Elias Glytsis

List of Publications by Year
in descending order

120 papers	3,431 citations	147566 31 h-index	155451 55 g-index
120 all docs	120 docs citations	120 times ranked	1837 citing authors

#	Article	IF	Citations
1	Uncertainty Quantification of Printed Microwave Interconnects by Use of the Sparse Polynomial Chaos Expansion Method. IEEE Microwave and Wireless Components Letters, 2022, 32, 1-4.	2.0	5
2	An Anisotropic Sparse Adaptive Polynomial Chaos Method for the Uncertainty Quantification of Resonant Gratings-Performance. Journal of Lightwave Technology, 2022, 40, 3640-3646.	2.7	3
3	An Adaptive Sparse Anisotropic Polynomial-Chaos Expansion Algorithm Applied to EMC Problems. IEEE Electromagnetic Compatibility Magazine, 2021, 10, 80-87.	0.1	0
4	Uncertainty Study of Periodic-Grating Wideband Filters With Sparse Polynomial-Chaos Expansions. IEEE Photonics Technology Letters, 2019, 31, 1499-1502.	1.3	6
5	Diffraction of radio frequency waves by spatially modulated interfaces in the plasma edge in tokamaks. Journal of Plasma Physics, 2019, 85, .	0.7	6
6	Intrusive polynomialâ€chaos approach for stochastic problems with axial symmetry. IET Microwaves, Antennas and Propagation, 2019, 13, 782-788.	0.7	3
7	Performance analysis of waveguide-mode resonant optical filters with stochastic design parameters. Applied Optics, 2018, 57, 3106.	0.9	5
8	Review and accuracy comparison of various permittivity-averaging schemes for material discontinuities in the two-dimensional FDFD method: implementation using efficient computer graphics techniques. Applied Optics, 2018, 57, 7303.	0.9	3
9	Simple derivative-free method of zero extraction by phase-based enclosure for determination of complex propagation constants in planar multilayer waveguides. Applied Optics, 2018, 57, 10485.	0.9	1
10	Efficient uncertainty analysis of waveguide-mode resonant optical filters. , 2017, , .		0
11	Applicability and Optimization of the Alternating-Direction-Implicit Iterative Method for the 2-D Finite-Difference Frequency-Domain Solution of Scattering Problems. IEEE Transactions on Antennas and Propagation, 2017, 65, 7166-7173.	3.1	1
12	Polynomial-chaos time-domain method for uncertainty analysis of axially-symmetric structures. , 2016, , .		1
13	Multi-domain modeling of 3D printed, nanotechnology and morphing/origami-based RF modules. , 2016, , .		2
14	Prism-Coupler Revisited: Analysis and Performance Characteristics Using the Finite-Difference Frequency-Domain Method. Journal of Lightwave Technology, 2014, 32, 4400-4409.	2.7	5
15	Preferential input-waveguide grating couplers: rigorous analysis using the pseudospectral time-domain method. Applied Optics, 2012, 51, 8460.	0.9	0
16	Preferential-order waveguide grating couplers: a comparative rigorous analysis using the finite-difference time-domain method. Applied Optics, 2010, 49, 5787.	2.1	5
17	Optical waveguide grating couplers: 2nd-order and 4th-order finite-difference time-domain analysis. Applied Optics, 2009, 48, 5164.	2.1	4
18	Finite-difference-time-domain analysis of finite-number-of-periods holographic and surface-relief gratings. Applied Optics, 2008, 47, 1981.	2.1	14

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19	Preferential Order Waveguide Grating Couplers: Rigorous Analysis using Finite-Difference Time-Domain Methods. , 2008, , .		0
20	Finite-Number-of-Periods Gratings: Analysis Using the Total-Field/Scattered-Field Finite-Difference-Time-Domain Method. , 2007, , .		0
21	Optimization of anisotropically etched silicon surface-relief gratings for substrate-mode optical interconnects. Applied Optics, 2006, 45, 15.	2.1	9
22	Optimization of sawtooth surface-relief gratings: effects of substrate refractive index and polarization. Applied Optics, 2006, 45, 3420.	2.1	4
23	Optimization of finite-length input volume holographic grating couplers illuminated by finite-width incident beams. Applied Optics, 2005, 44, 4435.	2.1	12
24	Angular sensitivities of volume gratings for substrate-mode optical interconnects. Applied Optics, 2005, 44, 4447.	2.1	8
25	Three-dimensional convergingâ€“diverging Gaussian beam diffraction by a volume grating. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2005, 22, 1293.	0.8	16
26	Optical Transmission of Polymer Pillars for Chip I/O Optical Interconnections. IEEE Photonics Technology Letters, 2004, 16, 117-119.	1.3	14
27	Characteristics of DuPont photopolymers for slanted holographic grating formations. Journal of the Optical Society of America B: Optical Physics, 2004, 21, 1722.	0.9	22
28	Volume holographic grating couplers: rigorous analysis by use of the finite-difference frequency-domain method. Applied Optics, 2004, 43, 1009.	2.1	19
29	Wavelength response of waveguide volume grating couplers for optical interconnects. Applied Optics, 2004, 43, 5162.	2.1	2
30	Measurements of polarization- and wavelength-dependent performance of waveguide volume grating couplers. , 2004, , .		0
31	Transmission characteristics of long-period fiber gratings having arbitrary azimuthal/radial refractive index variations. Journal of Lightwave Technology, 2003, 21, 218-227.	2.7	113
32	Substrate-embedded and flip-chip-bonded photodetector polymer-based optical interconnects: analysis, design, and performance. Journal of Lightwave Technology, 2003, 21, 2382-2394.	2.7	14
33	Holographic grating formation in photopolymers: analysis and experimental results based on a nonlocal diffusion model and rigorous coupled-wave analysis. Journal of the Optical Society of America B: Optical Physics, 2003, 20, 1177.	0.9	79
34	Quantum-well infrared photodetector structure synthesis: methodology and experimental verification. IEEE Journal of Quantum Electronics, 2003, 39, 468-477.	1.0	9
35	Electrical and optical clock distribution networks for gigascale microprocessors. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2002, 10, 582-594.	2.1	53
36	Two-dimensionally-periodic diffractive optical elements: limitations of scalar analysis. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2002, 19, 702.	0.8	27

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37	Finite-number-of-periods holographic gratings with finite-width incident beams: analysis using the finite-difference frequency-domain method. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2002, 19, 2018.	0.8	68
38	Volume grating couplers: polarization and loss effects. Applied Optics, 2002, 41, 5223.	2.1	17
39	Colorimetry-based retardation measurement method with white-light interference. Applied Optics, 2002, 41, 5290.	2.1	5
40	Tuning, attenuating, and switching by controlled flexure of long-period fiber gratings. Optics Letters, 2001, 26, 61.	1.7	23
41	Focusing diffractive cylindrical mirrors:â€ƒrigorous evaluation of various design methods. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2001, 18, 1487.	0.8	6
42	Modeling considerations for rigorous boundary element method analysis of diffractive optical elements. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2001, 18, 1495.	0.8	9
43	Guided-mode resonant subwavelength gratings: effects of finite beams and finite gratings. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2001, 18, 1912.	0.8	56
44	QUANTUM STATE ENGINEERING BASED ON ELECTROMAGNETIC ANALOGIES AND NUMERICAL METHODS FOR SEMICONDUCTOR INTERSUBBAND LASERS. Selected Topics in Electornics and Systems, 2000, , 389-418.	0.2	0
45	Effects of modulation strength in guided-mode resonant subwavelength gratings at normal incidence. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2000, 17, 1221.	0.8	55
46	Design, fabrication, and performance of preferential-order volume grating waveguide couplers. Applied Optics, 2000, 39, 1223.	2.1	60
47	Very-high-temperature stable CO2-laser-induced long-period fibre gratings. Electronics Letters, 1999, 35, 740.	0.5	48
48	Quasibound state determination of arbitrary-geometry quantum heterostructures. Microelectronics Journal, 1999, 30, 935-951.	1.1	10
49	Ballistic-electron-emission-spectroscopy detection of monolayer thickness fluctuations in a semiconductor heterostructure. Applied Physics Letters, 1999, 75, 283-285.	1.5	2
50	Metallic surface-relief on-axis and off-axis focusing diffractive cylindrical mirrors. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1999, 16, 113.	0.8	40
51	Finite-substrate-thickness cylindrical diffractive lenses: exact and approximate boundary-element methods. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1999, 16, 1294.	0.8	20
52	Determination of guided and leaky modes in lossless and lossy planar multilayer optical waveguides: reflection pole method and wavevector density method. Journal of Lightwave Technology, 1999, 17, 929-941.	2.7	132
53	Volume grating preferential-order focusing waveguide coupler. Optics Letters, 1999, 24, 1708.	1.7	37
54	Collimating cylindrical diffractive lenses: rigorous electromagnetic analysis and scalar approximation. Applied Optics, 1998, 37, 34.	2.1	28

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55	Optimal usage of available wiring resources in diffractiveâ€“reflective optoelectronic multichip modules. Applied Optics, 1998, 37, 233.	2.1	2
56	Design of a high-efficiency volume grating coupler for line focusing. Applied Optics, 1998, 37, 2278.	2.1	28
57	Polarizing mirror/absorber for visible wavelengths based on a silicon subwavelength grating: design and fabrication. Applied Optics, 1998, 37, 2534.	2.1	41
58	Effects of fabrication errors on the performance of cylindrical diffractive lenses: rigorous boundary-element method and scalar approximation. Applied Optics, 1998, 37, 6591.	2.1	19
59	Normal-incidence guided-mode resonant grating filters:?design and experimental demonstration. Optics Letters, 1998, 23, 700.	1.7	140
60	Surface mode at isotropicâ€“uniaxial and isotropicâ€“biaxial interfaces. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1998, 15, 248.	0.8	93
61	Scalar integral diffraction methods: unification, accuracy, and comparison with a rigorous boundary element method with application to diffractive cylindrical lenses. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1998, 15, 1822.	0.8	50
62	Long-period fibre grating fabrication with focused CO2 laser pulses. Electronics Letters, 1998, 34, 302.	0.5	283
63	QUANTUM STATE ENGINEERING BASED ON ELECTROMAGNETIC ANALOGIES AND NUMERICAL METHODS FOR SEMICONDUCTOR INTERSUBBAND LASERS. International Journal of High Speed Electronics and Systems, 1998, 09, 1235-1264.	0.3	1
64	CO2 laser-induced long-period fibre gratings: spectral characteristics, cladding modes and polarisation independence. Electronics Letters, 1998, 34, 1416.	0.5	55
65	Measurement of the zero-bias electron transmittance as a function of energy for half- and quarter-electron-wavelength semiconductor quantum-interference filters. Applied Physics Letters, 1998, 72, 374-376.	1.5	6
66	Electron-wave interference effects in a Ga1â^'xAlxAs single-barrier structure measured by ballistic electron emission spectroscopy. Applied Physics Letters, 1997, 71, 2292-2294.	1.5	6
67	Rigorous electromagnetic analysis of diffraction by finite-number-of-periods gratings. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1997, 14, 907.	0.8	57
68	Quasi-bound states determination using a perturbed wavenumbers method in a large quantum box. IEEE Journal of Quantum Electronics, 1997, 33, 742-752.	1.0	26
69	Quantum reflection pole method for determination of quasibound states in semiconductor heterostructures. Superlattices and Microstructures, 1997, 22, 481-496.	1.4	10
70	Ferroelectric liquid-crystal waveguide modulation based on a switchable uniaxialâ€“uniaxial interface. Applied Optics, 1996, 35, 3016.	2.1	21
71	Comparison of beam propagation method and rigorous coupled-wave analysis for single and multiplexed volume gratings. Applied Optics, 1996, 35, 4426.	2.1	22
72	Lossy multilayer channel optical waveguides analyzed by the transmission line matrix method. Applied Optics, 1996, 35, 5979.	2.1	2

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73	Subwavelength transmission grating retarders for use at 106 Î¼m. Applied Optics, 1996, 35, 6195.	2.1	34
74	Rigorous electromagnetic analysis of diffractive cylindrical lenses. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1996, 13, 2219.	0.8	91
75	Ballistic-electron-emission spectroscopy of Au/Si and Au/GaAs interfaces: Low-temperature measurements and ballistic models. Physical Review B, 1996, 54, 16972-16982.	1.1	19
76	Lowâ€temperature scanning tunneling microscope for ballistic electron emission microscopy and spectroscopy. Review of Scientific Instruments, 1995, 66, 91-96.	0.6	11
77	Application of the transmission line matrix method to the analysis of slab and channel optical waveguides. Applied Optics, 1995, 34, 2704.	2.1	3
78	Parallelized formulation of the maximum likelihood-expectation maximization algorithm for fine-grain message-passing architectures. IEEE Transactions on Medical Imaging, 1995, 14, 758-762.	5.4	15
79	Discontinuities in finiteâ€potential and gateâ€induced electron waveguides. Journal of Applied Physics, 1994, 76, 5567-5579.	1.1	9
80	Electron waveâ€packet response of aboveâ€allâ€bandâ€edges semiconductor quantum resonant structures. Journal of Applied Physics, 1994, 75, 5415-5422.	1.1	4
81	Efficient solution of eigenvalue equations of optical waveguiding structures. Journal of Lightwave Technology, 1994, 12, 2080-2084.	2.7	31
82	Homogeneous layer models for high-spatial-frequency dielectric surface-relief gratings: conical diffraction and antireflection designs. Applied Optics, 1994, 33, 2695.	2.1	124
83	Optimization of multilayer integrated optics waveguides. Journal of Lightwave Technology, 1994, 12, 512-518.	2.7	11
84	Comparison of SS-GIC and MHD-EMP-GIC effects on power systems. IEEE Transactions on Power Delivery, 1994, 9, 194-207.	2.9	20
85	<title>Quantum well mid-infrared lasers based on above-barrier transitions</title>. , 1994, 2145, 132.		0
86	Use of Classically Free Quasibound States for Infrared Emission. , 1994, , 511-524.		0
87	Nanostructure optical emitters based on quasibound electron energy levels. Microelectronics Journal, 1993, 24, 805-816.	1.1	4
88	Application of electromagnetics formalism to quantum-mechanical electron-wave propagation in semiconductors. Journal of the Optical Society of America B: Optical Physics, 1993, 10, 333.	0.9	27
89	Electron waveguiding characteristics and ballistic current capacity of semiconductor quantum slabs. IEEE Journal of Quantum Electronics, 1993, 29, 1364-1382.	1.0	55
90	Bound and quasibound state calculations for biased/unbiased semiconductor quantum heterostructures. IEEE Journal of Quantum Electronics, 1993, 29, 2731-2740.	1.0	58

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91	Efficient coupling of highâ€intensity subpicosecond laser pulses into solids. Applied Physics Letters, 1993, 62, 1068-1070.	1.5	141
92	Supermode analysis of electron wave directional coupling using a multilayer waveguide approach. Journal of Applied Physics, 1993, 73, 3352-3366.	1.1	16
93	Quantum transmittance from low-temperature ballistic electron emission spectroscopy of Au/Si(100) Schottky interfaces. Physical Review Letters, 1993, 71, 2999-3002.	2.9	23
94	Optical transitions to aboveâ€barrier quasibound states in asymmetric semiconductor heterostructures. Applied Physics Letters, 1993, 62, 1432-1434.	1.5	26
95	Electromagnetic analogies to general-Hamiltonian effective-mass electron wave propagation in semiconductors with spatially varying effective mass and potential energy. Physical Review B, 1992, 45, 8404-8407.	1.1	18
96	NUCLEAR MAGNETOHYDRODYNAMIC EMP, SOLAR STORMS, AND SUBSTORMS. International Journal of Modern Physics B, 1992, 06, 3353-3380.	1.0	2
97	Beam diameter threshold for polarization conversion photoinduced by spatially oscillating bulk photovoltaic currents in LiNbO_3: Fe. Journal of the Optical Society of America B: Optical Physics, 1992, 9, 1714.	0.9	12
98	Performance analysis of Givens rotation-integrated optical interdigitated-electrode cross-channel Bragg diffraction devices: extrinsic and inherent errors. Applied Optics, 1992, 31, 1754.	2.1	0
99	High-spatial-frequency binary and multilevel stairstep gratings: polarization-selective mirrors and broadband antireflection surfaces. Applied Optics, 1992, 31, 4459.	2.1	69
100	Multilayer waveguides: efficient numerical analysis of general structures. Journal of Lightwave Technology, 1992, 10, 1344-1351.	2.7	161
101	Semiconductor Ballistic Electron Reflection, Refraction, Interference, and Diffraction Effects: Modeling and Quantum Device Applications. , 1992, , .		0
102	Ballistic electron diffractive switches: design and performance analysis. , 1992, , .		0
103	Electron wave diffraction by semiconductor gratings: Rigorous analysis and design parameters. Applied Physics Letters, 1991, 59, 440-442.	1.5	15
104	Ballistic electron emission testing of semiconductor heterostructures. Solid State Communications, 1991, 80, 591-596.	0.9	20
105	Quantum well, voltageâ€induced quantum well, and quantum barrier electron waveguides: Mode characteristics and maximum current. Applied Physics Letters, 1991, 59, 1855-1857.	1.5	19
106	Ballistic currentâ€voltage characteristics of semiconductor superlattice electronâ€wave quantumâ€interference filter/emitter negative differential resistance devices. Journal of Applied Physics, 1991, 70, 3920-3933.	1.1	12
107	Electronâ€wave quarterâ€wavelength quantum well impedance transformers between differing energyâ€gap semiconductors. Journal of Applied Physics, 1990, 67, 2623-2630.	1.1	10
108	Performance analysis of Givens rotation integrated optical interdigitated-electrode cross-channel Bragg diffraction devices: intrinsic accuracy. Applied Optics, 1990, 29, 2556.	2.1	1

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109	Three-dimensional (vector) rigorous coupled-wave analysis of anisotropic grating diffraction. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1990, 7, 1399.	0.8	79
110	Theory and design of semiconductor electronâ€wave interference filter/emitters. Journal of Applied Physics, 1989, 66, 6158-6167.	1.1	19
111	Semiconductor superlattice interference filter design. Journal of Applied Physics, 1989, 65, 2535-2540.	1.1	37
112	Semiconductor biased superlattice tunable electron interference filter/emitter. Journal of Applied Physics, 1989, 66, 1494-1497.	1.1	11
113	Semiconductor quantum wells as electron wave slab waveguides. Journal of Applied Physics, 1989, 66, 1842-1848.	1.1	37
114	Semiconductor electronâ€wave slab waveguides. Journal of Applied Physics, 1989, 66, 1483-1485.	1.1	17
115	Rigorous 3-D coupled wave diffraction analysis of multiple superposed gratings in anisotropic media. Applied Optics, 1989, 28, 2401.	2.1	40
116	Antireflection surface structure: dielectric layer(s) over a high spatial-frequency surface-relief grating on a lossy substrate. Applied Optics, 1988, 27, 4288.	2.1	14
117	Anisotropic guided-wave diffraction by interdigitated electrode-induced phase gratings. Applied Optics, 1988, 27, 5031.	2.1	3
118	Rigorous three-dimensional coupled-wave diffraction analysis of single and cascaded anisotropic gratings. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1987, 4, 2061.	0.8	116
119	Zero-reflectivity homogeneous layers and high spatial-frequency surface-relief gratings on lossy materials. Applied Optics, 1987, 26, 3123.	2.1	39
120	Electric field, permittivity, and strain distributions induced by interdigitated electrodes on electrooptic waveguides. Journal of Lightwave Technology, 1987, 5, 668-683.	2.7	15