Optics Letters, 2006, 31, 954.	1.7	19
130	Two-dimensional multipole solitons in nonlocal nonlinear media. Optics Letters, 2006, 31, 3312.	1.7	235
131	Long-range interactions between optical solitons. Nature Physics, 2006, 2, 769-774.	6.5	340
132	Incoherent solitons in instantaneous nonlocal nonlinear media. Physical Review E, 2006, 73, 015601.	0.8	64
133	Spatial Thirring-type solitons via electromagnetically induced transparency. , 2006, , .		0
134	High harmonic generation from ions in a capillary discharge. , 2006, , .		0
135	Phase-matching in isotropic and homogeneous materials via Talbot effect. , 2006, , .		0
136	Observation of random phase gap solitons in 2D photonic lattices. , 2006, , .		0
137	Infinite-range interactions between solitons in highly-nonlocal nonlinear media. , 2006, , .		0
138	Transient 1D holographic detection of surface corrugation with extreme ultraviolet radiation. , 2006, , .		0
139	Observation of random-phase lattice solitons. Nature, 2005, 433, 500-503.	13.7	96
140	Brillouin Zone Spectroscopy of Nonlinear Photonic Lattices. Physical Review Letters, 2005, 94, 163902.	2.9	102
141	Solitons in Nonlinear Media with an Infinite Range of Nonlocality: First Observation of Coherent Elliptic Solitons and of Vortex-Ring Solitons. Physical Review Letters, 2005, 95, 213904.	2.9	562
142	Observation of Second-Band Vortex Solitons in 2D Photonic Lattices. Physical Review Letters, 2005, 95, 053904.	2.9	91
143	Grating-mediated wave guiding and holographic solitons. Journal of the Optical Society of America B: Optical Physics, 2005, 22, 1349.	0.9	10
144	Spatial photonics in nonlinear waveguide arrays. Optics Express, 2005, 13, 1780.	1.7	193

#	Article	IF	Citations
145	Gap random-phase lattice solitons. Optics Express, 2005, 13, 5013.	1.7	12
146	Spatial Thirring-type solitons via electromagnetically induced transparency. Optics Letters, 2005, 30, 3374.	1.7	49
147	Brillouin-zone spectroscopy of nonlinear photonic lattices. , 2005, , .		1
148	Gap random-phase lattice solitons. , 2005, , .		0
149	Observation of Random phase Gap Solitons in 2D photonic lattices. , 2005, , .		1
150	Spatial gap solitons in 2D photonic lattices. , 2005, , .		0
151	Observation of 2nd band vortex-ring soliton in 2D photonic lattices. , 2005, , .		0
152	Random-Phase Solitons in Nonlinear Periodic Lattices. Physical Review Letters, 2004, 92, 223901.	2.9	45
153	Grating-Mediated Waveguiding. Physical Review Letters, 2004, 93, 103902.	2.9	17
154	Observation of Vortex-Ring â€œDiscreteâ€•Solitons in 2D Photonic Lattices. Physical Review Letters, 2004, 92, 123904.	2.9	347
155	Interactions between spatial screening solitons propagating in opposite directions. Journal of the Optical Society of America B: Optical Physics, 2004, 21, 1354.	0.9	36
156	Pattern formation in a ring cavity with temporally incoherent feedback. Journal of the Optical Society of America B: Optical Physics, 2004, 21, 2197.	0.9	7
157	Two-dimensional higher-band vortex lattice solitons. Optics Letters, 2004, 29, 2049.	1.7	55
158	Interactions between spatial screening solitons propagating in opposite directions. , 2004, , .		0
159	Grating Mediated Waveguiding and Holographic Solitons. , 2004, , .		0
160	Observation of vortex-ring â€œdiscreteâ€•solitons in 2D photonic lattices. , 2004, , .		15
161	Multiband Vector Lattice Solitons. Physical Review Letters, 2003, 91, 113901.	2.9	87
162	Two-Dimensional Optical Lattice Solitons. Physical Review Letters, 2003, 91, 213906.	2.9	222

#	Article	IF	Citations
163	Spatial vector solitons consisting of counterpropagating fields. Optics Letters, 2002, 27, 2013.	1.7	38
164	Holographic solitons. Optics Letters, 2002, 27, 2031.	1.7	81
165	Collisions between Optical Spatial Solitons Propagating in Opposite Directions. Physical Review Letters, 2002, 89, 133901.	2.9	71
166	Three-Dimensional Spatiotemporal Pulse-Train Solitons. , 0, .		1