

Nicolas Bonod

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2484529/publications.pdf>

Version: 2024-02-01

160
papers

6,474
citations

47006

47
h-index

69250

77
g-index

162
all docs

162
docs citations

162
times ranked

5513
citing authors

#	ARTICLE	IF	CITATIONS
1	All-Dielectric Colored Metasurfaces with Silicon Mie Resonators. ACS Nano, 2016, 10, 7761-7767.	14.6	265
2	Bright Unidirectional Fluorescence Emission of Molecules in a Nanoaperture with Plasmonic Corrugations. Nano Letters, 2011, 11, 637-644.	9.1	258
3	Direct imaging of photonic nanojets. Optics Express, 2008, 16, 6930.	3.4	240
4	Enhancement of Single-Molecule Fluorescence Detection in Subwavelength Apertures. Physical Review Letters, 2005, 95, 117401.	7.8	211
5	All-Dielectric Silicon Nanogap Antennas To Enhance the Fluorescence of Single Molecules. Nano Letters, 2016, 16, 5143-5151.	9.1	197
6	Resonant optical transmission through thin metallic films with and without holes. Optics Express, 2003, 11, 482.	3.4	186
7	Boosting the directivity of optical antennas with magnetic and electric dipolar resonant particles. Optics Express, 2012, 20, 20376.	3.4	182
8	Diffraction gratings: from principles to applications in high-intensity lasers. Advances in Optics and Photonics, 2016, 8, 156.	25.5	166
9	Compact Metallo-Dielectric Optical Antenna for Ultra Directional and Enhanced Radiative Emission. ACS Nano, 2010, 4, 3390-3396.	14.6	165
10	Lattice modes and plasmonic linewidth engineering in gold and aluminum nanoparticle arrays. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 691.	2.1	156
11	All-Dielectric Metasurfaces Based on Cross-Shaped Resonators for Color Pixels with Extended Gamut. ACS Photonics, 2017, 4, 1076-1082.	6.6	127
12	Three-dimensional subwavelength confinement of light with dielectric microspheres. Optics Express, 2009, 17, 2089.	3.4	124
13	Purcell factor of spherical Mie resonators. Physical Review B, 2015, 91, .	3.2	123
14	Emission and excitation contributions to enhanced single molecule fluorescence by gold nanometric apertures. Optics Express, 2008, 16, 3008.	3.4	122
15	Effect of electric field on laser induced damage threshold of multilayer dielectric gratings. Optics Express, 2007, 15, 12508.	3.4	120
16	Promoting magnetic dipolar transition in trivalent lanthanide ions with lossless Mie resonances. Physical Review B, 2012, 85, .	3.2	120
17	Spectroscopy and Biosensing with Optically Resonant Dielectric Nanostructures. Advanced Optical Materials, 2018, 6, 1701094.	7.3	120
18	Optical and Topological Characterization of Gold Nanoparticle Dimers Linked by a Single DNA Double Strand. Nano Letters, 2011, 11, 5060-5065.	9.1	112

#	ARTICLE	IF	CITATIONS
19	Spectral analysis of three-dimensional photonic jets. <i>Optics Express</i> , 2008, 16, 14200.	3.4	108
20	Self-Assembled Nanoparticle Dimer Antennas for Plasmonic-Enhanced Single-Molecule Fluorescence Detection at Micromolar Concentrations. <i>ACS Photonics</i> , 2015, 2, 1099-1107.	6.6	105
21	Accelerated single photon emission from dye molecule-driven nanoantennas assembled on DNA. <i>Nature Communications</i> , 2012, 3, 962.	12.8	104
22	Strong electromagnetic confinement near dielectric microspheres to enhance single-molecule fluorescence. <i>Optics Express</i> , 2008, 16, 15297.	3.4	97
23	Total absorption of light by lamellar metallic gratings. <i>Optics Express</i> , 2008, 16, 15431.	3.4	94
24	Wafer Scale Formation of Monocrystalline Silicon-Based Mie Resonators <i>via</i> Silicon-on-Insulator Dewetting. <i>ACS Nano</i> , 2014, 8, 11181-11190.	14.6	89
25	Nanoaperture-enhanced fluorescence: Towards higher detection rates with plasmonic metals. <i>Physical Review B</i> , 2008, 77, .	3.2	88
26	Surface plasmon excitation on a single subwavelength hole in a metallic sheet. <i>Applied Optics</i> , 2005, 44, 2332.	2.1	80
27	Dielectric nanoantennas to manipulate solid-state light emission. <i>Journal of Applied Physics</i> , 2019, 126, .	2.5	76
28	All-Dielectric Color Filters Using SiGe-Based Mie Resonator Arrays. <i>ACS Photonics</i> , 2017, 4, 873-883.	6.6	75
29	Comparison of plasmon surface waves on shallow and deep metallic 1D and 2D gratings. <i>Optics Express</i> , 2007, 15, 4224.	3.4	68
30	Enhancing Magnetic Light Emission with All-Dielectric Optical Nanoantennas. <i>Nano Letters</i> , 2018, 18, 3481-3487.	9.1	66
31	Efficient excitation and collection of single-molecule fluorescence close to a dielectric microsphere. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2009, 26, 1473.	2.1	65
32	Enhancement and Inhibition of Spontaneous Photon Emission by Resonant Silicon Nanoantennas. <i>Physical Review Applied</i> , 2016, 6, .	3.8	65
33	Optimization of resonant effects in nanostructures via Weierstrass factorization. <i>Physical Review A</i> , 2013, 88, .	2.5	64
34	Optimizing Nanoparticle Designs for Ideal Absorption of Light. <i>ACS Photonics</i> , 2015, 2, 263-270.	6.6	63
35	Optimization of surface-plasmon-enhanced magneto-optical effects. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2004, 21, 791.	2.1	62
36	Mixed metal dielectric gratings for pulse compression. <i>Optics Express</i> , 2010, 18, 23776.	3.4	61

#	ARTICLE	IF	CITATIONS
37	Competition between Förster Resonance Energy Transfer and Donor Photodynamics in Plasmonic Dimer Nanoantennas. ACS Photonics, 2016, 3, 895-903.	6.6	61
38	Unidirectional excitation of surface plasmons by slanted gratings. Optics Express, 2007, 15, 11427.	3.4	60
39	Absorption of light by extremely shallow metallic gratings: metamaterial behavior. Optics Express, 2009, 17, 6770.	3.4	60
40	Controllable emission of a dipolar source coupled with a magneto-dielectric resonant subwavelength scatterer. Scientific Reports, 2013, 3, 3063.	3.3	60
41	Enhancing the magnetic field intensity with a dielectric gap antenna. Applied Physics Letters, 2014, 104, 021117.	3.3	58
42	Ultracompact and unidirectional metallic antennas. Physical Review B, 2010, 82, .	3.2	56
43	Enhanced Light Harvesting in Semitransparent Organic Solar Cells using an Optical Metal Cavity Configuration. Advanced Energy Materials, 2015, 5, 1400614.	19.5	55
44	Optical performance and laser induced damage threshold improvement of diffraction gratings used as compressors in ultra high intensity lasers. Optics Communications, 2006, 260, 649-655.	2.1	53
45	Tailoring the chirality of light emission with spherical Si-based antennas. Nanoscale, 2016, 8, 10441-10452.	5.6	52
46	Multipole methods for nanoantennas design: applications to Yagi-Uda configurations. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 1213.	2.1	51
47	Field enhancement in single subwavelength apertures. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 2342.	1.5	49
48	Picosecond Lifetimes with High Quantum Yields from Single-Photon-Emitting Colloidal Nanostructures at Room Temperature. ACS Nano, 2016, 10, 4806-4815.	14.6	48
49	Crucial role of the emitter-particle distance on the directivity of optical antennas. Optics Letters, 2011, 36, 3368.	3.3	44
50	Enhanced second-harmonic generation from individual metallic nanoapertures. Optics Letters, 2010, 35, 4063.	3.3	39
51	Single Emitter Fluorescence Enhancement with Surface Lattice Resonances. Journal of Physical Chemistry C, 2017, 121, 13280-13289.	3.1	38
52	Deep Ultraviolet Plasmonic Enhancement of Single Protein Autofluorescence in Zero-Mode Waveguides. Nano Letters, 2019, 19, 7434-7442.	9.1	38
53	Singular analysis of Fano resonances in plasmonic nanostructures. Physical Review A, 2013, 88, .	2.5	36
54	Fano-like resonance emerging from magnetic and electric plasmon mode coupling in small arrays of gold particles. Scientific Reports, 2016, 6, 32061.	3.3	36

#	ARTICLE	IF	CITATIONS
55	Enhanced transmission due to nonplasmon resonances in one- and two-dimensional gratings. <i>Applied Optics</i> , 2004, 43, 999.	2.1	34
56	Full optical characterization of single nanoparticles using quantitative phase imaging. <i>Optica</i> , 2020, 7, 243.	9.3	33
57	Large-scale dielectric metasurfaces. <i>Nature Materials</i> , 2015, 14, 664-665.	27.5	32
58	Differential theory: application to highly conducting gratings. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2004, 21, 199.	1.5	30
59	Differential theory of diffraction by finite cylindrical objects. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2005, 22, 481.	1.5	30
60	Robust optimization of the laser induced damage threshold of dielectric mirrors for high power lasers. <i>Optics Express</i> , 2018, 26, 11764.	3.4	30
61	Modal expansion of the scattered field: Causality, nondivergence, and nonresonant contribution. <i>Physical Review B</i> , 2018, 98, .	3.2	30
62	Analysis of the physical origin of surface modes on finite-size photonic crystals. <i>Physical Review B</i> , 2005, 72, .	3.2	28
63	Total light absorption in a wide range of incidence by nanostructured metals without plasmons. <i>Optics Letters</i> , 2008, 33, 2398.	3.3	28
64	Field enhancement in a circular aperture surrounded by a single channel groove. <i>Optics Express</i> , 2008, 16, 2276.	3.4	28
65	Optimized 2D array of thin silicon pillars for efficient antireflective coatings in the visible spectrum. <i>Scientific Reports</i> , 2016, 6, 24947.	3.3	28
66	Photonic Engineering of Hybrid Metal-Organic Chromophores. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 11083-11087.	13.8	27
67	Fabrication of poly-crystalline Si-based Mie resonators via amorphous Si on SiO ₂ dewetting. <i>Nanoscale</i> , 2016, 8, 2844-2849.	5.6	27
68	Enhanced Four-Wave Mixing in Doubly Resonant Si Nanoresonators. <i>ACS Photonics</i> , 2019, 6, 1295-1301.	6.6	27
69	Few-Molecule Strong Coupling with Dimers of Plasmonic Nanoparticles Assembled on DNA. <i>ACS Nano</i> , 2021, 15, 14732-14743.	14.6	27
70	The role of electric field polarization of the incident laser beam in the short pulse damage mechanism of pulse compression gratings. <i>Applied Physics Letters</i> , 2011, 99, .	3.3	26
71	Evolutionary Optimization of All-Dielectric Magnetic Nanoantennas. <i>Advanced Optical Materials</i> , 2019, 7, 1900121.	7.3	26
72	Light transmission through a subwavelength hole. <i>Optics Communications</i> , 2005, 255, 338-348.	2.1	25

#	ARTICLE	IF	CITATIONS
73	Raman scattering and fluorescence emission in a single nanoaperture: Optimizing the local intensity enhancement. <i>Optics Communications</i> , 2006, 267, 224-228.	2.1	24
74	Kerker Effect in Ultrahigh-Field Magnetic Resonance Imaging. <i>Physical Review X</i> , 2018, 8, .	8.9	24
75	Radiative and Nonradiative Photokinetics Alteration Inside a Single Metallic Nanometric Aperture. <i>Journal of Physical Chemistry C</i> , 2007, 111, 11469-11474.	3.1	23
76	Mimicking localized surface plasmons with dielectric particles. <i>Physical Review B</i> , 2015, 92, .	3.2	23
77	Modal analysis of anapoles, internal fields, and Fano resonances in dielectric particles. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2019, 36, 2052.	2.1	22
78	Fourier factorization of nonlinear Maxwell equations in periodic media: application to the optical Kerr effect. <i>Optics Communications</i> , 2005, 244, 389-398.	2.1	21
79	Mode-balancing far-field control of light localization in nanoantennas. <i>Physical Review B</i> , 2010, 81, .	3.2	21
80	Stacked magnetic resonators for MRI RF coils decoupling. <i>Journal of Magnetic Resonance</i> , 2017, 275, 11-18.	2.1	21
81	Self-Assembled Plasmonic Oligomers for Organic Photovoltaics. <i>Advanced Optical Materials</i> , 2014, 2, 171-175.	7.3	20
82	Enhanced transmission of light through a circularly structured aperture. <i>Applied Optics</i> , 2005, 44, 6898.	2.1	19
83	Single-scattering theory of light diffraction by a circular subwavelength aperture in a finitely conducting screen. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2007, 24, 339.	1.5	19
84	Chemical Alkaline Etching of Silicon Mie Particles. <i>Advanced Optical Materials</i> , 2015, 3, 1280-1286.	7.3	19
85	Optimization of plasmon excitation at structured apertures. <i>Applied Optics</i> , 2005, 44, 6141.	2.1	18
86	Metallic dimers: When bonding transverse modes shine light. <i>Physical Review B</i> , 2011, 84, .	3.2	18
87	Factorization of products of discontinuous functions applied to Fourier's Bessel basis. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2004, 21, 46.	1.5	17
88	Multipolar effects on the dipolar polarizability of magneto-electric antennas. <i>Optics Express</i> , 2013, 21, 16444.	3.4	17
89	Optical Monitoring of the Magnetolectric Coupling in Individual Plasmonic Scatterers. <i>ACS Photonics</i> , 2016, 3, 1581-1588.	6.6	16
90	Nanoscale Switching of Near-Infrared Hot Spots in Plasmonic Oligomers Probed by Two-Photon Absorption in Photopolymers. <i>ACS Photonics</i> , 2018, 5, 918-928.	6.6	16

#	ARTICLE	IF	CITATIONS
91	Interplay between spontaneous decay rates and Lamb shifts in open photonic systems. Optics Letters, 2018, 43, 1950.	3.3	16
92	Influence of absorption-edge properties on subpicosecond intrinsic laser-damage threshold at 1053 nm in hafnia and silica monolayers. Optics Express, 2019, 27, 16922.	3.4	16
93	Increased surface plasmon resonance sensitivity with the use of double Fourier harmonic gratings. Optics Express, 2008, 16, 11691.	3.4	15
94	Optimal interactions of light with magnetic and electric resonant particles. Physical Review B, 2016, 93, .	3.2	14
95	Design of a full-silica pulse-compression grating. Optics Letters, 2008, 33, 458.	3.3	13
96	Self-assembled antireflection coatings for light trapping based on SiGe random metasurfaces. Physical Review Materials, 2018, 2, .	2.4	13
97	Imaging the Gouy phase shift in photonic jets with a wavefront sensor. Optics Letters, 2012, 37, 3531.	3.3	12
98	Dispersion relations in metal nanoparticle chains: necessity of the multipole approach. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 1012.	2.1	12
99	Circularly Polarized Images with Contrast Reversal Using Pseudochiral Metasurfaces. ACS Photonics, 2018, 5, 4068-4073.	6.6	12
100	Strong Light Intensifications Yielded by Arbitrary Defects: Fresnel Diffraction Theory Applied to a Set of Opaque Disks. Physical Review Applied, 2019, 11, .	3.8	11
101	Full-silica metamaterial wave plate for high-intensity UV lasers. Optica, 2021, 8, 1372.	9.3	11
102	Light transmission through a subwavelength microstructured aperture: electromagnetic theory and applications. Optics Communications, 2005, 245, 355-361.	2.1	10
103	Transverse multipolar light-matter couplings in evanescent waves. Physical Review A, 2016, 94, .	2.5	9
104	All-dielectric Mie-resonant metaphotonics. Comptes Rendus Physique, 2020, 21, 425-442.	0.9	9
105	Polarizability expressions for predicting resonances in plasmonic and Mie scatterers. Physical Review A, 2017, 95, .	2.5	8
106	Non-Bloch plasmonic stop-band in real-metal gratings. Optics Express, 2007, 15, 6241.	3.4	7
107	Transverse and longitudinal confinement of photonic nanojets by compound dielectric microspheres. Proceedings of SPIE, 2009, , .	0.8	7
108	Singular analysis to homogenize planar metamaterials as nonlocal effective media. Physical Review B, 2014, 89, .	3.2	7

#	ARTICLE	IF	CITATIONS
109	Lamb shift multipolar analysis. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 1348.	2.1	7
110	Pulse compression gratings for the PETAL project: a review of various technologies. , 2008, , .		6
111	Biophotonics applications of nanometric apertures. International Journal of Materials and Product Technology, 2009, 34, 488.	0.2	5
112	Importance of Mueller matrix characterization of bianisotropic metamaterials. Thin Solid Films, 2014, 571, 405-409.	1.8	5
113	Free-space micro-graphics with electrically driven levitated light scatterers. Optics Letters, 2019, 44, 1476.	3.3	5
114	Near field dielectric microlenses. Proceedings of SPIE, 2010, , .	0.8	4
115	Laser-particle interactions in shaped beams: Beam power normalization. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 126, 31-37.	2.3	4
116	Recent progress in the development of pulse compression gratings. EPJ Web of Conferences, 2013, 59, 07002.	0.3	4
117	Design, optimization and development of pulse compression gratings for the MPW-HE LIL. European Physical Journal Special Topics, 2006, 133, 669-672.	0.2	4
118	Polarization insensitive blazed diffraction gratings. Journal of the European Optical Society-Rapid Publications, 2006, 1, .	1.9	3
119	Physics of extraordinary transmission through subwavelength hole arrays. , 0, , 1-27.		3
120	Investigation of the influence of a spatial beam profile on laser damage growth dynamics in multilayer dielectric mirrors in the near infrared sub-picosecond regime. Optics Express, 2022, 30, 17739.	3.4	3
121	Gratings and their quasistatic equivalents for high optical absorptance. Physical Review A, 2009, 79, .	2.5	2
122	Digital Heterodyne Holography Reveals the Non-Quasi-Static Scattering Behaviour of Transversally Coupled Nanodisk Pairs. International Journal of Optics, 2012, 2012, 1-8.	1.4	2
123	Optical Antennas. International Journal of Optics, 2012, 2012, 1-4.	1.4	2
124	Gustav Mie: the man, the theory. Photoniques, 2020, , 22-26.	0.1	2
125	Differential theory of diffraction in cylindrical coordinates. Physica Status Solidi (B): Basic Research, 2007, 244, 3463-3478.	1.5	1
126	Metamaterial-induced band-gap of surface plasmon propagation. Journal of Optics, 2009, 11, 114018.	1.5	1

#	ARTICLE	IF	CITATIONS
127	Recent progress in the development of pulse compression gratings. , 2011, , .		1
128	Optimized Magnetic Nanoantennas: Evolutionary Optimization of All- ϵ -Dielectric Magnetic Nanoantennas (Advanced Optical Materials 10/2019). Advanced Optical Materials, 2019, 7, 1970039.	7.3	1
129	Controlling spontaneous emission with dielectric optical antennas. , 2020, , 109-144.		1
130	Poles, physical bounds, and optimal materials predicted with approximated Mie coefficients. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 979.	2.1	1
131	Photonic jets and Bessel beams. , 2010, , .		1
132	Experimental Validation of the Robust Optimization Algorithm for High-Fluence Optical Coatings. , 2019, , .		1
133	Wigner matrix formalism for phase-modulated signals. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2021, 38, 124.	1.5	1
134	Factorization of nonlinear Maxwell equations in periodic media. , 2003, 5184, 134.		0
135	Design of diffraction gratings for multipetawatt laser compressors. , 2005, 5962, 810.		0
136	Mixed metal dielectric gratings for pulse compression applications. , 2009, , .		0
137	Straightforward control of light in a metallic trimer. Proceedings of SPIE, 2010, , .	0.8	0
138	Mixed metal dielectric pulse compression gratings. , 2010, , .		0
139	On The Phase Of The Electric Field In Optical Antennas. , 2011, , .		0
140	Magneto-electric nano-antennas. , 2013, , .		0
141	Plasmonic oligomers as effective red light scatterers to enhance the performance of organic solar cells. , 2013, , .		0
142	Manipulating light matter interaction with Mie resonators. , 2013, , .		0
143	Preface: the 2014 international workshop on Optical Wave (and Waveguide) Theory and Numerical Modelling. Optical and Quantum Electronics, 2015, 47, 3127-3129.	3.3	0
144	Optimizing nano-antenna designs: Ideal absorption, unitarity, and directivity. , 2015, , .		0

#	ARTICLE	IF	CITATIONS
145	Tailoring light emission with all-silicon optical antennas. , 2016, , .		0
146	Polarizability approximations generalized to dielectric nanospheres. , 2016, , .		0
147	High damage threshold meter-scale optical components for multi-PW lasers. , 2016, , .		0
148	A Dielectric Magnetic Nanoantenna Designed by Evolutionary Optimization. , 2019, , .		0
149	Enhancing Magnetic Light Emission with Optical Nanoantennas. , 2019, , .		0
150	Modal analysis of anapoles. Journal of Physics: Conference Series, 2020, 1461, 012017.	0.4	0
151	Modal analysis of Mie resonators: Pole-expansion of scattering operators. Journal of Physics: Conference Series, 2020, 1461, 012025.	0.4	0
152	Enhanced Raman Scattering in a 10 Attoliter Nanohole. , 2006, , .		0
153	Are surface plasmons always required for absorbing light in metallic nanostructures?. , 2010, , .		0
154	Near-field phase analysis reveals unexpected scattering properties of optical antennas. , 2012, , .		0
155	Miniaturiser les antennes pour la lumière visible. , 2016, , 95-99.	0.1	0
156	Les métasurfaces, des composants optiques fonctionnels ultra-minces. Photoniques, 2017, , 25-30.	0.1	0
157	Designing surface lattice resonances to enhance the luminescence from silicon nanocrystals. , 2018, , .		0
158	Opticien célèbre. Marie Skłodowska-Curie. Photoniques, 2019, , 14-16.	0.1	0
159	Physicien célèbre. Paul Langevin. Photoniques, 2019, , 18-20.	0.1	0
160	Physicien célèbre: Max von Laue. Photoniques, 2019, , 18-19.	0.1	0