Luca Carletti

List of Publications by Year
in descending order

90 papers	2,504 citations	218677 26 h-index	197818 49 g-index
90 all docs	90 docs citations	90 times ranked	1831 citing authors

#	Article	IF	Citations
1	Giant Nonlinear Response at the Nanoscale Driven by Bound States in the Continuum. Physical Review Letters, 2018, 121, 033903.	7.8	284
2	Nonlinear Generation of Vector Beams From AlGaAs Nanoantennas. Nano Letters, 2016, 16, 7191-7197.	9.1	237
3	Monolithic AlGaAs second-harmonic nanoantennas. Optics Express, 2016, 24, 15965.	3.4	208
4	Enhanced second-harmonic generation from magnetic resonance in AlGaAs nanoantennas. Optics Express, 2015, 23, 26544.	3.4	188
5	Amorphous silicon nanowires combining high nonlinearity, FOM and optical stability. Optics Express, 2012, 20, 22609.	3.4	99
6	Spontaneous photon-pair generation from a dielectric nanoantenna. Optica, 2019, 6, 1416.	9.3	98
7	High-harmonic generation at the nanoscale boosted by bound states in the continuum. Physical Review Research, 2019, 1, .	3.6	95
8	Shaping the Radiation Pattern of Second-Harmonic Generation from AlGaAs Dielectric Nanoantennas. ACS Photonics, 2016, 3, 1500-1507.	6.6	91
9	Silicon Metasurfaces for Third Harmonic Geometric Phase Manipulation and Multiplexed Holography. Nano Letters, 2019, 19, 6585-6591.	9.1	77
10	Plasmon-free SERS detection of environmental CO₂on TiO₂surfaces. Nanoscale, 2016, 8, 3226-3231.	5.6	71
11	Controlling second-harmonic generation at the nanoscale with monolithic AlGaAs-on-AlOx antennas. Nanotechnology, 2017, 28, 114005.	2.6	67
12	Steering and Encoding the Polarization of the Second Harmonic in the Visible with a Monolithic LiNbO₃ Metasurface. ACS Photonics, 2021, 8, 731-737.	6.6	63
13	Polarization properties of second-harmonic generation in AlGaAs optical nanoantennas. Optics Letters, 2017, 42, 559.	3.3	57
14	Near-unity third-harmonic circular dichroism driven by a quasibound state in the continuum in asymmetric silicon metasurfaces. Physical Review A, 2021, 104, .	2.5	55
15	Tuning the second-harmonic generation in AlGaAs nanodimers via non-radiative state optimization [Invited]. Photonics Research, 2018, 6, B6.	7.0	49
16	Metalâ€“dielectric hybrid nanoantennas for efficient frequency conversion at the anapole mode. Beilstein Journal of Nanotechnology, 2018, 9, 2306-2314.	2.8	47
17	Second harmonic generation in monolithic lithium niobate metasurfaces. Optics Express, 2019, 27, 33391.	3.4	47
18	Nonlinear optical response of low loss silicon germanium waveguides in the mid-infrared. Optics Express, 2015, 23, 8261.	3.4	46

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19	High-index-contrast grating reflector with beam steering ability for the transmitted beam. Optics Express, 2011, 19, 23567.	3.4	45
20	Optical tuning of dielectric nanoantennas for thermo-optically reconfigurable nonlinear metasurfaces. Optics Letters, 2021, 46, 2453.	3.3	40
21	Nonlinear Goniometry by Second-Harmonic Generation in AlGaAs Nanoantennas. ACS Photonics, 2018, 5, 4386-4392.	6.6	37
22	Mid-infrared nonlinear optical response of Si-Ge waveguides with ultra-short optical pulses. Optics Express, 2015, 23, 32202.	3.4	36
23	Switching the second harmonic generation by a dielectric metasurface via tunable liquid crystal. Optics Express, 2020, 28, 12037.	3.4	34
24	Shaping the Nonlinear Emission Pattern of a Dielectric Nanoantenna by Integrated Holographic Gratings. Nano Letters, 2018, 18, 6750-6755.	9.1	30
25	Ultrafast, All Optically Reconfigurable, Nonlinear Nanoantenna. ACS Nano, 2021, 15, 11150-11157.	14.6	30
26	Reconfigurable nonlinear response of dielectric and semiconductor metasurfaces. Nanophotonics, 2021, 10, 4209-4221.	6.0	29
27	Vertical Second Harmonic Generation in Asymmetric Dielectric Nanoantennas. IEEE Photonics Journal, 2020, 12, 1-7.	2.0	25
28	Evidence of Cascaded Third-Harmonic Generation in Noncentrosymmetric Gold Nanoantennas. Nano Letters, 2019, 19, 7013-7020.	9.1	23
29	Resonant dielectric metasurfaces in strong optical fields. APL Materials, 2021, 9, 060701.	5.1	23
30	High Quality Factor Silicon Membrane Metasurface for Intensity-Based Refractive Index Sensing. Optics, 2021, 2, 193-199.	1.2	22
31	Gain-loss engineering of bound states in the continuum for enhanced nonlinear response in dielectric nanocavities. Optics Express, 2020, 28, 3009.	3.4	22
32	An All-Dielectric Polaritonic Metasurface with a Giant Nonlinear Optical Response. Nano Letters, 2022, 22, 896-903.	9.1	22
33	Controlling the directivity of all-dielectric nanoantennas excited by integrated quantum emitters. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 1918.	2.1	19
34	Photo-induced heat generation in non-plasmonic nanoantennas. Physical Chemistry Chemical Physics, 2018, 20, 15307-15315.	2.8	19
35	Strong Coupling in All-Dielectric Intersubband Polaritonic Metasurfaces. Nano Letters, 2021, 21, 367-374.	9.1	18
36	THz-photonics transceivers by all-dielectric phonon-polariton nonlinear nanoantennas. Scientific Reports, 2022, 12, 4590.	3.3	17

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37	Second-Harmonic Generation in Mie-Resonant GaAs Nanowires. Applied Sciences (Switzerland), 2019, 9, 3381.	2.5	15
38	Tuning the Ultrafast Response of Fano Resonances in Halide Perovskite Nanoparticles. ACS Nano, 2020, 14, 13602-13610.	14.6	14
39	Self-tuning of second-harmonic generation in GaAs nanowires enabled by nonlinear absorption. Optics Express, 2019, 27, 32480.	3.4	12
40	Theoretical Model for Pattern Engineering of Harmonic Generation in All-Dielectric Nanoantennas. IEEE Journal of Quantum Electronics, 2017, 53, 1-5.	1.9	11
41	Resonant, broadband, and highly efficient optical frequency conversion in semiconductor nanowire gratings at visible and UV wavelengths. Journal of the Optical Society of America B: Optical Physics, 2019, 36, 2346.	2.1	11
42	Efficient Frequency Conversion with Geometric Phase Control in Optical Metasurfaces. Advanced Science, 2022, 9, e2104508.	11.2	11
43	Imaging Electric and Magnetic Modes and Their Hybridization in Single and Dimer AlGaAs Nanoantennas. Advanced Optical Materials, 2018, 6, 1800664.	7.3	10
44	Role of the substrate in monolithic AlGaAs nonlinear nanoantennas. Nanophotonics, 2017, 7, 517-521.	6.0	8
45	Plasmon-Enhanced Second Harmonic Generation: from Individual Antennas to Extended Arrays. Plasmonics, 2017, 12, 1595-1600.	3.4	8
46	Sum-Frequency Generation and Photon-Pair Creation in AlGaAs Nano-Scale Resonators. , 2017, , .		5
47	Enhanced Five-Photon Photoluminescence in Subwavelength AlGaAs Resonators. Nano Letters, 2022, 22, 4200-4206.	9.1	5
48	Bioinspired self-similar all-dielectric antennas: probing the effect of secondary scattering centres by Raman spectroscopy. Materials Advances, 2020, 1, 2443-2449.	5.4	4
49	Monolithic AlGaAs second-harmonic nanoantennas: erratum. Optics Express, 2021, 29, 11132.	3.4	3
50	New Trends in Optical Resonant Bio-Chemical Sensing. IEEE Sensors Journal, 2021, 21, 12856-12867.	4.7	3
51	Nonlinear optical properties of SiGe waveguides in the mid-infrared. , 2014, , .		3
52	Hydrogenated amorphous silicon nanowires with high nonlinear figure of merit and stable nonlinear optical response. Proceedings of SPIE, 2013, , .	0.8	1
53	Nonlinear response of SiGe waveguides in the mid-infrared. Proceedings of SPIE, 2014, , .	0.8	1
54	Mid-IR integrated photonics for sensing applications. Proceedings of SPIE, 2015, , .	0.8	1

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55	Mid-infrared nonlinear optics in SiGe waveguides. , 2015, , .		1
56	Cathodoluminescence imaging spectroscopy of single and dimer AlGaAs nano-disks. , 2017, , .		1
57	Sum-frequency generation and photon-pair creation in AlGaAs nano-disks. , 2017, , .		1
58	Nonlinear nanophotonics and bound states in the continuum. , 2018, , .		1
59	Sensing through the optical radiation pattern in dielectric metastructures. , 2019, , .		1
60	Manipulating second-harmonic light from semiconductor nanocrystals. SPIE Newsroom, 0, , .	0.1	1
61	All-Dielectric Intersubband Polaritonic Metasurface with Giant Second-Order Nonlinear Response. , 2020, , .		1
62	Sum-Frequency- and Photon-Pair-Generation in AlGaAs Nano-Disks. , 2018, , .		1
63	Wave-front-engineered grating mirrors for VCSELs. , 2012, , .		0
64	Experimental characterization of hydrogenated amorphous silicon photonic crystal waveguides. , 2013, , .		0
65	Mid-infrared ultra-short pulses nonlinear measurement of SiGe waveguides. , 2014, , .		0
66	Mid-infrared integrated photonics on a SiGe platform. , 2015, , .		0
67	Shaping the second harmonic radiation pattern from AlGaAs dielectric nanoantennas. , 2016, , .		0
68	Enhanced second-harmonic generation driven from magnetic dipole resonance in AlGaAs nanoantennas. , 2016, , .		0
69	Enhanced second-harmonic generation from magnetic resonance in AlGaAs nanoantennas. , 2016, , .		0
70	Second harmonic generation in AlGaAs nanoantennas. Proceedings of SPIE, 2017, , .	0.8	0
71	Giant enhancement and control of second-harmonic radiation from AlGaAs nanoantennas. , 2017, , .		0
72	Second harmonic generation at the nanoscale in isolated and coupled AlGaAs nanodisks. , 2017, , .		0

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73	Polarization-resolved second harmonic generation measurements in AlGaAs monolithic nanoantennas. , 2017, , .		0
74	Switching from magnetic to electric dipole in second harmonic generation from all-dielectric nanoantennas. , 2017, , .		0
75	Optical Switching of the Second Harmonic Generation in AlGaAs Nanoantennas. , 2018, , .		0
76	Harmonic Generation in Mie-Resonant GaAs Nanowires. , 2019, , .		0
77	Second-Harmonic Generation in Monolithic Lithium Niobate Metasurfaces. , 2019, , .		0
78	Hybrid Dielectric Metasurfaces: From Strong Light-Matter Interaction to Extreme Nonlinearities. , 2019, , .		0
79	Monolithic LiNbO3 Metasurface for Steering and Polarization-Encoding of Second-Harmonic Generation in the Visible. , 2021, , .		0
80	Design of All-Dielectric Photonic Crystals for Surface-Enhanced Raman Scattering. , 2016, , .		0
81	Photon-pair generation and sum-frequency conversion in nonlinear dielectric nanoresonators. , 2016, , .		0
82	Second-harmonic generation in AlGaAs nanoantennas. , 2016, , .		0
83	Quantum-classical correspondence for photon-pair generation in nonlinear dielectric nano-resonators. , 2016, , .		0
84	Shaping the radiation pattern of second-harmonic generation from AlGaAs nonlinear nanoantennas. , 2016, , .		0
85	Modelling And Optimization Of The Second-Harmonic Radiation Pattern In Dielectric Nanoantennas. , 2016, , .		0
86	Waveguides for Nonlinear Optics in the Mid-Infrared. , 2017, , .		0
87	Directional second harmonic generation from AlGaAs nanoantennas (Conference Presentation). , 2017, , .		0
88	Non-radiating Modes for Tunable Second Harmonic Generation in AlGaAs Nanodimers. , 2018, , .		0
89	Engineering Nanoantennas for Efficient Nonlinear Photon Conversion at the Nanoscale. , 2018, , .		0
90	Enhancing nonlinear processes from dielectric nanoantennas: the role of the substrate. , 2019, , .		0