

Joseph Salzman

List of Publications by Year in descending order

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3003
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of 1.5â€‰MeV electron irradiation on $\hat{2}$ -Ga ₂ O ₃ carrier lifetime and diffusion length. Applied Physics Letters, 2018, 112, .	1.5	55
2	Low dose ⁶⁰ Co gamma-irradiation effects on electronic carrier transport and DC characteristics of AlGa _N /Ga _N high-electron-mobility transistors. Radiation Effects and Defects in Solids, 2017, 172, 250-256.	0.4	26
3	Optical Signature of the Electron Injection in Ga ₂ O ₃ . ECS Journal of Solid State Science and Technology, 2017, 6, Q3049-Q3051.	0.9	12
4	Effects of Gamma Irradiation on AlGa _N -Based High Electron Mobility Transistors. ECS Journal of Solid State Science and Technology, 2017, 6, S3063-S3066.	0.9	8
5	Optical and electron beam studies of gamma-irradiated AlGa _N /Ga _N high-electron-mobility transistors. Radiation Effects and Defects in Solids, 2016, 171, 223-230.	0.4	5
6	Non-volatile resonance modes of a photonic cavity in diamond produced by fine-tuning. Journal of Applied Physics, 2016, 120, 163107.	1.1	2
7	Optically sensitive devices based on Pt nano particles fabricated by atomic layer deposition and embedded in a dielectric stack. Journal of Applied Physics, 2015, 118, .	1.1	10
8	Dual bipolar resistive switching in the sub-forming regime of HfO ₂ resistive switching devices. Solid-State Electronics, 2015, 111, 238-242.	0.8	6
9	Multi-functional optically sensitive metal-insulator-semiconductor devices based on Pt nanoparticles fabricated in-situ with a dielectric stack using atomic layer deposition. , 2015, , .		0
10	Fabrication of triangular nanobeam waveguide networks in bulk diamond using single-crystal silicon hard masks. Applied Physics Letters, 2014, 105, .	1.5	37
11	The electrostatics of Ta ₂ O ₅ in Si-based metal oxide semiconductor devices. Journal of Applied Physics, 2013, 113, .	1.1	11
12	Ultraviolet to near infrared response of optically sensitive nonvolatile memories based on platinum nano-particles and high-k dielectrics on a silicon on insulator substrate. Journal of Applied Physics, 2013, 113, 074503.	1.1	8
13	The Effect of HfO ₂ Overlayer on the Thermal Stability of SiGe Substrate. ECS Solid State Letters, 2012, 1, N7-N9.	1.4	3
14	Investigation of the band offsets caused by thin Al ₂ O ₃ layers in HfO ₂ based Si metal oxide semiconductor devices. Applied Physics Letters, 2012, 100, .	1.5	20
15	Resistive Switching in HfO_2 Probed by a Metal-Insulator-Semiconductor Bipolar Transistor. IEEE Electron Device Letters, 2012, 33, 11-13.	2.2	37
16	Ultraviolet to near infrared response of optically triggered nonvolatile memories based on platinum nano-particles and high-k dielectrics on a SOI substrate. , 2012, , .		0
17	Non-volatile memory transistor based on Pt nanocrystals with negative differential resistance. Journal of Applied Physics, 2012, 112, 024319.	1.1	11
18	Processing of photonic crystal nanocavity for quantum information in diamond. Diamond and Related Materials, 2011, 20, 937-943.	1.8	62

#	ARTICLE	IF	CITATIONS
19	Nonvolatile low-voltage memory transistor based on SiO ₂ tunneling and HfO ₂ blocking layers with charge storage in Au nanocrystals. Applied Physics Letters, 2011, 98, .	1.5	28
20	Optical properties of nonvolatile memory capacitors based on gold nanoparticles and SiO ₂ –HfO ₂ sublayers. Applied Physics Letters, 2011, 98, .	1.5	8
21	Triangular nanobeam photonic cavities in single-crystal diamond. New Journal of Physics, 2011, 13, 025018.	1.2	58
22	Diamond processing by focused ion beam–surface damage and recovery. Applied Physics Letters, 2011, 99, .	1.5	30
23	Tunneling Emitter Bipolar Transistor as a Characterization Tool for Dielectrics and their Interfaces. ECS Transactions, 2011, 41, 325-334.	0.3	4
24	A Nonvolatile Memory Capacitor Based on a Double Gold Nanocrystal Storing Layer and High- κ Dielectric Tunneling and Control Layers. Journal of the Electrochemical Society, 2010, 157, H463.	1.3	12
25	Effect of dielectric constant tuning on a photonic cavity frequency and Q-factor. Optics Express, 2010, 18, 15907.	1.7	1
26	A nonvolatile memory capacitor based on Au nanocrystals with HfO ₂ tunneling and blocking layers. Applied Physics Letters, 2009, 95, 023104.	1.5	30
27	Ultra high-Q photonic crystal nanocavity design: The effect of a low- $\hat{\mu}$ slab material. Optics Express, 2008, 16, 4972.	1.7	28
28	Stranski–Krastanov growth of GaN quantum dots on AlN template by metalorganic chemical vapor deposition. Journal of Applied Physics, 2008, 104, 044307.	1.1	8
29	Photonic crystals (PC) in diamond: Cavity Q - Mode volume influence on the design. , 2007, , .		1
30	Characterization of three-dimensional microstructures in single-crystal diamond. Diamond and Related Materials, 2006, 15, 1614-1621.	1.8	92
31	Surface states and persistent photocurrent in a GaN heterostructure field effect transistor. Semiconductor Science and Technology, 2006, 21, 933-937.	1.0	4
32	Diamond based photonic crystal microcavities. Optics Express, 2006, 14, 3556.	1.7	102
33	Cathodoluminescence study of micro-crack-induced stress relief for AlN films on Si(111). Journal of Electronic Materials, 2006, 35, L15-L19.	1.0	9
34	Characteristics of In _x Al _{1-x} GaN High-Electron Mobility Field-Effect Transistor. IEEE Transactions on Electron Devices, 2005, 52, 146-150.	1.6	33
35	Ion-Beam-Assisted Lift-Off Technique for Three-Dimensional Micromachining of Freestanding Single-Crystal Diamond. Advanced Materials, 2005, 17, 2427-2430.	11.1	166
36	Impact of native oxides beneath the gate contact of AlGaIn/GaN HFET devices. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 2627-2630.	0.8	6

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37	Simulation of x-ray diffraction profiles in imperfect multilayers by direct wave summation. Journal Physics D: Applied Physics, 2005, 38, A239-A244.	1.3	6
38	Low-frequency 1/f noise and persistent transients in AlGaIn-GaN HFETs. IEEE Electron Device Letters, 2005, 26, 345-347.	2.2	5
39	Engineering and impact of surface states on AlGaIn/GaN-based hetero field effect transistors. Semiconductor Science and Technology, 2005, 20, 972-978.	1.0	5
40	Propagation loss in GaN-based ridge waveguides. Applied Physics Letters, 2004, 84, 3801-3803.	1.5	11
41	Persistent photocurrent and surface trapping in GaN Schottky ultraviolet detectors. Applied Physics Letters, 2004, 84, 4092-4094.	1.5	106
42	InAlN δ -GaIn heterostructure field-effect transistor DC and small-signal characteristics. Electronics Letters, 2004, 40, 1304.	0.5	23
43	Photonic crystal heterostructure waveguides. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 1531-1536.	0.8	2
44	The atypical temperature evolution of the phonon modes of GaAsN. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 1554-1559.	0.8	0
45	Incorporation of dielectric layers into the processing of III-nitride-based heterostructure field-effect transistors. Journal of Electronic Materials, 2003, 32, 355-363.	1.0	3
46	Microstructure of GaN grown by lateral confined epitaxy 2. GaN on patterned sapphire. Journal of Electronic Materials, 2003, 32, 23-28.	1.0	1
47	Electron mobility in an AlGaIn/GaN two-dimensional electron gas I-carrier concentration dependent mobility. IEEE Transactions on Electron Devices, 2003, 50, 2002-2008.	1.6	78
48	The anomalous composition dependence of the bandgap of GaAsN. Physica Status Solidi A, 2003, 195, 528-531.	1.7	7
49	Reduction of oxygen contamination in AlN. Physica Status Solidi C: Current Topics in Solid State Physics, 2003, 0, 2541-2544.	0.8	1
50	Lateral and longitudinal coupled waveguides in semiconductor lasers. Optics Letters, 2003, 28, 1939.	1.7	0
51	Enhanced photoluminescence from GaN grown by lateral confined epitaxy. Journal of Applied Physics, 2002, 91, 1191-1197.	1.1	13
52	Anisotropy in detectivity of GaN Schottky ultraviolet detectors: Comparing lateral and vertical geometry. Applied Physics Letters, 2002, 80, 347-349.	1.5	52
53	The effect of mass transfer on the photoelectrochemical etching of GaN. Semiconductor Science and Technology, 2002, 17, 510-514.	1.0	11
54	The anomalous bandgap bowing in GaAsN. Applied Physics Letters, 2002, 81, 463-465.	1.5	112

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55	Interrupted synthetic aperture radar (SAR). IEEE Aerospace and Electronic Systems Magazine, 2002, 17, 33-39.	2.3	55
56	Microstructure of GaN deposited by lateral confined epitaxy on patterned Si (111). Journal of Electronic Materials, 2002, 31, 88-93.	1.0	3
57	Reduction of cracks in GaN films grown on Si-on-insulator by lateral confined epitaxy. Journal of Crystal Growth, 2002, 243, 375-380.	0.7	20
58	Dependence of the refractive index of Al _x Ga _{1-x} N on temperature and composition at elevated temperatures. Journal of Applied Physics, 2001, 89, 2676-2685.	1.1	107
59	Gain mechanism in GaN Schottky ultraviolet detectors. Applied Physics Letters, 2001, 79, 1417-1419.	1.5	272
60	Vertical versus Lateral GaN Schottky Ultraviolet Detectors and Their Gain Mechanism. Physica Status Solidi A, 2001, 188, 345-349.	1.7	3
61	Determination of Band-Gap Bowing for Al _x Ga _{1-x} N Alloys. Physica Status Solidi A, 2001, 188, 789-792.	1.7	18
62	Lateral confined epitaxy of GaN layers on Si substrates. Journal of Crystal Growth, 2001, 230, 341-345.	0.7	31
63	GaN layer growth optimization for high power devices. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 302, 14-17.	2.6	24
64	Properties of carbon-doped GaN. Applied Physics Letters, 2001, 78, 757-759.	1.5	136
65	Thermal microcrack distribution control in GaN layers on Si substrates by lateral confined epitaxy. Applied Physics Letters, 2001, 78, 288-290.	1.5	74
66	Surface states and surface oxide in GaN layers. Journal of Applied Physics, 2001, 89, 390-395.	1.1	83
67	The effect of AlN buffer layer on GaN grown on (111)-oriented Si substrates by MOCVD. Journal of Crystal Growth, 2000, 218, 181-190.	0.7	63
68	Quantitative analysis of small amounts of cubic GaN phase in GaN films grown on sapphire. Journal of Electronic Materials, 2000, 29, 457-462.	1.0	1
69	Grain-boundary-controlled transport in GaN layers. Physical Review B, 2000, 61, 15573-15576.	1.1	59
70	Yellow luminescence and Fermi level pinning in GaN layers. Applied Physics Letters, 2000, 77, 987.	1.5	25
71	Thermally activated electrical conductivity in thin GaN epitaxial films. Applied Physics Letters, 2000, 76, 1431-1433.	1.5	19
72	Yellow luminescence and related deep levels in unintentionally doped GaN films. Physical Review B, 1999, 59, 9748-9751.	1.1	138

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73	Multiparameter Statistical Design of Experiments for GaN Growth Optimization. Physica Status Solidi A, 1999, 176, 313-317.	1.7	6
74	The Effect of Grain Boundaries on Electrical Conductivity in Thin GaN Layers. Physica Status Solidi A, 1999, 176, 683-687.	1.7	9
75	Electrical isolation of GaN by ion implantation damage: Experiment and model. Applied Physics Letters, 1999, 74, 2441-2443.	1.5	44
76	Ordering dependence of pyroelectricity in $Ga_{1-x}In_xP$. Journal of Applied Physics, 1997, 81, 3729-3731.	1.1	3
77	III-V-N compounds for infrared applications. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1997, 50, 148-152.	1.7	27
78	Selective area growth of GaP on Si by MOCVD. Journal of Crystal Growth, 1997, 172, 53-57.	0.7	13
79	The role of the substrate in photoenhanced metalorganic chemical vapor deposition. Applied Physics Letters, 1995, 66, 296-298.	1.5	3
80	Direct measurement of the local intensity modulation response of distributed feedback lasers. IEEE Photonics Technology Letters, 1995, 7, 260-262.	1.3	2
81	Distributed feedback lasers with an S-bent waveguide for high-power single-mode operation. IEEE Journal of Selected Topics in Quantum Electronics, 1995, 1, 346-355.	1.9	24
82	Single-mode stability of DFB lasers with longitudinal Bragg detuning. IEEE Photonics Technology Letters, 1995, 7, 461-463.	1.3	10
83	Exciton dimensionality and confinement studied by resonant Raman scattering in $GaAs/Al_xGa_{1-x}As$ Bragg-confining structures and superlattices. Physical Review B, 1994, 50, 5305-5315.	1.1	11
84	Landau levels of bragg confined electrons and holes. Solid-State Electronics, 1994, 37, 1195-1197.	0.8	4
85	Selective growth of GaAs/InGaP heterostructures by photo-enhanced organometallic chemical vapor deposition. Journal of Crystal Growth, 1994, 135, 23-30.	0.7	9
86	Atmospheric and low pressure shadow masked MOVPE growth of InGaAs(P)/InP and (In)GaAs/(Al)GaAs heterostructures and quantum wells. Journal of Electronic Materials, 1994, 23, 225-232.	1.0	13
87	Transmission through abrupt heterojunction potential barriers. IEEE Journal of Quantum Electronics, 1994, 30, 1995-2000.	1.0	3
88	Wavelength dependence of photoenhanced organometallic chemical vapor deposition. Thin Solid Films, 1993, 225, 91-95.	0.8	2
89	X-ray diffraction study of surface acoustic wave device under acoustic excitation. Journal of Applied Physics, 1993, 73, 8647-8649.	1.1	12
90	A kinetic model for photoenhanced organometallic chemical vapour deposition. Semiconductor Science and Technology, 1993, 8, 1094-1100.	1.0	1

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91	Exciton states in GaAs/AlGaAs Bragg confining structures studied by resonant Raman scattering. Physical Review Letters, 1993, 71, 420-423.	2.9	16
92	Enhanced electro-optic effect in amorphous hydrogenated silicon based waveguides. Applied Physics Letters, 1992, 61, 1664-1666.	1.5	13
93	Experimental evidence of Bragg confinement of carriers in a quantum barrier. Applied Physics Letters, 1992, 61, 949-951.	1.5	44
94	Acoustic field study in layered structures by means of x-ray diffraction. Journal of Applied Physics, 1992, 71, 3134-3137.	1.1	13
95	Distributed Bragg reflector active optical filters. IEEE Journal of Quantum Electronics, 1991, 27, 2016-2024.	1.0	20
96	Threshold and saturation effects for photosignals in an amorphous silicon waveguide structure. Applied Physics Letters, 1991, 59, 2660-2662.	1.5	5
97	Bragg confinement of carriers in a shallow quantum well. Applied Physics Letters, 1991, 59, 1858-1860.	1.5	11
98	Bragg confinement of carriers in a quantum barrier. Applied Physics Letters, 1990, 56, 871-873.	1.5	29
99	Eigenmodes of multiwaveguide structures. Journal of Lightwave Technology, 1990, 8, 1803-1809.	2.7	12
100	Polarization discrimination properties of Bragg-reflection waveguides. Optics Letters, 1990, 15, 1288.	1.7	12
101	Bragg reflection waveguide composite structures. IEEE Journal of Quantum Electronics, 1990, 26, 519-531.	1.0	20
102	Kinetics of pressure-dependent gradual degradation of semiconductor lasers and light-emitting diodes. Applied Physics Letters, 1989, 55, 1170-1172.	1.5	13
103	The Bragg reflection waveguide directional coupler. IEEE Photonics Technology Letters, 1989, 1, 319-322.	1.3	14
104	Modal coupling in tilted-mirror waveguide lasers and amplifiers. Optics Letters, 1988, 13, 455.	1.7	10
105	Plane-wave spectrum approach for tilted waveguides. Optics Letters, 1988, 13, 1135.	1.7	7
106	Kinetic model for gradual degradation in semiconductor lasers and light-emitting diodes. Applied Physics Letters, 1988, 53, 2135-2137.	1.5	40
107	Cross coupled cavity semiconductor laser. Applied Physics Letters, 1988, 52, 767-769.	1.5	8
108	The tilted waveguide semiconductor laser amplifier. Journal of Applied Physics, 1988, 64, 2240-2242.	1.1	11

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109	Saturable nonlinear dielectric waveguide with applications to broad-area semiconductor lasers. Optics Letters, 1987, 12, 953.	1.7	1
110	Self-stabilized nonlinear lateral modes of broad area lasers. IEEE Journal of Quantum Electronics, 1987, 23, 1909-1920.	1.0	52
111	Laterally coupled-cavity semiconductor lasers. IEEE Journal of Quantum Electronics, 1987, 23, 395-400.	1.0	22
112	Eigenvalues of unstable resonator semiconductor lasers. Optics Communications, 1987, 61, 332-336.	1.0	1
113	Confocal unstable-resonator semiconductor laser. Optics Letters, 1986, 11, 507.	1.7	15
114	Modal analysis of semiconductor lasers with nonplanar mirrors. IEEE Journal of Quantum Electronics, 1986, 22, 463-470.	1.0	10
115	Phase-locked arrays of unstable resonator semiconductor lasers. Applied Physics Letters, 1986, 49, 440-442.	1.5	13
116	High-speed dual-wavelength demultiplexing and detection in a monolithic superlattice waveguide detector array. Applied Physics Letters, 1986, 49, 233-235.	1.5	31
117	Lateral coherence properties of broad-area semiconductor quantum well lasers. Journal of Applied Physics, 1986, 60, 66-68.	1.1	32
118	Phase-locked controlled filament laser. Applied Physics Letters, 1986, 49, 611-613.	1.5	18
119	Efficiency of unstable resonator semiconductor lasers. Electronics Letters, 1985, 21, 821.	0.5	7
120	Tilted-mirror semiconductor lasers. Applied Physics Letters, 1985, 47, 9-11.	1.5	20
121	Coherence and focusing properties of unstable resonator semiconductor lasers. Applied Physics Letters, 1985, 46, 923-925.	1.5	14
122	Modal properties of unstable resonator semiconductor lasers with a lateral waveguide. Applied Physics Letters, 1985, 47, 445-447.	1.5	14
123	Unstable resonator cavity semiconductor lasers. Applied Physics Letters, 1985, 46, 218-220.	1.5	54
124	Double heterostructure lasers with facets formed by a hybrid wet and reactive-ion etching technique. Journal of Applied Physics, 1985, 57, 2948-2950.	1.1	12
125	Lateral coupled cavity semiconductor laser. Applied Physics Letters, 1985, 47, 195-197.	1.5	7
126	Frequency selectivity in laterally coupled semiconductor laser arrays. Optics Letters, 1985, 10, 387.	1.7	4

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127	Chirped optical heterodyne: A method for real time Fourier processing by coherent detection. Journal of Applied Physics, 1982, 53, 48-50.	1.1	0
128	The effects of sulfur concentration on the growth rate of selective MOCVD grown InP [for BH LD]. , 0, , .		2
129	GaAsN, a novel material for optoelectronics on silicon. , 0, , .		0
130	Surface morphology of MOCVD-grown GaN on sapphire. , 0, , .		0
131	Polarization engineering of InAlN/GaN HFET and the effect on DC and RF performance. , 0, , .		0