

Meir Orenstein

List of Publications by Year in descending order

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Version: 2024-02-01

124
papers

1,995
citations

257101

24
h-index

264894

42
g-index

127
all docs

127
docs citations

127
times ranked

2156
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Revealing the subfemtosecond dynamics of orbital angular momentum in nanoplasmonic vortices. <i>Science</i> , 2017, 355, 1187-1191. | 6.0 | 217 |
| 2 | Optical Vortices Crystals: Spontaneous Generation in Nonlinear Semiconductor Microcavities. <i>Science</i> , 1999, 285, 230-233. | 6.0 | 145 |
| 3 | Observation of two-photon emission from semiconductors. <i>Nature Photonics</i> , 2008, 2, 238-241. | 15.6 | 123 |
| 4 | Metafocusing by a Metaspiral Plasmonic Lens. <i>Nano Letters</i> , 2015, 15, 5739-5743. | 4.5 | 97 |
| 5 | Topological optical differentiator. <i>Nature Communications</i> , 2021, 12, 680. | 5.8 | 94 |
| 6 | Electrical characteristics of metal-dielectric-metal and metal-dielectric-semiconductor structures based on electron beam evaporated Y2O3, Ta2O5 and Al2O3 thin film. <i>Journal of Applied Physics</i> , 1998, 84, 6747-6752. | 1.1 | 78 |
| 7 | Short-range surface plasmonics: Localized electron emission dynamics from a 60-nm spot on an atomically flat single-crystalline gold surface. <i>Science Advances</i> , 2017, 3, e1700721. | 4.7 | 77 |
| 8 | On the extraction of linear and nonlinear physical parameters in nonideal diodes. <i>Journal of Applied Physics</i> , 1999, 85, 6873-6883. | 1.1 | 73 |
| 9 | Theory for Twisted Bilayer Photonic Crystal Slabs. <i>Physical Review Letters</i> , 2021, 126, 136101. | 2.9 | 72 |
| 10 | Inverse Design of Lightweight Broadband Reflector for Relativistic Lightsail Propulsion. <i>ACS Photonics</i> , 2020, 7, 2350-2355. | 3.2 | 54 |
| 11 | Mode-coupling effects on the small-signal modulation of multitransverse-mode vertical-cavity semiconductor lasers. <i>IEEE Journal of Quantum Electronics</i> , 1999, 35, 944-954. | 1.0 | 40 |
| 12 | Structured 3D linear space-time light bullets by nonlocal nanophotonics. <i>Light: Science and Applications</i> , 2021, 10, 160. | 7.7 | 37 |
| 13 | Sub-100 nm Focusing of Short Wavelength Plasmons in Homogeneous 2D Space. <i>Nano Letters</i> , 2014, 14, 5598-5602. | 4.5 | 36 |
| 14 | PT -Symmetric Topological Edge-Gain Effect. <i>Physical Review Letters</i> , 2020, 125, 033603. | 2.9 | 34 |
| 15 | Control of semiconductor emitter frequency by increasing polariton momenta. <i>Nature Photonics</i> , 2018, 12, 423-429. | 15.6 | 32 |
| 16 | Non-evanescent adiabatic directional coupler. <i>IEEE Journal of Quantum Electronics</i> , 2001, 37, 1321-1328. | 1.0 | 31 |
| 17 | Parallel optical interconnects over multimode waveguides. <i>Journal of Lightwave Technology</i> , 2006, 24, 380-386. | 2.7 | 31 |
| 18 | Small-signal modulation of multitransverse modes vertical-cavity surface-emitting semiconductor lasers. <i>IEEE Photonics Technology Letters</i> , 1998, 10, 757-759. | 1.3 | 30 |

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|----|---|-----|-----------|
| 19 | Limits of the modulation response of a single-mode proton implanted VCSEL. IEEE Photonics Technology Letters, 1998, 10, 760-762. | 1.3 | 29 |
| 20 | Nonlinear Phase Noise in Phase-Modulated WDM Fiber-Optic Communications. IEEE Photonics Technology Letters, 2004, 16, 1307-1309. | 1.3 | 29 |
| 21 | Bit-error rate of optical DPSK in fiber systems by multicanonical Monte Carlo Simulations. IEEE Photonics Technology Letters, 2005, 17, 1355-1357. | 1.3 | 29 |
| 22 | Data Parallelization by Optical MIMO Transmission Over Multimode Fiber With Intermodal Coupling. Journal of Lightwave Technology, 2007, 25, 1503-1514. | 2.7 | 29 |
| 23 | Perfect Lensing by a Single Interface: Defying Loss and Bandwidth Limitations of Metamaterials. Physical Review Letters, 2015, 115, 195504. | 2.9 | 29 |
| 24 | Mixing the Light Spin with Plasmon Orbit by Nonlinear Light-Matter Interaction in Gold. Physical Review X, 2019, 9, . | 2.8 | 27 |
| 25 | Nonreciprocal radiative heat transfer between two planar bodies. Physical Review B, 2020, 101, . | 1.1 | 23 |
| 26 | Functional Meta Lenses for Compound Plasmonic Vortex Field Generation and Control. Nano Letters, 2021, 21, 3941-3946. | 4.5 | 23 |
| 27 | Intermediate-mode-assisted optical directional couplers via embedded periodic structure. IEEE Journal of Quantum Electronics, 1998, 34, 1772-1781. | 1.0 | 21 |
| 28 | Disk and ring microcavity lasers and their concentric coupling. IEEE Journal of Quantum Electronics, 1999, 35, 737-744. | 1.0 | 21 |
| 29 | Spin-patterned plasmonics: towards optical access to topological-insulator surface states. Optics Express, 2015, 23, 32759. | 1.7 | 21 |
| 30 | Orbital angular momentum multiplication in plasmonic vortex cavities. Science Advances, 2021, 7, . | 4.7 | 21 |
| 31 | Injection locking of a passively mode-locked laser. IEEE Journal of Quantum Electronics, 1996, 32, 155-160. | 1.0 | 20 |
| 32 | Deterministic Arrays of Epitaxially Grown Diamond Nanopyramid<i>s</i> with Embedded Siliconâ€Vacancy Centers. Advanced Optical Materials, 2019, 7, 1800715. | 3.6 | 20 |
| 33 | Metal-free quantum-based metamaterial for surface plasmon polariton guiding with amplification. Journal of Applied Physics, 2008, 104, 063513. | 1.1 | 19 |
| 34 | Self-stabilization of dense soliton trains in a passively mode-locked ring laser. IEEE Journal of Quantum Electronics, 1999, 35, 977-982. | 1.0 | 16 |
| 35 | Novel Ultra Localized and Dense Nitrogen Delta-Doping in Diamond for Advanced Quantum Sensing. Nano Letters, 2020, 20, 3192-3198. | 4.5 | 16 |
| 36 | Deep-Subwavelength Thermal Switch via Resonant Coupling in Monolayer Hexagonal Boron Nitride. Physical Review Applied, 2021, 15, . | 1.5 | 15 |

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|----|--|-----|-----------|
| 37 | HBT optoelectronic mixer at microwave frequencies: modeling and experimental characterization. Journal of Lightwave Technology, 1999, 17, 1423-1428. | 2.7 | 14 |
| 38 | Optical unidirectional devices by complex spatial single sideband perturbation. IEEE Journal of Quantum Electronics, 2005, 41, 1013-1023. | 1.0 | 14 |
| 39 | Strained InGaAs-GaAs single-quantum-well lasers coupled to n-type δ -doping-improved static and dynamic performance. IEEE Journal of Quantum Electronics, 1998, 34, 1690-1697. | 1.0 | 13 |
| 40 | Balanced Versus Single-Ended Detection of DPSK: Degraded Advantage Due to Fiber Nonlinearities. IEEE Photonics Technology Letters, 2007, 19, 164-166. | 1.3 | 13 |
| 41 | Thermodynamics of Light Management in Near-Field Thermophotovoltaics. Physical Review Applied, 2021, 16, . | 1.5 | 13 |
| 42 | Near-field scanning optical microscopy studies of V-grooved quantum wire lasers. Applied Physics Letters, 1998, 73, 1619-1621. | 1.5 | 12 |
| 43 | Parallel Optical Interconnects Over Multimode Waveguides Using Mutually Coherent Channels and Direct Detection. Journal of Lightwave Technology, 2007, 25, 3126-3131. | 2.7 | 12 |
| 44 | Phasematching in semiconductor nonlinear optics by linear long-period gratings. Applied Physics Letters, 2008, 92, 181110. | 1.5 | 12 |
| 45 | Design and implementation of bound-to-quasibound GaN/AlGaIn photovoltaic quantum well infrared photodetectors operating in the short wavelength infrared range at room temperature. Journal of Applied Physics, 2019, 125, 174505. | 1.1 | 10 |
| 46 | Supermodes of hermite tapered arrays of vertical-cavity semiconductor lasers. IEEE Journal of Quantum Electronics, 1999, 35, 1062-1066. | 1.0 | 9 |
| 47 | Mid-Infrared GaN/AlGaIn Quantum Cascade Detector Grown on Silicon. IEEE Electron Device Letters, 2019, 40, 263-266. | 2.2 | 9 |
| 48 | Efficient coupling of nano-plasmonics to micro-photon circuitry. , 2005, , . | | 8 |
| 49 | Enhanced Self-Coherent Optical Decision-Feedback-Aided Detection of Multi-Symbol M-DPSK/PolSK in particular 8-DPSK/BPolSK at 40 Gbps. , 2007, , . | | 7 |
| 50 | Multimode Fiber as Random Code Generator Application to Massively Parallel MIMO Transmission. Journal of Lightwave Technology, 2008, 26, 882-890. | 2.7 | 7 |
| 51 | Linearly dichroic plasmonic lens and hetero-chiral structures. Optics Express, 2016, 24, 2436. | 1.7 | 7 |
| 52 | Epitaxial Nanoflag Photonics: Semiconductor Nanoemitters Grown with Their Nanoantennas. Nano Letters, 2017, 17, 6011-6017. | 4.5 | 7 |
| 53 | Doubly Resonant Nanoantennas on Diamond for Spatial Addressing of Spin States. Nano Letters, 2017, 17, 4217-4222. | 4.5 | 7 |
| 54 | Two-level quantum system as a macroscopic scatterer for ultraconfined two-dimensional photonic modes. Physical Review A, 2020, 102, . | 1.0 | 7 |

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| 55 | Noise in pulsed injection locking of a passively modelocked laser. IEEE Journal of Quantum Electronics, 1996, 32, 796-801. | 1.0 | 6 |
| 56 | Calculation of light distribution in optical devices by a global solution of an inhomogeneous scalar wave equation. IEEE Journal of Quantum Electronics, 1997, 33, 1236-1244. | 1.0 | 6 |
| 57 | Multi-Chip Detection of Optical Differential Phase-Shift Keying and Complexity Reduction by Interferometric Decision Feedback. , 2006, , . | | 6 |
| 58 | n-type delta doped strained quantum well lasers for improved modulation bandwidth. Applied Physics Letters, 1997, 70, 1787-1789. | 1.5 | 5 |
| 59 | Self oscillation at millimeter-wave frequencies and modulation using optoelectronic mixing in a two-heterojunction bipolar photo-transistors configuration. IEEE Photonics Technology Letters, 2001, 13, 67-69. | 1.3 | 5 |
| 60 | Filterless "Add" multiplexer based on novel complex gratings assisted coupler. IEEE Photonics Technology Letters, 2005, 17, 1450-1452. | 1.3 | 5 |
| 61 | Performance of High-Bitrate Multiple-Output Links Over Multimode Fiber With Intermodal Dispersion. Journal of Lightwave Technology, 2008, 26, 2192-2201. | 2.7 | 5 |
| 62 | Spontaneous locking of optical vortices in coupled semiconductor lasers. Physical Review A, 2014, 90, . | 1.0 | 5 |
| 63 | Multimode effects on the evolution and long-term stability of a passively mode-locked laser under pulsed injection locking. IEEE Journal of Quantum Electronics, 1997, 33, 710-718. | 1.0 | 4 |
| 64 | Optoelectronic generation and modulation of millimeter waves in a single InP-GaInAs photo heterojunction bipolar transistor. IEEE Photonics Technology Letters, 2000, 12, 1240-1242. | 1.3 | 4 |
| 65 | Understanding nonlinear phase noise in optical DPSK systems. , 0, , . | | 4 |
| 66 | Optical DPASK and DQPSK: a comparative analysis for linear and nonlinear transmission. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 581-588. | 1.9 | 4 |
| 67 | Mutually Unbiased Bases in 4, 8, and 16 Dimensions Generated by Means of Controlled-Phase Gates With Application to Entangled-Photon QKD Protocols. IEEE Journal of Selected Topics in Quantum Electronics, 2009, 15, 1713-1723. | 1.9 | 4 |
| 68 | Coupling mechanism of two dimensional reflectivity modulated vertical cavity semiconductor laser arrays. , 0, , . | | 3 |
| 69 | Optoelectronic mixing in a self oscillating InP/GaInAs photo-heterojunction bipolar transistor. , 0, , . | | 3 |
| 70 | Experimental demonstration and modelling of optoelectronic mixing and digital modulation in a single InP photo heterojunction bipolar transistor. , 0, , . | | 3 |
| 71 | 2D photonic band gap cavities embedded in a plasmonic gap structure- zero modal volume?. , 2005, , . | | 3 |
| 72 | Multichip Differential Phase-Shift-Keyed Transmission Over (Non)Linear Optical Channels. Journal of Lightwave Technology, 2007, 25, 1431-1440. | 2.7 | 3 |

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|----|---|-----|-----------|
| 73 | Enhanced resolution and high aspect-ratio semiconductor nanopatterning by metal overcoating. Applied Physics Letters, 2009, 94, 063103. | 1.5 | 3 |
| 74 | Charge-Discharge Digital/Analog Microring Modulator With No Intrinsic Speed Limitation. IEEE Photonics Technology Letters, 2014, 26, 1522-1525. | 1.3 | 3 |
| 75 | Photonic Chern insulators from two-dimensional atomic lattices interacting with a single surface plasmon polariton. Physical Review B, 2021, 103, . | 1.1 | 3 |
| 76 | Integrated-optical realizations of quantum key distribution over maximally unbiased bases. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 897-913. | 1.9 | 2 |
| 77 | Perfect 4-way Plasmon Splitting in Cross Gap Waveguides Intersection. , 2006, , . | | 2 |
| 78 | W-shaped Plasmon Waveguide for Silicon based Plasmonic Modulator. , 2006, , . | | 2 |
| 79 | Interaction of two-dimensional atomic lattices with a single surface plasmon polariton. Physical Review A, 2021, 103, . | 1.0 | 2 |
| 80 | Adaptive four-level modeling of laser cooling of solids. Applied Physics Letters, 2021, 119, 181107. | 1.5 | 2 |
| 81 | Modulation characteristics and harmonic distortion of VCSEL arrays and multi transverse mode VCSELs. , 0, , . | | 1 |
| 82 | Perfect lensing with lossy metamaterials: Maintaining a singular focus by avoiding feedback. , 2016, , . | | 1 |
| 83 | Responsivity enhancement of MIS photodetectors on SOI substrates by plasmonic nanoantennas. , 2016, , . | | 1 |
| 84 | Universal Behavior of the Scattering Matrix Near Thresholds in Photonics. Physical Review Letters, 2021, 127, 277401. | 2.9 | 1 |
| 85 | Nonlinear on-switching of high spatial frequency patterns in ring vertical cavity surface emitting lasers. , 0, , . | | 0 |
| 86 | Dynamics of injection locking of mode locked semiconductor lasers. , 0, , . | | 0 |
| 87 | Noise reduction and pulse evolution of high repetition rate passively mode locked Er doped fiber lasers by harmonic injection locking. , 0, , . | | 0 |
| 88 | From vertical to in-plane emission of circular VCSELs. , 0, , . | | 0 |
| 89 | Two simultaneous wavelength and ultrahigh repetition rate operation of a harmonically injection locked diode laser. , 0, , . | | 0 |
| 90 | Improved modulation bandwidth of strained quantum well lasers by coupled with n-type $\hat{\Gamma}$ -doped layer. , 0, , . | | 0 |

| # | ARTICLE | IF | CITATIONS |
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| 91 | Spatial soliton arrays in a ring shaped complex nonlinear medium. , 0, , . | | 0 |
| 92 | Interactions of coherent or incoherent spatial soliton pairs in the vicinity of a non-linear interface. , 0, , . | | 0 |
| 93 | Spontaneous vortice arrays formation in broad area vertical cavity semiconductor lasers. , 0, , . | | 0 |
| 94 | Multistable emission of vortex beams from VCSEL arrays. , 0, , . | | 0 |
| 95 | A two heterojunction bipolar photo-transistor configuration for millimeter wave generation and modulation. , 0, , . | | 0 |
| 96 | Supermodes with angular momentum from coherent VCSEL arrays-emergence and stability. , 0, , . | | 0 |
| 97 | Timing extraction using direct optical injection locking of a relaxation oscillator based on an InP/InGaP/InGaAs resonant tunnel diode. , 0, , . | | 0 |
| 98 | Bit error rate estimation of DPSK modulated fiber-optic systems using multicanonical Monte-Carlo simulations. , 2005, , . | | 0 |
| 99 | Parallel optical interconnects over multimode waveguides using modal diversity. , 2005, , . | | 0 |
| 100 | Optimal optical power for DPASK over a nonlinear fiber-optic channel. , 2005, , . | | 0 |
| 101 | Repetition rate enhancement and mode shaping in dual-cavity stretched pulse fiber laser. IEEE Photonics Technology Letters, 2006, 18, 920-922. | 1.3 | 0 |
| 102 | Nano-scale “plasmon-soliton”. , 2006, , . | | 0 |
| 103 | On-Demand Photon-Number State Generation via Cavity Parametric Down Conversion. , 2006, , . | | 0 |
| 104 | Experimental observation of spontaneous two-photon emission from semiconductors. , 2007, , . | | 0 |
| 105 | Nonlinear Surface Plasmon Polaritons and the Ponderomotive Force. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , . | 0.0 | 0 |
| 106 | Coupling of nano-stripe and nano-slot plasmonic waveguides. , 2007, , . | | 0 |
| 107 | Interband Second-Order Susceptibility Enhancement in Strained GaInP/AlGaInP Quantum Wells. , 2007, , . | | 0 |
| 108 | Semiconductor Devices Based on Two-Photon Emission. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , . | 0.0 | 0 |

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| 109 | Enhanced Aspect Ratio of Focused Ion Beam Nanopatterning Technique in Semiconductors. , 2007, , . | | 0 |
| 110 | Photon emission by photon model for spontaneous frequency conversion in dispersive dielectric microcavities. , 2007, , . | | 0 |
| 111 | High Quality 3D Virtual Nanocavity by Fringing Near-Fields of a Plasmonic Cylinder. , 2007, , . | | 0 |
| 112 | Antibunched statistics of heralded photon states. , 2009, , . | | 0 |
| 113 | Source of photons entangled with photon-holes. , 2009, , . | | 0 |
| 114 | Electrically induced two-photon transparency in semiconductors. , 2009, , . | | 0 |
| 115 | Ponderomotive force - the fundamental nonlinearity in plasmonics. , 2009, , . | | 0 |
| 116 | Symmetry breaking in plasmonic waveguides with metal nonlinearities. , 2011, , . | | 0 |
| 117 | Plasmonic "templar cross" antennas for subwavelength addressing of spin states in diamonds. , 2016, , . | | 0 |
| 118 | Epitaxial indium phosphide nanoflag optical antennas: Directional and polarized emission and absorption. , 2016, , . | | 0 |
| 119 | GaN/AlGaIn Photovoltaic Quantum Well Infrared Photodetector at 2.3 μ m. , 2018, , . | | 0 |
| 120 | Enhanced Quantum Nano-Sources Based on Silicon-Vacancy Centers in Epitaxially Grown Diamond Nano-Pyramids. , 2019, , . | | 0 |
| 121 | Nonlinear compression towards few-cycle pulses in two-photon semiconductor amplifiers. , 2008, , . | | 0 |
| 122 | Forerunners and turbulent propagation in plasmonic waveguides. , 2008, , . | | 0 |
| 123 | Dynamics of Decelerating Plasmonic Vortex Cavities. , 2019, , . | | 0 |
| 124 | Multichip Differential Phase-Shift-Keyed Transmission Over (Non)Linear Optical Channels. Journal of Lightwave Technology, 2009, , . | 2.7 | 0 |