Jens FÃ¶rstner

List of Publications by Year
in descending order

121 papers	1,960 citations	304743 22 h-index	276875 41 g-index
122 all docs	122 docs citations	122 times ranked	2020 citing authors

#	Article	IF	Citations
1	Optimization of optical waveguide antennas for directive emission of light. Journal of the Optical Society of America B: Optical Physics, 2022, 39, 83.	2.1	5
2	Numerical analysis of the coherent mechanism producing negative polarization at backscattering from systems of absorbing particles. Optics Letters, 2022, 47, 58.	3.3	6
3	Resonant evanescent excitation of OAM modes in a high-contrast circular step-index fiber. , 2022, , .		1
4	Broadband optical Ta₂O₅ antennas for directional emission of light. Optics Express, 2022, 30, 19288.	3.4	5
5	Negative polarization of light at backscattering from a numerical analog of planetary regoliths. Icarus, 2022, 384, 115099.	2.5	7
6	Nonlinear dielectric properties of random paraelectric-dielectric composites. Acta Materialia, 2021, 203, 116432.	7.9	7
7	Dielectric travelling wave antennas for directional light emission. Optics Express, 2021, 29, 14694.	3.4	8
8	Resonant evanescent excitation of guided waves with high-order optical angular momentum. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 1717.	2.1	5
9	Ultrafast electric control of cavity mediated single-photon and photon-pair generation with semiconductor quantum dots. Physical Review B, 2021, 104, .	3.2	5
10	Optoelectronic sampling of ultrafast electric transients with single quantum dots. Applied Physics Letters, 2021, 119, 181109.	3.3	0
11	Light backscattering from large clusters of densely packed irregular particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 255, 107234.	2.3	6
12	Hybrid coupled mode modelling of the evanescent excitation of a dielectric tube by semi-guided waves at oblique angles. Optical and Quantum Electronics, 2020, 52, 1.	3.3	5
13	Electrically controlled rapid adiabatic passage in a single quantum dot. Applied Physics Letters, 2020, 116, .	3.3	8
14	Light diffraction in slab waveguide lenses simulated with the stepwise angular spectrum method. Optics Express, 2020, 28, 36361.	3.4	6
15	Light scattering by 3-foci convex and concave particles in the geometrical optics approximation. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 231, 49-60.	2.3	1
16	Oblique quasi-lossless excitation of a thin silicon slab waveguide: a guided-wave variant of an anti-reflection coating. Journal of the Optical Society of America B: Optical Physics, 2019, 36, 2395.	2.1	8
17	Oblique evanescent excitation of a dielectric strip: A model resonator with an open optical cavity of unlimited Q. Optics Express, 2019, 27, 9313.	3.4	14
18	Coupled microstrip-cavities under oblique incidence of semi-guided waves: a lossless integrated optical add-drop filter. OSA Continuum, 2019, 2, 3288.	1.8	5

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19	Ultrafast electric phase control of a single exciton qubit. Applied Physics Letters, 2018, 112, 111105.	3.3	8
20	Tailored UV Emission by Nonlinear IR Excitation from ZnO Photonic Crystal Nanocavities. ACS Photonics, 2018, 5, 1933-1942.	6.6	17
21	Solving Maxwell's Equations with Modern C++ and SYCL: A Case Study. , 2018, , .		4
22	Oblique Semi-Guided Waves: 2-D Integrated Photonics with Negative Effective Permittivity. , 2018, , .		4
23	OpenCL-Based FPGA Design to Accelerate the Nodal Discontinuous Galerkin Method for Unstructured Meshes. , 2018, , .		21
24	Polarization Conversion Effect in Biological and Synthetic Photonic Diamond Structures. Advanced Optical Materials, 2018, 6, 1800635.	7.3	8
25	Application of the Discontinuous Galerkin Time Domain Method in Nonlinear Nanoplasmonics. , 2018, , .		0
26	Unveiling and Imaging Degenerate States in Plasmonic Nanoparticles with Nanometer Resolution. ACS Nano, 2018, 12, 8436-8446.	14.6	22
27	Intensity surge and negative polarization of light from compact irregular particles. Optics Letters, 2018, 43, 3562.	3.3	22
28	Oblique incidence of semi-guided planar waves on slab waveguide steps: effects of rounded edges. Optics Express, 2018, 26, 18621.	3.4	12
29	Light scattering by ice crystals of cirrus clouds: From exact numerical methods to physical-optics approximation. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 195, 132-140.	2.3	35
30	Directional Emission from Dielectric Leaky-Wave Nanoantennas. Nano Letters, 2017, 17, 4178-4183.	9.1	39
31	Spiral modes supported by circular dielectric tubes and tube segments. Optical and Quantum Electronics, 2017, 49, 1.	3.3	5
32	Flexible FPGA design for FDTD using OpenCL. , 2017, , .		16
33	Direction-tunable enhanced emission from a subwavelength metallic double-nanoslit structure. Optics Express, 2017, 25, 13207.	3.4	6
34	Radar backscattering from a large-grain cometary coma: numerical simulation. Astronomy and Astrophysics, 2017, 608, A20.	5.1	3
35	Fabrication and characterization of two-dimensional cubic AlN photonic crystal membranes containing zincblende GaN quantum dots. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 292-296.	0.8	10
36	Discrete plasmonic solitons in graphene-coated nanowire arrays. Optics Express, 2016, 24, 4714.	3.4	12

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37	Simulations of high harmonic generation from plasmonic nanoparticles in the terahertz region. Applied Physics B: Lasers and Optics, 2016, 122, 1.	2.2	3
38	Phase sensitive properties and coherent manipulation of a photonic crystal microcavity. Optics Express, 2016, 24, 20672.	3.4	0
39	Light scattering by irregular particles much larger than the wavelength with wavelength-scale surface roughness. Optics Letters, 2016, 41, 3491.	3.3	34
40	Second harmonic generation spectroscopy on hybrid plasmonic/dielectric nanoantennas. Light: Science and Applications, 2016, 5, e16013-e16013.	16.6	114
41	Light scattering by ice crystals of cirrus clouds: comparison of the physical optics methods. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 182, 12-23.	2.3	17
42	Full Resonant Transmission of Semiguided Planar Waves Through Slab Waveguide Steps at Oblique Incidence. Journal of Lightwave Technology, 2016, 34, 997-1005.	4.6	20
43	Oblique incidence of semi-guided waves on step-like folds in planar dielectric slabs: Lossless vertical interconnects in 3D integrated photonic circuits. , 2016, , .		1
44	The role of electromagnetic interactions in second harmonic generation from plasmonic metamaterials. Applied Physics B: Lasers and Optics, 2016, 122, 1.	2.2	8
45	Coupling Mediated Coherent Control of Localized Surface Plasmon Polaritons. Nano Letters, 2015, 15, 4189-4193.	9.1	16
46	Robust Population Inversion by Polarization Selective Pulsed Excitation. Scientific Reports, 2015, 5, 10313.	3.3	2
47	Unveiling Nanometer Scale Extinction and Scattering Phenomena through Combined Electron Energy Loss Spectroscopy and Cathodoluminescence Measurements. Nano Letters, 2015, 15, 1229-1237.	9.1	143
48	How planar optical waves can be made to climb dielectric steps. Optics Letters, 2015, 40, 3711.	3.3	30
49	Subwavelength binary plasmonic solitons. Optics Letters, 2015, 40, 851.	3.3	0
50	Light scattering by random irregular particles of two classes of shape. Optics Letters, 2014, 39, 6723.	3.3	8
51	Engineering plasmonic and dielectric directional nanoantennas. Proceedings of SPIE, 2014, , .	0.8	1
52	Cubic GaN quantum dots embedded in zinc-blende AlN microdisks. Journal of Crystal Growth, 2013, 378, 287-290.	1.5	4
53	Optimal second-harmonic generation in split-ring resonator arrays. , 2013, , .		4
54	Light scattering by randomly irregular dielectric particles larger than the wavelength. Optics Letters, 2013, 38, 5153.	3.3	27

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55	Whispering gallery modes in zinc-blende AlN microdisks containing non-polar GaN quantum dots. Applied Physics Letters, 2013, 102, .	3.3	19
56	Near-field coupling and second-harmonic generation in split-ring resonator arrays. , 2012, , .		1
57	Cavity-assisted emission of polarization-entangled photons from biexcitons in quantum dots with fine-structure splitting. Optics Express, 2012, 20, 5335.	3.4	47
58	Photonic crystal waveguides intersection for resonant quantum dot optical spectroscopy detection. Optics Express, 2012, 20, 14130.	3.4	4
59	Collective effects in second-harmonic generation from split-ring-resonator arrays. , 2012, , .		0
60	Collective Effects in Second-Harmonic Generation from Split-Ring-Resonator Arrays. Physical Review Letters, 2012, 109, 015502.	7.8	160
61	Convey vector personalities - FPGA acceleration with an openmp-like programming effort?. , 2012, , .		5
62	Optimization of the intensity enhancement in plasmonic nanoantennas. , 2012, , .		1
63	Engineering high harmonic generation in semiconductors via pulse shaping. , 2012, , .		0
64	Transformation of Scientific Algorithms to Parallel Computing Code: Single GPU and MPI Multi GPU Backends with Subdomain Support. , 2011, , .		3
65	Electrong-factor anisotropy in symmetric (110)-oriented GaAs quantum wells. Physical Review B, 2011, 84, .	3.2	16
66	Intensity dependence of optically-induced injection currents in semiconductor quantum wells. , 2011, , .		0
67	Theoretical approach to the ultrafast nonlinear optical response of metal slabs. , 2011, , .		0
68	Numerical analysis of coupled photonic crystal cavities. Photonics and Nanostructures - Fundamentals and Applications, 2011, 9, 345-350.	2.0	2
69	Intensityâ€dependent ultrafast dynamics of injection currents in unbiased GaAs quantum wells. Physica Status Solidi - Rapid Research Letters, 2011, 5, 119-121.	2.4	0
70	Simulation of the ultrafast nonlinear optical response of metal slabs. Physica Status Solidi (B): Basic Research, 2011, 248, 887-891.	1.5	4
71	Phonon-assisted decoherence and tunneling in quantum dot molecules. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1125-1128.	0.8	2
72	Oscillatory excitation energy dependence of injection currents in GaAs/AlGaAs quantum wells. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1137-1140.	0.8	3

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73	Numerical investigation of the coupling between microdisk modes and quantum dots. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1254-1257.	0.8	2
74	Simulation of Mutual Coupling of Photonic Crystal Cavity Modes and Semiconductor Quantum Dots. , 2011, , .		0
75	Injection currents in (110)-oriented GaAs/AlGaAs quantum wells: recent progress in theory and experiment. , 2011, , .		0
76	Application of the Discontinuous Galerkin Time Domain Method to the Optics of Bi-Chiral Plasmonic Crystals. , 2011, , .		0
77	Phonon-mediated relaxation in doped quantum dot molecules. Journal of Physics: Conference Series, 2010, 245, 012035.	0.4	0
78	Microscopic theoretical analysis of optically generated injection currents in semiconductor quantum wells. Proceedings of SPIE, 2010, , .	0.8	1
79	Numerical Analysis of Coupled Photonic Crystal Cavities. , 2010, , .		0
80	Self-assembled quantum dots in a liquid-crystal-tunable microdisk resonator. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 2552-2555.	2.7	9
81	Anticrossing of Whispering Gallery Modes in microdisk resonators embedded in an anisotropic environment. Photonics and Nanostructures - Fundamentals and Applications, 2010, 8, 273-277.	2.0	4
82	Modeling excitonic line shapes in weakly disordered semiconductor nanostructures. Physical Review B, 2010, 81, .	3.2	10
83	Microscopic analysis of charge and spin photocurrents injected by circularly polarized one-color laser pulses in GaAs quantum wells. Physical Review B, 2010, 82, .	3.2	26
84	Reversal of Coherently Controlled Ultrafast Photocurrents by Band Mixing in Undoped GaAs Quantum Wells. Physical Review Letters, 2010, 104, 217401.	7.8	21
85	Theory of phonon-mediated relaxation in doped quantum dot molecules. Physical Review B, 2010, 81, .	3.2	14
86	Enhanced FDTD edge correction for nonlinear effects calculation. , 2010, , .		0
87	Tuning quantum-dot based photonic devices with liquid crystals. Optics Express, 2010, 18, 7946.	3.4	11
88	Anticrossing of Whispering Gallery Modes in Microdisk Resonators Embedded in a Liquid Crystal. , 2009, , .		0
89	Indirect spin dephasing via charge-state decoherence in optical control schemes in quantum dots. Physical Review A, 2009, 79, .	2.5	4
90	Generation of injection currents in (110)-oriented GaAs quantum wells: experimental observation and development of a microscopic theory. , 2009, , .		3

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91	Theoretical study of phononassisted singlet-singlet relaxation in two-electron semiconductor quantum dot molecules. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 474-478.	0.8	1
92	Indirect Dephasing Channel for Optically Controlled Spin in a Single Quantum Dot. , 2009, , .		0
93	Phonon-assisted tunneling between singlet states in two-electron quantum dot molecules. Physical Review B, 2008, 78, .	3.2	28
94	Theory of ultrafast nonlinear optics of Coulomb-coupled semiconductor quantum dots: Rabi oscillations and pump-probe spectra. Physical Review B, 2006, 73, .	3.2	61
95	Interplay of electron-phonon and Coulomb interaction in semiconductor quantum dots. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 2389-2392.	0.8	1
96	Optical experiments on second-harmonic generation from metamaterials consisting of split-ring resonators. , 2006, , .		0
97	Quantum information processing using Coulomb-coupled quantum dots. AIP Conference Proceedings, 2005, , .	0.4	0
98	Microscopic theory of electron dynamics and time-resolved two-color two-photon photoemission at semiconductor surfaces. Physical Review B, 2005, 71, .	3.2	8
99	Resonance fluorescence of semiconductor quantum dots: Signatures of the electron-phonon interaction. Physical Review B, 2005, 71, .	3.2	53
100	Ultrafast electron-phonon interaction of intersubband transitions: Quantum kinetics from adiabatic following to Rabi-oscillations. Physical Review B, 2005, 72, .	3.2	29
101	Femtosecond Transfer Dynamics of Photogenerated Electrons at a Surface Resonance of Reconstructed InP(100). Physical Review Letters, 2005, 94, 067601.	7.8	28
102	Electromagnetic field structure and normal mode coupling in photonic crystal nanocavities. Optics Express, 2005, 13, 4980.	3.4	11
103	Phase Evolution of Solitonlike Optical Pulses during Excitonic Rabi Flopping in a Semiconductor. Physical Review Letters, 2005, 94, 057406.	7.8	17
104	Transition between different coherent lightâ€“matter interaction regimes analyzed by phase-resolved pulse propagation. Optics Letters, 2005, 30, 1384.	3.3	11
105	Linear and nonlinear pulse propagation in a multiple-quantum-well photonic crystal. Physical Review B, 2004, 70, .	3.2	26
106	Optical dephasing of coherent intersubband transitions in a quasi-two-dimensional electron gas. Physical Review B, 2004, 69, .	3.2	81
107	Polaron signatures in the line shape of semiconductor ;intersubband transitions: quantum kinetics of the electronâ€“phonon interaction. Physica Status Solidi (B): Basic Research, 2004, 241, R49-R51.	1.5	18
108	Dynamics of the phonon-induced electron transfer between semiconductor bulk and surface states. Physica Status Solidi (B): Basic Research, 2004, 241, R60-R62.	1.5	8

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109	Adiabatically driven electron dynamics in a resonant photonic band gap: Optical switching of a Bragg periodic semiconductor. Physical Review B, 2004, 70, .	3.2	26
110	Self-consistent Projection Operator Theory of Intersubband Absorbance in Semiconductor Quantum Wells. , 2004, , 251-271.		7
111	Temporal phase evolution during excitonic Rabi flopping in semiconductors. , 2004, , .		0
112	Phonon-induced damping of Rabi oscillations in semiconductor quantum dots. Physica Status Solidi (B): Basic Research, 2003, 238, 419-422.	1.5	42
113	Theory of the lineshape of quantum well intersubband transitions: optical dephasing and light propagation effects. Physica Status Solidi (B): Basic Research, 2003, 238, 474-477.	1.5	17
114	Phonon-Assisted Damping of Rabi Oscillations in Semiconductor Quantum Dots. Physical Review Letters, 2003, 91, 127401.	7.8	261
115	Self-induced transparency in InGaAs quantum-dot waveguides. Applied Physics Letters, 2003, 83, 3668-3670.	3.3	34
116	Line narrowing and hole burning within the homogeneous linewidth:â€ƒa new wave-mixing effect in two-level systems. Optics Letters, 2002, 27, 1830.	3.3	0
117	Light Propagation- and Many-particle-induced Non-Lorentzian Lineshapes in Semiconductor Nanooptics. Physica Status Solidi (B): Basic Research, 2002, 234, 155-165.	1.5	22
118	Nonlinear Pulse Propagation in Semiconductors: Hole Burning within a Homogeneous Line. Physical Review Letters, 2001, 86, 476-479.	7.8	9
119	Nonlinear Polariton Pulse Propagation in Bulk Semiconductors. Physica Status Solidi (B): Basic Research, 2000, 221, 453-457.	1.5	9
120	The HighPerMeshes framework for numerical algorithms on unstructured grids. Concurrency Computation Practice and Experience, 0, , e6616.	2.2	1
121	Flexible source of correlated photons based on LNOI rib waveguides. JPhys Photonics, 0, , .	4.6	1