

Luigi Bonacina

List of Publications by Year in descending order

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Version: 2024-02-01

110
papers

2,732
citations

147566

31
h-index

205818

48
g-index

118
all docs

118
docs citations

118
times ranked

3076
citing authors

#	ARTICLE	IF	CITATIONS
1	Harmonic Nanocrystals for Biolabeling: A Survey of Optical Properties and Biocompatibility. ACS Nano, 2012, 6, 2542-2549.	7.3	174
2	Circadian Clocks in Mouse and Human CD4+ T Cells. PLoS ONE, 2011, 6, e29801.	1.1	156
3	Generation of 30 fJ single-cycle terahertz pulses at 100 Hz repetition rate by optical rectification. Optics Letters, 2008, 33, 2497.	1.7	141
4	Real-time recording of circadian liver gene expression in freely moving mice reveals the phase-setting behavior of hepatocyte clocks. Genes and Development, 2013, 27, 1526-1536.	2.7	126
5	Polar Fe(IO ₃) ₃ nanocrystals as local probes for nonlinear microscopy. Applied Physics B: Lasers and Optics, 2007, 87, 399-403.	1.1	98
6	Time-Resolved Photodynamics of Triangular-Shaped Silver Nanoplates. Nano Letters, 2006, 6, 7-10.	4.5	88
7	Nanodoublers as deep imaging markers for multi-photon microscopy. Optics Express, 2009, 17, 15342.	1.7	71
8	Nonlinear Nanomedicine: Harmonic Nanoparticles toward Targeted Diagnosis and Therapy. Molecular Pharmaceutics, 2013, 10, 783-792.	2.3	71
9	Time-Resolved Visible and Infrared Study of the Cyano Complexes of Myoglobin and of Hemoglobin I from <i>Lucina pectinata</i> . Biophysical Journal, 2004, 87, 1881-1891.	0.2	68
10	White-Emission Mechanosensitive Membrane Probes that Function by Bending Rather than Twisting. Angewandte Chemie - International Edition, 2018, 57, 10559-10563.	7.2	67
11	Mobile source of high-energy single-cycle terahertz pulses. Applied Physics B: Lasers and Optics, 2010, 101, 11-14.	1.1	66
12	Harmonic generation at the nanoscale. Journal of Applied Physics, 2020, 127, .	1.1	65
13	Circadian hepatocyte clocks keep synchrony in the absence of a master pacemaker in the suprachiasmatic nucleus or other extrahepatic clocks. Genes and Development, 2021, 35, 329-334.	2.7	56
14	Ensemble and Individual Characterization of the Nonlinear Optical Properties of ZnO and BaTiO ₃ Nanocrystals. Journal of Physical Chemistry C, 2011, 115, 15140-15146.	1.5	54
15	Multi-harmonic Imaging in the Second Near-Infrared Window of Nanoparticle-Labeled Stem Cells as a Monitoring Tool in Tissue Depth. ACS Nano, 2017, 11, 6672-6681.	7.3	53
16	A flash-lamp based device for fluorescence detection and identification of individual pollen grains. Review of Scientific Instruments, 2013, 84, 033302.	0.6	52
17	Optimal control of filamentation in air. Applied Physics Letters, 2006, 89, 171117.	1.5	50
18	Energy-time-entangled two-photon molecular absorption. Physical Review A, 2021, 103, .	1.0	46

#	ARTICLE	IF	CITATIONS
19	Nano-FROG: Frequency resolved optical gating by a nanometric object. Optics Express, 2008, 16, 10405.	1.7	45
20	Ultrafast gaseous π -half-wave plate. Optics Express, 2008, 16, 7564.	1.7	44
21	Characterization of the nonlinear optical properties of nanocrystals by Hyper Rayleigh Scattering. Journal of Nanobiotechnology, 2013, 11, S8.	4.2	44
22	Nonlinear Correlation Spectroscopy (NLCS). Nano Letters, 2012, 12, 1668-1672.	4.5	42
23	Individual bioaerosol particle discrimination by multi-photon excited fluorescence. Optics Express, 2011, 19, 24516.	1.7	41
24	Ultrafast expansion and vibrational coherences of electronic 'Bubbles' in solid neon. Chemical Physics Letters, 2002, 362, 31-38.	1.2	37
25	Harmonic nanoparticles: noncentrosymmetric metal oxides for nonlinear optics. Journal of Optics (United Kingdom), 2015, 17, 033001.	1.0	36
26	32TW atmospheric white-light laser. Applied Physics Letters, 2007, 90, 151106.	1.5	34
27	High-Speed Tracking of Murine Cardiac Stem Cells by Harmonic Nanodoublers. Small, 2012, 8, 2752-2756.	5.2	34
28	Simultaneous Multiharmonic Imaging of Nanoparticles in Tissues for Increased Selectivity. ACS Photonics, 2015, 2, 1416-1422.	3.2	34
29	Cellular uptake and biocompatibility of bismuth ferrite harmonic advanced nanoparticles. Nanomedicine: Nanotechnology, Biology, and Medicine, 2015, 11, 815-824.	1.7	33
30	Multiobjective genetic approach for optimal control of photoinduced processes. Physical Review A, 2007, 76, .	1.0	32
31	Evanescent-Field-Induced Second Harmonic Generation by Noncentrosymmetric Nanoparticles. Optics Express, 2010, 18, 23218.	1.7	32
32	Nonlinear optical and magnetic properties of BiFeO ₃ harmonic nanoparticles. Journal of Applied Physics, 2014, 116, .	1.1	32
33	Characterization of a MEMS-based pulse-shaping device in the deep ultraviolet. Applied Physics B: Lasers and Optics, 2009, 96, 757-761.	1.1	27
34	Plasmon-enhanced nonlinear optical properties of SiC nanoparticles. Nanotechnology, 2013, 24, 055703.	1.3	27
35	Ultrafast structural dynamics in electronically excited solid neon. Real-time probing of the electronic bubble formation. Physical Review B, 2003, 67, .	1.1	25
36	Implications of short time scale dynamics on long time processes. Structural Dynamics, 2017, 4, 061507.	0.9	24

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37	Two-Photon-Triggered Photorelease of Caged Compounds from Multifunctional Harmonic Nanoparticles. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 27443-27452.	4.0	24
38	Second harmonic spectroscopy of ZnO, BiFeO ₃ and LiNbO ₃ nanocrystals. <i>Optical Materials Express</i> , 2019, 9, 1955.	1.6	24
39	Plasmonic Tipless Pyramid Arrays for Cell Poration. <i>Nano Letters</i> , 2015, 15, 4461-4466.	4.5	23
40	White-Fluorescent Dual-Emission Mechanosensitive Membrane Probes that Function by Bending Rather than Twisting. <i>Angewandte Chemie</i> , 2018, 130, 10719-10723.	1.6	22
41	Sequential Proton Coupled Electron Transfer (PCET): Dynamics Observed over 8 Orders of Magnitude in Time. <i>Journal of the American Chemical Society</i> , 2016, 138, 4401-4407.	6.6	21
42	Photocontrolled Release of the Anticancer Drug Chlorambucil with Caged Harmonic Nanoparticles. <i>Helvetica Chimica Acta</i> , 2020, 103, e1900251.	1.0	21
43	Lattice Response of Quantum Solids to an Impulsive Local Perturbation. <i>Physical Review Letters</i> , 2005, 95, 015301.	2.9	20
44	Spectral phase, amplitude, and spatial modulation from ultraviolet to infrared with a reflective MEMS pulse shaper. <i>Optics Express</i> , 2011, 19, 7580.	1.7	20
45	Convenient synthesis of heterobifunctional poly(ethylene glycol) suitable for the functionalization of iron oxide nanoparticles for biomedical applications. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2013, 23, 5006-5010.	1.0	20
46	Multiorder Nonlinear Mixing in Metal Oxide Nanoparticles. <i>Nano Letters</i> , 2020, 20, 8725-8732.	4.5	20
47	Structural dynamics in quantum solids. II. Real-time probing of the electronic bubble formation in solid hydrogens. <i>Journal of Chemical Physics</i> , 2002, 116, 4553-4562.	1.2	19
48	Ultraviolet and near-infrared femtosecond temporal pulse shaping with a new high-aspect-ratio one-dimensional micromirror array. <i>Optics Letters</i> , 2010, 35, 3102.	1.7	19
49	The ultrafast structural response of solid parahydrogen: A complementary experimental/simulation investigation. <i>Journal of Chemical Physics</i> , 2006, 125, 054507.	1.2	18
50	Identification of biological microparticles using ultrafast depletion spectroscopy. <i>Faraday Discussions</i> , 2008, 137, 37-49.	1.6	18
51	Preparation from a revisited wet chemical route of phase-pure, monocrystalline and SHG-efficient BiFeO ₃ nanoparticles for harmonic bio-imaging. <i>Scientific Reports</i> , 2018, 8, 10473.	1.6	18
52	Multi-Order Investigation of the Nonlinear Susceptibility Tensors of Individual Nanoparticles. <i>Scientific Reports</i> , 2016, 6, 25415.	1.6	16
53	Coherent manipulation of free amino acids fluorescence. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 9317.	1.3	15
54	Folate-modified silicon carbide nanoparticles as multiphoton imaging nanoprobe for cancer-cell-specific labeling. <i>RSC Advances</i> , 2017, 7, 27361-27369.	1.7	15

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55	Bismuth ferrite dielectric nanoparticles excited at telecom wavelengths as multicolor sources by second, third, and fourth harmonic generation. <i>Nanoscale</i> , 2018, 10, 8146-8152.	2.8	14
56	Wavelength-Selective Nonlinear Imaging and Photo-Induced Cell Damage by Dielectric Harmonic Nanoparticles. <i>ACS Nano</i> , 2020, 14, 4087-4095.	7.3	13
57	Deep UV generation and direct DNA photo-interaction by harmonic nanoparticles in labelled samples. <i>Nanoscale</i> , 2014, 6, 2929-2936.	2.8	12
58	Functionalized bismuth ferrite harmonic nanoparticles for cancer cells labeling and imaging. <i>Journal of Nanoparticle Research</i> , 2015, 17, 1.	0.8	12
59	Temporal Airy pulses control cell poration. <i>APL Photonics</i> , 2016, 1, 046102.	3.0	12
60	Nonlinear optical susceptibility of two-dimensional WS ₂ measured by hyper Rayleigh scattering. <i>Optics Letters</i> , 2017, 42, 5018.	1.7	12
61	Design, simulation, fabrication, packaging, and characterization of a MEMS-based mirror array for femtosecond pulse-shaping in phase and amplitude. <i>Review of Scientific Instruments</i> , 2011, 82, 075106.	0.6	10
62	DAST/SiO ₂ multilayer structure for efficient generation of 6 ÅTHz quasi-single-cycle electromagnetic pulses. <i>Optics Letters</i> , 2012, 37, 2439.	1.7	10
63	Health state dependent multiphoton induced autofluorescence in human 3D in vitro lung cancer model. <i>Scientific Reports</i> , 2017, 7, 16233.	1.6	10
64	Image Correlation Spectroscopy with Second Harmonic Generating Nanoparticles in Suspension and in Cells. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 6112-6118.	2.1	10
65	An inexpensive nonlinear medium for intense ultrabroadband pulse characterization. <i>Applied Physics B: Lasers and Optics</i> , 2009, 97, 537-540.	1.1	9
66	Live cells assessment of opto-poration by a single femtosecond temporal Airy laser pulse. <i>AIP Advances</i> , 2018, 8, 125105.	0.6	9
67	Effects of atmospheric turbulence on remote optimal control experiments. <i>Applied Physics Letters</i> , 2008, 92, 041103.	1.5	7
68	Discriminating Biomolecules with Coherent Control Strategies. <i>Chimia</i> , 2011, 65, 346.	0.3	7
69	Direct amplitude shaping of high harmonics in the extreme ultraviolet. <i>Optics Express</i> , 2012, 20, 25843.	1.7	7
70	Discriminability of tryptophan containing dipeptides using quantum control. <i>Applied Physics B: Lasers and Optics</i> , 2013, 111, 541-549.	1.1	7
71	Bismuth Ferrite Second Harmonic Nanoparticles for Pulmonary Macrophage Tracking. <i>Small</i> , 2019, 15, e1803776.	5.2	7
72	Localized plasmonic fields of nanoantennas enhance second harmonic generation from two-dimensional molybdenum disulfide. <i>MRS Communications</i> , 2018, 8, 1029-1036.	0.8	6

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73	Second Harmonic Nanoparticles: Bismuth Ferrite Second Harmonic Nanoparticles for Pulmonary Macrophage Tracking (Small 4/2019). Small, 2019, 15, 1970024.	5.2	6
74	Dispersion of the nonlinear susceptibility of MoS_2 and WS_2 from second-harmonic scattering spectroscopy. Physical Review B, 2020, 102, .	1.1	6
75	Filament-induced birefringence in Argon. Laser Physics, 2009, 19, 336-341.	0.6	5
76	High aspect ratio micromirror array with two degrees of freedom for femtosecond pulse shaping. Proceedings of SPIE, 2010, , .	0.8	5
77	Discriminating Bio-aerosols from Non-Bio-aerosols in Real-Time by Pump-Probe Spectroscopy. Scientific Reports, 2016, 6, 33157.	1.6	5
78	Editorial: Use of 3D Models in Drug Development and Precision Medicine - Advances and Outlook. Frontiers in Bioengineering and Biotechnology, 2021, 9, 658941.	2.0	5
79	Gd ³⁺ -Functionalized Lithium Niobate Nanoparticles for Dual Multiphoton and Magnetic Resonance Bioimaging. ACS Applied Nano Materials, 0, , .	2.4	5
80	Dynamics of a coherently driven micromaser by the Monte Carlo wavefunction approach. Journal of Optics B: Quantum and Semiclassical Optics, 2000, 2, 490-496.	1.4	3
81	Tailoring single-cycle electromagnetic pulses in the 2 \times 9 THz frequency range using DAST/SiO ₂ multilayer structures pumped at Ti:sapphire wavelength. Optics Express, 2014, 22, 21618.	1.7	3
82	Real-time monitoring of bacterial and organic pollution in a water stream by fluorescence depletion spectroscopy. Applied Physics B: Lasers and Optics, 2017, 123, 1.	1.1	3
83	Large linear micromirror array for UV femtosecond laser pulse shaping. , 2008, , .		2
84	Shaping light with MOEMS. , 2011, , .		2
85	8 nm nanodiamonds as markers for 2 photon excited luminescent microscopy. Journal of Physics: Conference Series, 2016, 740, 012010.	0.3	2
86	Nonlinear optical properties of silicon carbide (SiC) nanoparticles by carbothermal reduction. , 2016, , .		2
87	Ultrafast pulse shaping modulates perceived visual brightness in living animals. Science Advances, 2021, 7, .	4.7	2
88	1300 nm Fiber Laser System for THG and 2PEF Bio-Imaging. , 2016, , .		2
89	Linear micromirror array for broadband femtosecond pulse shaping in phase and amplitude. Proceedings of SPIE, 2009, , .	0.8	1
90	MEMS for femtosecond pulse shaping applications. , 2009, , .		1

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91	Harmonic Nanoparticles for Regenerative Research. Journal of Visualized Experiments, 2014, , .	0.2	1
92	OncoCilAirâ„¢: A physiological in vitro platform to assess the efficacy and the toxicity of lung cancer therapeutics. Toxicology Letters, 2018, 295, S122.	0.4	1
93	Nonlinear plasmonic nanohybrids as probes for multimodal cell imaging and potential phototherapeutic agents. Biomedical Physics and Engineering Express, 2019, 5, 025039.	0.6	1
94	Photoresponsive Nanocarriers Based on Lithium Niobate Nanoparticles for Harmonic Imaging and On-Demand Release of Anticancer Chemotherapeutics. ACS Nanoscience Au, 0, , .	2.0	1
95	TW lasers in air: ultra-high powers and optimal control strategies. Proceedings of SPIE, 2007, , .	0.8	0
96	Linear MEMS micromirror array for UV-NIR femtosecond pulse shaping. , 2010, , .		0
97	DAST/SiO ₂ /multilayer structure for efficient generation of 6 THz quasi-single-cycle pulses via cascaded optical rectification. , 2012, , .		0
98	Harmonic Nanoparticles: High-Speed Tracking of Murine Cardiac Stem Cells by Harmonic Nanodoublers (Small 17/2012). Small, 2012, 8, 2614-2614.	5.2	0
99	Optimal Dynamic Discrimination in Tryptophan-Containing Dipeptides. EPJ Web of Conferences, 2013, 41, 07012.	0.1	0
100	Coherent Control of Biomolecules and Imaging Using Nanodoublers. NATO Science for Peace and Security Series B: Physics and Biophysics, 2013, , 251-269.	0.2	0
101	Label free optimal dynamic discrimination of biological macromolecules. Proceedings of SPIE, 2013, , .	0.8	0
102	Harmonic nanoparticles for nonlinear bio-imaging and detection. Proceedings of SPIE, 2013, , .	0.8	0
103	Assessment of cytotoxicity and oxidative effect of Bismuth Ferrite (BFO) harmonic nanoparticles for localized DNA photo-interaction. , 2014, , .		0
104	Wavelength Dependence of the Second-Order Nonlinear Susceptibility of Harmonic Nanoparticles. , 2018, , .		0
105	CLEO/Europe-EQEC 2021, One Page Summary Template (Multi-order Nonlinear Mixing in Dielectric) Tj ETQq1 1 0.784314 rgBT /Overl		
106	Femtosecond Lidar and Coherent Control. , 2007, , .		0
107	Deep UV Strategy for Discriminating Biomolecules. NATO Science for Peace and Security Series B: Physics and Biophysics, 2013, , 393-394.	0.2	0
108	Cell Poration of Fixed and Live Cells by Phase Shaped Femtosecond Pulses. NATO Science for Peace and Security Series B: Physics and Biophysics, 2018, , 399-400.	0.2	0

#	ARTICLE	IF	CITATIONS
109	Dielectric Nanoparticles Excited at Telecom Wavelengths as Multiharmonic Multicolor Sources. , 2018, , .		0
110	Integrating plasmonic metals and 2D transition metal dichalcogenides for enhanced nonlinear frequency conversion. , 2018, , .		0