

Christian Girard

List of Publications by Year in descending order

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114
papers

6,495
citations

66343

42
h-index

64796

79
g-index

114
all docs

114
docs citations

114
times ranked

5449
citing authors

#	ARTICLE	IF	CITATIONS
1	â€œpyGDMâ€- new functionalities and major improvements to the python toolkit for nano-optics full-field simulations. Computer Physics Communications, 2022, 270, 108142.	7.5	15
2	Tailoring Wavelength- and Emitter-Orientation-Dependent Propagation of Single Photons in Silicon Nanowires. Physical Review Applied, 2022, 17, .	3.8	5
3	Deep Learning Enabled Strategies for Modeling of Complex Aperiodic Plasmonic Metasurfaces of Arbitrary Size. ACS Photonics, 2022, 9, 575-585.	6.6	17
4	Generalizing the exact multipole expansion: density of multipole modes in complex photonic nanostructures. Nanophotonics, 2022, 11, 3663-3678.	6.0	1
5	Challenges in nanofabrication for efficient optical metasurfaces. Scientific Reports, 2021, 11, 5620.	3.3	16
6	Deep learning in nano-photonics: inverse design and beyond. Photonics Research, 2021, 9, B182.	7.0	222
7	Interconnect-Free Multibit Arithmetic and Logic Unit in a Single Reconfigurable $3\frac{1}{4}\mu\text{m}^2$ Plasmonic Cavity. ACS Nano, 2021, 15, 13351-13359.	14.6	6
8	Polarizabilities of complex individual dielectric or plasmonic nanostructures. Physical Review B, 2020, 101, .	3.2	9
9	Quantum theory of near-field optical imaging with rare-earth atomic clusters. Journal of the Optical Society of America B: Optical Physics, 2020, 37, 1474.	2.1	6
10	Theory of plasmonic properties of hyper-doped silicon nanostructures. Optics Communications, 2019, 453, 124336.	2.1	8
11	Spectral Tuning of High Order Plasmonic Resonances in Multimodal Filmâ€Coupled Crystalline Cavities. Advanced Optical Materials, 2019, 7, 1801787.	7.3	4
12	Enhancement of electric and magnetic dipole transition of rare-earth-doped thin films tailored by high-index dielectric nanostructures. Applied Optics, 2019, 58, 1682.	1.8	23
13	Design of plasmonic directional antennas via evolutionary optimization. Optics Express, 2019, 27, 29069.	3.4	25
14	Decay rate of magnetic dipoles near nonmagnetic nanostructures. Physical Review B, 2018, 97, .	3.2	23
15	Designing Plasmonic Eigenstates for Optical Signal Transmission in Planar Channel Devices. ACS Photonics, 2018, 5, 2328-2335.	6.6	16
16	Multi-resonant silicon nanoantennas by evolutionary multi-objective optimization. , 2018, , .		1
17	Polarization conversion in plasmonic nanoantennas for metasurfaces using structural asymmetry and mode hybridization. Scientific Reports, 2017, 7, 40906.	3.3	21
18	Strongly Directional Scattering from Dielectric Nanowires. ACS Photonics, 2017, 4, 2036-2046.	6.6	67

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19	Evolutionary multi-objective optimization of colour pixels based on dielectric nanoantennas. Nature Nanotechnology, 2017, 12, 163-169.	31.5	105
20	Beyond dipolar regime in high-order plasmon mode bowtie antennas. Optics Communications, 2017, 387, 48-54.	2.1	5
21	Tuning the linear and non-linear optical response of orthogonal dimmer antennas for metasurfaces. , 2016, , .		0
22	Evolutionary multi-objective optimization for multi-resonant photonic nanostructures. , 2016, , .		2
23	Origin of second-harmonic generation from individual silicon nanowires. Physical Review B, 2016, 93, .	3.2	29
24	Modal engineering of Surface Plasmons in apertured Au Nanoprisms. Scientific Reports, 2015, 5, 16635.	3.3	17
25	Plasmonic Hot Printing in Gold Nanoprisms. ACS Photonics, 2015, 2, 744-751.	6.6	34
26	Molecular decay rate near nonlocal plasmonic particles. Optics Letters, 2015, 40, 2116.	3.3	5
27	Tailoring Second-Harmonic Generation in Single L-Shaped Plasmonic Nanoantennas from the Capacitive to Conductive Coupling Regime. ACS Photonics, 2015, 2, 1592-1601.	6.6	49
28	Multimodal plasmonics in fused colloidal networks. Nature Materials, 2015, 14, 87-94.	27.5	57
29	NEAR-FIELD PROPERTIES OF PLASMONIC NANOSTRUCTURES WITH HIGH ASPECT RATIO. Progress in Electromagnetics Research, 2014, 146, 77-88.	4.4	10
30	Electron energy losses and cathodoluminescence from complex plasmonic nanostructures: spectra, maps and radiation patterns from a generalized field propagator. New Journal of Physics, 2014, 16, 113012.	2.9	23
31	Plasmonic Pumping of Excitonic Photoluminescence in Hybrid MoS ₂ Au Nanostructures. ACS Nano, 2014, 8, 12682-12689.	14.6	198
32	Selection of Arginine-Rich Anti-Gold Antibodies Engineered for Plasmonic Colloid Self-Assembly. Journal of Physical Chemistry C, 2014, 118, 14502-14510.	3.1	9
33	Plasmonic Shaping in Gold Nanoparticle Three-Dimensional Assemblies. Journal of Physical Chemistry C, 2013, 117, 23126-23132.	3.1	33
34	Tailoring and imaging the plasmonic local density of states in crystalline nanoprisms. Nature Materials, 2013, 12, 426-432.	27.5	172
35	Plasphonics : local hybridization of plasmons and phonons. Optics Express, 2013, 21, 4551.	3.4	15
36	Surface Plasmon Damping Quantified with an Electron Nanoprobe. Scientific Reports, 2013, 3, 1312.	3.3	133

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37	Scanning optical microscopy modeling in nanoplasmonics. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 2431.	2.1	21
38	Interaction of an ultrashort optical pulse with a metallic nanotip: A Green dyadic approach. Journal of Applied Physics, 2012, 112, 053103.	2.5	10
39	Plasmonic Nanoparticle Networks for Light and Heat Concentration. ACS Nano, 2012, 6, 3434-3440.	14.6	82
40	Damping of the Acoustic Vibrations of Individual Gold Nanoparticles. Nano Letters, 2011, 11, 3301-3306.	9.1	75
41	Acousto-Plasmonic and Surface-Enhanced Raman Scattering Properties of Coupled Gold Nanospheres/Nanodisk Trimers. Nano Letters, 2011, 11, 431-437.	9.1	47
42	Mapping Heat Origin in Plasmonic Structures. Physical Review Letters, 2010, 104, 136805.	7.8	256
43	Thermoplasmonics modeling: A Green's function approach. Physical Review B, 2010, 82, .	3.2	146
44	Manipulating and squeezing the photon local density of states with plasmonic nanoparticle networks. Physical Review B, 2010, 81, .	3.2	6
45	Dual wavelength sensing based on interacting gold nanodisk trimers. Nanotechnology, 2010, 21, 305501.	2.6	30
46	Gold nanoring trimers: a versatile structure for infrared sensing. Optics Express, 2010, 18, 22271.	3.4	44
47	Processing and near-field optical properties of self-assembled plasmonic nanoparticle networks. Journal of Chemical Physics, 2009, 130, 034702.	3.0	25
48	Sculpting nanometer-sized light landscape with plasmonic nanocolumns. Journal of Chemical Physics, 2009, 131, 224707.	3.0	11
49	The strength of surface plasmons. , 2008, , .		0
50	Surface Plasmon Optical Tweezers: Tunable Optical Manipulation in the Femtonewton Range. Physical Review Letters, 2008, 100, 186804.	7.8	235
51	Molecular quenching and relaxation in a plasmonic tunable system. Physical Review B, 2008, 77, .	3.2	44
52	Theory of molecular excitation and relaxation near a plasmonic device. Journal of Chemical Physics, 2007, 127, 034701.	3.0	32
53	Parallel and selective trapping in a patterned plasmonic landscape. Nature Physics, 2007, 3, 477-480.	16.7	455
54	Near-field optical properties of single plasmonic nanowires. Applied Physics Letters, 2006, 89, 233119.	3.3	81

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55	Near-field optical properties of top-down and bottom-up nanostructures. <i>Journal of Optics</i> , 2006, 8, S73-S86.	1.5	44
56	Theoretical Near-Field Optical Properties of Branched Plasmonic Nanoparticle Networks. <i>Physical Review Letters</i> , 2006, 97, 100801.	7.8	29
57	Generalized Bloch equations for optical interactions in confined geometries. <i>Chemical Physics Letters</i> , 2005, 404, 44-48.	2.6	41
58	Near fields in nanostructures. <i>Reports on Progress in Physics</i> , 2005, 68, 1883-1933.	20.1	222
59	Energy transfer in near-field optics. <i>Journal of Chemical Physics</i> , 2005, 123, 174709.	3.0	16
60	Modelling resonant coupling between microring resonators addressed by optical evanescent waves. <i>Nanotechnology</i> , 2004, 15, 1200-1210.	2.6	8
61	Tailoring the transmittance of integrated optical waveguides with short metallic nanoparticle chains. <i>Physical Review B</i> , 2004, 69, .	3.2	68
62	Sub-wavelength patterning of the optical near-field. <i>Optics Express</i> , 2004, 12, 282.	3.4	17
63	Near-field optical transmittance of metal particle chain waveguides. <i>Optics Express</i> , 2004, 12, 6141.	3.4	68
64	Fluorescence resonant energy transfer in the optical near field. <i>Physical Review A</i> , 2003, 67, .	2.5	18
65	Polarization state of the optical near field. <i>Physical Review E</i> , 2002, 65, 036701.	2.1	18
66	Theory of near-field optical imaging with a single molecule as light source. <i>Journal of Chemical Physics</i> , 2002, 117, 4659-4666.	3.0	39
67	Theory of Near-field Optical Imaging with a Single Molecule as Light Source. <i>Single Molecules</i> , 2002, 3, 311-312.	0.9	4
68	Theory of near-field optical imaging with a single fluorescent molecule used as a point-like detector. <i>Chemical Physics</i> , 2002, 282, 277-287.	1.9	2
69	Optical Analogy to Electronic Quantum Coralls. <i>Physical Review Letters</i> , 2001, 86, 4950-4953.	7.8	99
70	Relationship between scanning near-field optical images and local density of photonic states. <i>Chemical Physics Letters</i> , 2001, 345, 512-516.	2.6	44
71	Coplanar devices for the optical addressing of single molecules. <i>Nanotechnology</i> , 2001, 12, 75-79.	2.6	2
72	Addressing and imaging high optical index dielectric ridges in the optical near field. <i>Physical Review E</i> , 2001, 64, 066607.	2.1	16

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73	Mechanics of(Xe)Natomic chains under STM manipulation. Physical Review B, 2001, 63, .	3.2	28
74	Detection of the optical magnetic field by circular symmetry plasmons. Applied Surface Science, 2000, 164, 124-130.	6.1	11
75	Local detection of the optical magnetic field in the near zone of dielectric samples. Physical Review B, 2000, 62, 10504-10514.	3.2	69
76	Theoretical principles of near-field optical microscopies and spectroscopies. Journal of Chemical Physics, 2000, 112, 7775-7789.	3.0	98
77	The physics of the near-field. Reports on Progress in Physics, 2000, 63, 893-938.	20.1	132
78	Resonant optical tunnel effect through dielectric structures of subwavelength cross sections. Physical Review E, 1999, 59, 6097-6104.	2.1	15
79	Generalized Field Propagator for Arbitrary Finite-Size Photonic Band Gap Structures. Physical Review Letters, 1999, 82, 315-318.	7.8	49
80	Single-atom motion during a lateral STM manipulation. Physical Review B, 1999, 59, R7845-R7848.	3.2	60
81	Near-field optical properties of localized plasmons around lithographically designed nanostructures. Journal of Applied Physics, 1999, 86, 2576-2583.	2.5	25
82	Plasmon polaritons of metallic nanowires for controlling submicron propagation of light. Physical Review B, 1999, 60, 9061-9068.	3.2	241
83	Transmission scanning near-field optical microscopy with uncoated silicon tips. Ultramicroscopy, 1998, 71, 371-377.	1.9	16
84	Near-field optical contrasts in the Fresnel evanescent wave. Physical Review E, 1998, 58, 1081-1085.	2.1	10
85	Theoretical study of the atomic-force-microscopy imaging process on the NaCl(001) surface. Journal of Chemical Physics, 1998, 108, 359-367.	3.0	25
86	Transmittance of subwavelength optical tunnel junctions. Physical Review B, 1998, 58, 12551-12554.	3.2	6
87	Optical magnetic near-field intensities around nanometer-scale surface structures. Physical Review B, 1997, 55, 16487-16497.	3.2	45
88	Field propagator of a dressed junction:â€fFluorescence lifetime calculations in a confined geometry. Physical Review A, 1997, 56, 3245-3254.	2.5	41
89	Controlling and tuning strong optical field gradients at a local probe microscope tip apex. Applied Physics Letters, 1997, 70, 705-707.	3.3	247
90	Near-field optics theories. Reports on Progress in Physics, 1996, 59, 657-699.	20.1	398

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91	Dielectric versus topographic contrast in near-field microscopy. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1996, 13, 1801.	1.5	67
92	Martin, Girard, and Dereux Reply.. Physical Review Letters, 1996, 76, 2405-2405.	7.8	1
93	Computing the optical near-field distributions around complex subwavelength surface structures: A comparative study of different methods. Physical Review E, 1996, 54, 4285-4292.	2.1	41
94	Computation of electrostatic fields in low-symmetry systems: Application to STM configurations. Physical Review B, 1996, 53, 13159-13168.	3.2	33
95	Observation of Light Confinement Effects with a Near-Field Optical Microscope. Physical Review Letters, 1996, 77, 5332-5335.	7.8	84
96	Electrodynamics in complex systems: Application to near-field probing of optical microresonators. Physical Review E, 1996, 54, 5752-5760.	2.1	15
97	Electromagnetic fields in two-dimensional models of near-field optical microscope tips. Ultramicroscopy, 1995, 60, 1-9.	1.9	16
98	Interference patterns in and outside a dielectric prism combined with a Fabry-Pérot cavity. Ultramicroscopy, 1995, 61, 29-34.	1.9	0
99	Theory of Kerr effect in magnetic multilayered structures. Ultramicroscopy, 1995, 61, 57-62.	1.9	3
100	New optical near field developments: some perspectives in interferometry. Ultramicroscopy, 1995, 61, 117-125.	1.9	5
101	Generation of optical standing waves around mesoscopic surface structures: Scattering and light confinement. Physical Review B, 1995, 52, 2889-2898.	3.2	68
102	Molecular Lifetime Changes Induced by Nanometer Scale Optical Fields. Physical Review Letters, 1995, 75, 3098-3101.	7.8	122
103	Generalized Field Propagator for Electromagnetic Scattering and Light Confinement. Physical Review Letters, 1995, 74, 526-529.	7.8	353
104	Theory of Near Field Optics. , 1995, , 1-20.		4
105	Optical spectroscopy of a surface at the nanometer scale: A theoretical study in real space. Physical Review B, 1994, 49, 11344-11351.	3.2	57
106	Theoretical analysis of light-inductive forces in scanning probe microscopy. Physical Review B, 1994, 49, 13872-13881.	3.2	40
107	Importance of confined fields in near-field optical imaging of subwavelength objects. Physical Review B, 1994, 50, 14467-14473.	3.2	56
108	Iterative scheme for computing exactly the total field propagating in dielectric structures of arbitrary shape. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1994, 11, 1073.	1.5	121

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109	Field susceptibility of a composite system: application to van der Waals dispersive interactions inside a finite line of physisorbed atoms. <i>Surface Science</i> , 1993, 295, 445-456.	1.9	14
110	Model for reflection near field optical microscopy. <i>Applied Optics</i> , 1990, 29, 3726.	2.1	45
111	Numerical determination of the structure of registered rare gas monolayers adsorbed on dielectric or metallic substrates. <i>Surface Science</i> , 1988, 201, 278-293.	1.9	5
112	Substrate-mediated interactions between adsorbed atoms and molecules - a discrete solid theory. <i>Surface Science</i> , 1988, 195, 173-186.	1.9	17
113	Self-consistent interaction potential for a molecule adsorbed on a dielectric surface: A symmetric top molecule on an ionic crystal. <i>Journal of Chemical Physics</i> , 1987, 86, 6531-6539.	3.0	41
114	Potential energy calculations for argon and methane adsorbed on MgO(001) substrate. <i>Chemical Physics Letters</i> , 1987, 138, 83-89.	2.6	35