

Alfred Forchel

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

126
papers

5,186
citations

36
h-index

70
g-index

162
ext. papers

5,843
ext. citations

5.7
avg, IF

4.92
L-index

#	Paper	IF	Citations
126	Transient Oscillatory Behaviors of Polariton Condensates. <i>Journal of the Physical Society of Japan</i> , 2018 , 87, 094401	1.5	1
125	Highly excited exciton-polariton condensates. <i>Physical Review B</i> , 2017 , 95,	3.3	12
124	Spatial correlation of two-dimensional bosonic multimode condensates. <i>Physical Review A</i> , 2016 , 93,	2.6	5
123	High-energy side-peak emission of exciton-polariton condensates in high density regime. <i>Scientific Reports</i> , 2016 , 6, 25655	4.9	14
122	Structural and optical properties of position-retrievable low-density GaAs droplet epitaxial quantum dots for application to single photon sources with plasmonic optical coupling. <i>Nanoscale Research Letters</i> , 2015 , 10, 114	5	6
121	Spatial and temporal dynamics of the crossover from exciton-polariton condensation to photon lasing. <i>Japanese Journal of Applied Physics</i> , 2015 , 54, 092801	1.4	2
120	Ghost Branch Photoluminescence From a Polariton Fluid Under Nonresonant Excitation. <i>Physical Review Letters</i> , 2015 , 115, 186401	7.4	17
119	An electrically pumped polariton laser 2015 ,		1
118	AlGaInAs Quantum Dots for Intermediate Band Formation in Solar Cell Devices. <i>Lecture Notes in Nanoscale Science and Technology</i> , 2014 , 167-186	0.3	1
117	Free space quantum key distribution over 500 meters using electrically driven quantum dot single-photon sources—proof of principle experiment. <i>New Journal of Physics</i> , 2014 , 16, 043003	2.9	28
116	Algebraic order and the Berezinskii-Kosterlitz-Thouless transition in an exciton-polariton gas. <i>Physical Review B</i> , 2014 , 90,	3.3	45
115	Bright single photon source based on self-aligned quantum dot-cavity systems. <i>Optics Express</i> , 2014 , 22, 8136-42	3.3	36
114	f-band condensates in exciton-polariton lattice systems. <i>Physical Review B</i> , 2014 , 89,	3.3	8
113	Optical Properties of Quantum Dashes. <i>Solid State Phenomena</i> , 2014 , 213, 3-11	0.4	
112	Complete tomography of a high-fidelity solid-state entangled spin-photon qubit pair. <i>Nature Communications</i> , 2013 , 4, 2228	17.4	26
111	Unconventional growth mechanism for monolithic integration of III-V on silicon. <i>ACS Nano</i> , 2013 , 7, 100-116.7	16.7	44
110	An electrically pumped polariton laser. <i>Nature</i> , 2013 , 497, 348-52	50.4	325

109	Recent advances in GaSb-based structures for mid-infrared emitting lasers: spectroscopic study 2013 ,		1
108	Temperature Dependence of Highly Excited Exciton Polaritons in Semiconductor Microcavities. <i>Journal of the Physical Society of Japan</i> , 2013 , 82, 084709	1.5	17
107	Stochastic formation of polariton condensates in two degenerate orbital states. <i>Physical Review B</i> , 2013 , 87,	3.3	29
106	Exciton-Polariton Condensates in Zero-, One-, and Two-Dimensional Lattices. <i>Springer Series in Solid-state Sciences</i> , 2013 , 157-175	0.4	3
105	Spatial dynamics of stepwise homogeneously pumped polariton condensates. <i>Physical Review B</i> , 2012 , 86,	3.3	7
104	Quantum-dot spin-photon entanglement via frequency downconversion to telecom wavelength. <i>Nature</i> , 2012 , 491, 421-5	50.4	345
103	Site-controlled InP/GaN quantum dots emitting single photons in the red spectral range. <i>Applied Physics Letters</i> , 2012 , 100, 091109	3.4	17
102	Height-driven linear polarization of the surface emission from quantum dashes. <i>Semiconductor Science and Technology</i> , 2012 , 27, 105022	1.8	12
101	In(Ga)As/GaAs site-controlled quantum dots with tailored morphology and high optical quality. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2012 , 209, 2379-2386	1.6	14
100	Quantum key distribution using quantum dot single-photon emitting diodes in the red and near infrared spectral range. <i>New Journal of Physics</i> , 2012 , 14, 083001	2.9	63
99	Optical properties of well-isolated single InP/InGaP quantum dots. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2012 , 9, 1288-1291		
98	Power-law decay of the spatial correlation function in exciton-polariton condensates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 6467-72	11.5	95
97	Temperature dependence of pulsed polariton lasing in a GaAs microcavity. <i>New Journal of Physics</i> , 2012 , 14, 083014	2.9	13
96	Exciton-polariton condensates with flat bands in a two-dimensional kagome lattice. <i>New Journal of Physics</i> , 2012 , 14, 065002	2.9	81
95	Downconversion quantum interface for a single quantum dot spin and 1550-nm single-photon channel. <i>Optics Express</i> , 2012 , 20, 27510-9	3.3	48
94	Single mode quantum cascade lasers with shallow-etched distributed Bragg reflector. <i>Optics Express</i> , 2012 , 20, 3890-7	3.3	20
93	Single photon emission from InGaN/GaN quantum dots up to 50 K. <i>Applied Physics Letters</i> , 2012 , 100, 061115	3.4	34
92	Single-photon emitters based on epitaxial isolated InP/InGaP quantum dots. <i>Applied Physics Letters</i> , 2012 , 100, 023116	3.4	17

91	Characterization of two-threshold behavior of the emission from a GaAs microcavity. <i>Physical Review B</i> , 2012 , 85,	3.3	51
90	Dynamical d-wave condensation of exciton-polaritons in a two-dimensional square-lattice potential. <i>Nature Physics</i> , 2011 , 7, 681-686	16.2	122
89	Observing chaos for quantum-dot microlasers with external feedback. <i>Nature Communications</i> , 2011 , 2, 366	17.4	57
88	Extrapolation of the intensity autocorrelation function of a quantum-dot micropillar laser into the thermal emission regime. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2011 , 28, 1404	1.7	7
87	Single vortex-antivortex pair in an exciton-polariton condensate. <i>Nature Physics</i> , 2011 , 7, 129-133	16.2	168
86	Properties of GaN Nanowires Grown by Molecular Beam Epitaxy. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2011 , 17, 878-888	3.8	99
85	Electrically Driven Quantum Dot Micropillar Light Sources. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2011 , 17, 1670-1680	3.8	12
84	Highly indistinguishable photons from a quantum dot in a microcavity. <i>Physica Status Solidi (B): Basic Research</i> , 2011 , 248, 867-871	1.3	7
83	Microcavity mode structure investigations with high spatial resolution. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2011 , 8, 1239-1241		2
82	Ultrafast coherent control and suppressed nuclear feedback of a single quantum dot hole qubit. <i>Nature Physics</i> , 2011 , 7, 872-878	16.2	188
81	Distributed feedback quantum cascade lasers at 13.8 μm on indium phosphide. <i>Applied Physics Letters</i> , 2011 , 98, 211118	3.4	6
80	From polariton condensates to highly photonic quantum degenerate states of bosonic matter. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 1804-9	11.5	63
79	Ultrafast optical spin echo in a single quantum dot. <i>Nature Photonics</i> , 2010 , 4, 367-370	33.9	244
78	Gain-induced trapping of microcavity exciton polariton condensates. <i>Physical Review Letters</i> , 2010 , 104, 126403	7.4	62
77	Ultrafast tracking of second-order photon correlations in the emission of quantum-dot microresonator lasers. <i>Physical Review B</i> , 2010 , 81,	3.3	32
76	Higher order coherence of exciton-polariton condensates. <i>Physical Review B</i> , 2010 , 81,	3.3	32
75	Pulsed nuclear pumping and spin diffusion in a single charged quantum dot. <i>Physical Review Letters</i> , 2010 , 105, 107401	7.4	44
74	Tunable Long Wavelength ($\sim 2.8 \mu\text{m}$) GaInAsSb/InAs Quantum-Well Binary Superimposed Grating Lasers. <i>IEEE Photonics Technology Letters</i> , 2010 ,	2.2	1

73	Atomically flat single-crystalline gold nanostructures for plasmonic nanocircuitry. <i>Nature Communications</i> , 2010 , 1, 150	17.4	314
72	Mode imaging and selection in strongly coupled nanoantennas. <i>Nano Letters</i> , 2010 , 10, 2105-10	11.5	115
71	Widely tunable quantum cascade lasers with coupled cavities for gas detection. <i>Applied Physics Letters</i> , 2010 , 97, 181111	3.4	25
70	Non-resonant cavity-quantum dot coupling. <i>Journal of Physics: Conference Series</i> , 2010 , 210, 012058	0.3	
69	Direct comparison of catalyst-free and catalyst-induced GaN nanowires. <i>Nano Research</i> , 2010 , 3, 528-536	10	154
68	Numerical and Experimental Study of the Q ² Factor of High-Q Micropillar Cavities. <i>IEEE Journal of Quantum Electronics</i> , 2010 , 46, 1470-1483	2	29
67	Magnetic-field asymmetry of nonlinear mesoscopic transport in channels coupled to a single metallic gate. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2010 , 42, 2055-2057	3	1
66	Microthermography of diode lasers: The impact of light propagation on image formation. <i>Journal of Applied Physics</i> , 2009 , 105, 014502	2.5	15
65	Magnetic-field asymmetry of nonlinear transport in narrow channels with asymmetric hybrid confinement. <i>Applied Physics Letters</i> , 2009 , 95, 062106	3.4	7
64	Fourier Transformed Photoreflectance and Photoluminescence of Mid Infrared GaSb-Based Type II Quantum Wells. <i>Applied Physics Express</i> , 2009 , 2, 126505	2.4	39
63	Mode-Controlled Tapered Lasers Based on Quantum Dots. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2009 , 15, 780-784	3.8	3
62	Short-Wavelength (760-820 nm) AlGaInAs Quantum Dot Lasers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2009 , 15, 792-798	3.8	8
61	GaInNAs-Based High-Power and Tapered Laser Diodes for Pumping Applications. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2009 , 15, 968-972	3.8	10
60	Coherence length of high-β semiconductor microcavity lasers. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009 , 6, 568-571		
59	Influence of arsenic flux on the annealing properties of GaInNAs quantum wells for long wavelength laser applications around 1.6 μm. <i>Journal of Crystal Growth</i> , 2009 , 311, 1715-1718	1.6	8
58	Immersion Layer in Columnar Quantum Dash Structure as a Polarization Insensitive Light Emitter at 1.55 μm. <i>Applied Physics Express</i> , 2009 , 2, 061102	2.4	4
57	Polarization-independent active metamaterial for high-frequency terahertz modulation. <i>Optics Express</i> , 2009 , 17, 819-27	3.3	95
56	Design and Continuous-Wave Room-Temperature Performance of Ga(AlInAs)Sb DFB Lasers at 2.8 μm. <i>IEEE Photonics Technology Letters</i> , 2009 , 21, 36-38	2.2	0

55	Nonlinear Transport Properties of Electron Y-Branch Switches. <i>Advances in Solid State Physics</i> , 2009 , 305-316		
54	Frequency-Dependent Linewidth Enhancement Factor of Quantum-Dot Lasers. <i>IEEE Photonics Technology Letters</i> , 2008 , 20, 1736-1738	2.2	11
53	High-Power Frequency Stabilized GaSb DBR Tapered Laser. <i>IEEE Photonics Technology Letters</i> , 2008 , 20, 2162-2164	2.2	4
52	Widely Tunable Photonic Crystal Coupled Cavity Lasers on GaSb. <i>IEEE Photonics Technology Letters</i> , 2008 , 20, 1100-1102	2.2	8
51	2- μm Mode-Locked Semiconductor Disk Laser Synchronously Pumped Using an Amplified Diode Laser. <i>IEEE Photonics Technology Letters</i> , 2008 , 20, 1332-1334	2.2	10
50	Scalable fabrication of optical resonators with embedded site-controlled quantum dots. <i>Optics Letters</i> , 2008 , 33, 1759-61	3	37
49	Ultra-high-Q photonic crystal cavity created by modulating air hole radius of a waveguide. <i>Optics Express</i> , 2008 , 16, 4605-14	3.3	32
48	Elimination of cross-talk in waveguide intersections of triangular lattice photonic crystals. <i>Optics Express</i> , 2008 , 16, 11399-404	3.3	9
47	Optimization of photonic crystal cavity for chemical sensing. <i>Optics Express</i> , 2008 , 16, 11709-17	3.3	71
46	Gain Studies on Quantum-Dot Lasers With Temperature-Stable Emission Wavelength. <i>IEEE Journal of Quantum Electronics</i> , 2008 , 44, 175-181	2	10
45	2 watt 2 μm Tm/Ho fiber laser system passively Q-switched by antimonide semiconductor saturable absorber 2008 ,		4
44	Glass supported ZnSe microring strongly coupled to a single CdSe quantum dot. <i>Applied Physics Letters</i> , 2008 , 93, 151109	3.4	7
43	Single mode emitting ridge waveguide quantum cascade lasers coupled to an active ring resonator filter. <i>Applied Physics Letters</i> , 2008 , 93, 211106	3.4	8
42	DFB Lasers With Deeply Etched Vertical Grating Based on InAs/InP Quantum-Dash Structures. <i>IEEE Photonics Technology Letters</i> , 2007 , 19, 264-266	2.2	6
41	Widely Tunable Coupled Cavity Lasers at 1.9 μm on GaSb. <i>IEEE Photonics Technology Letters</i> , 2007 , 19, 592-594	2.2	7
40	Modal Analysis of Large Spot Size, Low Output Beam Divergence Quantum-Dot Lasers. <i>IEEE Photonics Technology Letters</i> , 2007 , 19, 916-918	2.2	5
39	High-Performance Short-Wavelength (~ 760 nm) AlGaInAs Quantum-Dot Lasers. <i>IEEE Photonics Technology Letters</i> , 2007 , 19, 1380-1382	2.2	11
38	Quantum Cascade Microlasers With Two-Dimensional Photonic Crystal Reflectors. <i>IEEE Photonics Technology Letters</i> , 2007 , 19, 1937-1939	2.2	3

37	Superradiance of quantum dots. <i>Nature Physics</i> , 2007 , 3, 106-110	16.2	324
36	Tapered quantum cascade lasers. <i>Applied Physics Letters</i> , 2007 , 91, 181122	3.4	29
35	Photon antibunching from a single quantum-dot-microcavity system in the strong coupling regime. <i>Physical Review Letters</i> , 2007 , 98, 117402	7.4	281
34	Optical characterization of ZnSe/ZnMgSSe microdisks with embedded CdSe quantum dots. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2007 , 4, 3289-3296		3
33	InAs/InP Quantum-Dash Lasers and Amplifiers. <i>Proceedings of the IEEE</i> , 2007 , 95, 1779-1790	14.3	66
32	CdSe quantum dot microdisk laser. <i>Applied Physics Letters</i> , 2006 , 89, 231104	3.4	37
31	Photonic Crystal Based Active Optoelectronic Devices 2006 , 329-346		1
30	Planar High Index-Contrast Photonic Crystals for Telecom Applications 2006 , 308-328		3
29	Ultrahigh-quality photonic crystal cavity in GaAs. <i>Optics Letters</i> , 2006 , 31, 1229-31	3	37
28	Nanostructured semiconductors for optoelectronic applications 2006 ,		1
27	Recent advances in nanophotonics—from physics to devices. <i>Current Applied Physics</i> , 2006 , 6, e166-e171	2.6	1
26	Influence of the strain on the formation of GaInAs/GaAs quantum structures. <i>Journal of Crystal Growth</i> , 2006 , 286, 6-10	1.6	42
25	Codirectional couplers in GaAs-based planar photonic crystals. <i>Applied Physics Letters</i> , 2005 , 86, 081108	3.4	2
24	System performance of a modern hollow-core optical fiber coupled to a quantum cascade laser: transmission efficiency and relative intensity noise 2005 ,		1
23	GaAs/AlGaAs-Quantenkaskaden-Laser (GaAs/AlGaAs Quantum Cascade Lasers). <i>TM Technisches Messen</i> , 2005 , 72,	0.7	1
22	High brightness GaInAs/(Al)GaAs quantum-dot tapered lasers at 980 nm with high wavelength stability. <i>Applied Physics Letters</i> , 2004 , 84, 2238-2240	3.4	15
21	Low-loss photonic crystal and monolithic InP integration: bands, bends, lasers, and filters 2004 , 5360, 119		1
20	High-brightness GaInAs/(Al)GaAs quantum dot tapered lasers at 980 nm with a high wavelength stability 2004 , 5365, 60		

19	High-power and low-noise 1.55 μm InP-based quantum dash lasers 2004 , 5452, 22		3
18	Preamplified planar microcoil on GaAs substrates for microspectroscopy. <i>Review of Scientific Instruments</i> , 2003 , 74, 4855-4857	1.7	17
17	Spatial photon trapping: tailoring the optical properties of semiconductor microcavities. <i>Semiconductor Science and Technology</i> , 2003 , 18, S339-S350	1.8	12
16	Ballistic transport in nanoscale field effect transistors revealed by four-terminal DC characterization. <i>Superlattices and Microstructures</i> , 2003 , 34, 271-275	2.8	1
15	Recent advances in semiconductor quantum-dot lasers. <i>Comptes Rendus Physique</i> , 2003 , 4, 611-619	1.4	18
14	Photonic crystal optical filter based on contra-directional waveguide coupling. <i>Applied Physics Letters</i> , 2003 , 83, 5121-5123	3.4	63
13	Two-dimensional photonic crystal coupled-defect laser diode. <i>Applied Physics Letters</i> , 2003 , 82, 4-6	3.4	115
12	Transmission spectroscopy of photonic crystal based waveguides with resonant cavities. <i>Journal of Applied Physics</i> , 2002 , 91, 4791-4794	2.5	15
11	High Performance 1.3 μm Quantum-Dot Lasers. <i>Japanese Journal of Applied Physics</i> , 2002 , 41, 1158-1161	1.4	17
10	Enhanced transmission through photonic-crystal-based bent waveguides by bend engineering. <i>Applied Physics Letters</i> , 2001 , 79, 3579-3581	3.4	32
9	Single-mode operation of coupled-cavity lasers based on two-dimensional photonic crystals. <i>Applied Physics Letters</i> , 2001 , 79, 4091-4093	3.4	21
8	Photonic crystal tapers for ultracompact mode conversion. <i>Optics Letters</i> , 2001 , 26, 1102-4	3	93
7	Fabrication of quantum point contacts by imprint lithography and transport studies. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2000 , 18, 3561		29
6	Room temperature lasing at blue wavelengths in gallium nitride microcavities. <i>Science</i> , 1999 , 285, 1905-6	3.3	203
5	First-order gain-coupled (Ga,In)As/(Al,Ga)As distributed feedback lasers by focused ion beam implantation and in situ overgrowth. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1995 , 13, 2714		4
4	Many-Body Effects in the Magnetoplasma of In _{0.13} Ga _{0.87} As/GaAs Quantum Wires. <i>Japanese Journal of Applied Physics</i> , 1995 , 34, 4408-4410	1.4	3
3	Optical Study of Intermixing in CdTe/CdMgTe Quantum Wells. <i>Japanese Journal of Applied Physics</i> , 1994 , 33, L247-L249	1.4	9
2	Strained InAs/Al _x Ga _{0.48} In _{0.52} As heterostructures: a tunable quantum well materials system for light emission from the near-IR to the mid-IR. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 1993 , 21, 288-292	3.1	

- 1 Investigation of Random and Channeling Ar-Implantation-Induced Damage in Al(In)GaAs/GaAs Quantum Wells. *Japanese Journal of Applied Physics*, **1992**, 31, 4428-4432 1.4 3