

# Lionel Canioni

## List of Publications by Year in descending order

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138  
papers

3,570  
citations

136740

32  
h-index

143772

57  
g-index

138  
all docs

138  
docs citations

138  
times ranked

3157  
citing authors

#	ARTICLE	IF	CITATIONS
1	Good practices in LIBS analysis: Review and advices. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2014, 101, 171-182.	1.5	247
2	Review of Terahertz Tomography Techniques. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2014, 35, 382-411.	1.2	201
3	Silver Clusters Embedded in Glass as a Perennial High Capacity Optical Recording Medium. <i>Advanced Materials</i> , 2010, 22, 5282-5286.	11.1	200
4	Laser-Induced Breakdown Spectroscopy of Composite Samples: A Comparison of Advanced Chemometrics Methods. <i>Analytical Chemistry</i> , 2006, 78, 1462-1469.	3.2	167
5	Qualitative and quantitative investigation of chromium-polluted soils by laser-induced breakdown spectroscopy combined with neural networks analysis. <i>Analytical and Bioanalytical Chemistry</i> , 2006, 385, 256-262.	1.9	150
6	Review in terahertz spectral analysis. <i>TrAC - Trends in Analytical Chemistry</i> , 2013, 44, 98-105.	5.8	149
7	Towards quantitative laser-induced breakdown spectroscopy analysis of soil samples. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2007, 62, 1582-1589.	1.5	115
8	Three-dimensional optical data storage using third-harmonic generation in silver zinc phosphate glass. <i>Optics Letters</i> , 2008, 33, 360.	1.7	102
9	Glass Structure and Optical Nonlinearities in Thallium(I) Tellurium(IV) Oxide Glasses. <i>Journal of Solid State Chemistry</i> , 1999, 146, 329-335.	1.4	98
10	Optical non-linearity in oxide glasses. <i>Journal of Non-Crystalline Solids</i> , 1996, 203, 96-101.	1.5	93
11	Beat the diffraction limit in 3D direct laser writing in photosensitive glass. <i>Optics Express</i> , 2009, 17, 10304.	1.7	86
12	Nonlinear optical properties of some tellurium (IV) oxide glasses. <i>Materials Research Bulletin</i> , 1994, 29, 933-941.	2.7	85
13	3D Patterning at the Nanoscale of Fluorescent Emitters in Glass. <i>Journal of Physical Chemistry C</i> , 2010, 114, 15584-15588.	1.5	76
14	Femtosecond laser induced photochemistry in materials tailored with photosensitive agents [Invited]. <i>Optical Materials Express</i> , 2011, 1, 866.	1.6	74
15	Chemometrics Applied to Quantitative Analysis of Ternary Mixtures by Terahertz Spectroscopy. <i>Analytical Chemistry</i> , 2014, 86, 4927-4933.	3.2	71
16	Propagation beam consideration for 3D THz computed tomography. <i>Optics Express</i> , 2012, 20, 5817.	1.7	68
17	Optical properties of infrared femtosecond laser-modified fused silica and application to waveguide fabrication. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2005, 22, 2138.	0.9	59
18	Luminescence properties of silver zinc phosphate glasses following different irradiations. <i>Journal of Luminescence</i> , 2009, 129, 1514-1518.	1.5	59

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19	Application of a series of artificial neural networks to on-site quantitative analysis of lead into real soil samples by laser induced breakdown spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2014, 97, 57-64.	1.5	58
20	Development of a mobile system based on laser-induced breakdown spectroscopy and dedicated to in situ analysis of polluted soils. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2008, 63, 1085-1090.	1.5	54
21	Imaging of Ca <sup>2+</sup> intracellular dynamics with a third-harmonic generation microscope. <i>Optics Letters</i> , 2001, 26, 515.	1.7	52
22	Time-resolved and time-integrated single-shot laser-induced plasma experiments using nanosecond and femtosecond laser pulses. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2004, 59, 1033-1039.	1.5	52
23	Direct laser writing of a new type of waveguides in silver containing glasses. <i>Scientific Reports</i> , 2017, 7, 11124.	1.6	46
24	In Situ Semi-Quantitative Analysis of Polluted Soils by Laser-Induced Breakdown Spectroscopy (LIBS). <i>Applied Spectroscopy</i> , 2011, 65, 467-473.	1.2	45
25	Femtosecond laser structuring and optical properties of a silver and zinc phosphate glass. <i>Journal of Non-Crystalline Solids</i> , 2010, 356, 2658-2665.	1.5	43
26	Three-dimensional direct femtosecond laser writing of second-order nonlinearities in glass. <i>Optics Letters</i> , 2012, 37, 1029.	1.7	43
27	On the femtosecond laser-induced photochemistry in silver-containing oxide glasses: mechanisms, related optical and physico-chemical properties, and technological applications. <i>Advanced Optical Technologies</i> , 2018, 7, 291-309.	0.9	41
28	Effect of niobium oxide introduction on erbium luminescence in borophosphate glasses. <i>Optical Materials</i> , 2006, 28, 172-180.	1.7	38
29	Precise and absolute measurements of the complex third-order optical susceptibility. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2004, 21, 2180.	0.9	36
30	Formation and thermo-assisted stabilization of luminescent silver clusters in photosensitive glasses. <i>Materials Research Bulletin</i> , 2013, 48, 1637-1644.	2.7	36
31	Coherent broadband pulse shaping in the mid infrared. <i>Optics Letters</i> , 2001, 26, 743.	1.7	35
32	Nonlinear optical properties for TiO <sub>2</sub> containing phosphate, borophosphate, and silicate glasses. <i>Journal of Applied Physics</i> , 1997, 81, 1481-1487.	1.1	34
33	Direct 3D-printing of phosphate glass by fused deposition modeling. <i>Materials and Design</i> , 2020, 194, 108957.	3.3	31
34	Femtosecond laser direct inscription of mid-IR transmitting waveguides in BGG glasses. <i>Optical Materials Express</i> , 2017, 7, 3124.	1.6	29
35	Femtosecond laser writing of near-surface waveguides for refractive-index sensing. <i>Optics Express</i> , 2019, 27, 31130.	1.7	29
36	Thermally poled new borate glasses for second harmonic generation. <i>Journal of Non-Crystalline Solids</i> , 2001, 290, 73-85.	1.5	27

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37	Femtosecond single-beam direct laser poling of stable and efficient second-order nonlinear optical properties in glass. <i>Journal of Applied Physics</i> , 2014, 115, .	1.1	27
38	Fluorescence and second-harmonic generation correlative microscopy to probe space charge separation and silver cluster stabilization during direct laser writing in a tailored silver-containing glass. <i>Optical Materials Express</i> , 2013, 3, 1855.	1.6	26
39	Laser action along and near the optic axis of a holmium-doped KY(WO <sub>4</sub> ) <sub>2</sub> crystal. <i>Optics Letters</i> , 2014, 39, 6407.	1.7	23
40	Photowritable Silver-Containing Phosphate Glass Ribbon Fibers. <i>Advanced Optical Materials</i> , 2016, 4, 162-168.	3.6	22
41	Precise measurements and analysis of linear and nonlinear optical properties of glass materials near 1.5 $\mu$ m. <i>Optics Communications</i> , 1998, 151, 241-246.	1.0	21
42	Nonlinear refractive index of photo-thermo-refractive glass. <i>Optical Materials</i> , 2006, 28, 401-407.	1.7	21
43	Modeling of cluster organization in metal-doped oxide glasses irradiated by a train of femtosecond laser pulses. <i>Physical Review A</i> , 2016, 93, .	1.0	20
44	Second harmonic generation in poled tellurite glass. <i>Journal of Non-Crystalline Solids</i> , 2003, 332, 207-218.	1.5	19
45	Ultrashort laser pulse diffraction by transmitting volume Bragg gratings in photo-thermo-refractive glass. <i>Optics Letters</i> , 2009, 34, 2572.	1.7	19
46	Patterning linear and nonlinear optical properties of photosensitive glasses by femtosecond structured light. <i>Optics Letters</i> , 2015, 40, 201.	1.7	19
47	High repetition rate femtosecond laser irradiation of fused silica studied by Raman spectroscopy. <i>Optical Materials Express</i> , 2016, 6, 79.	1.6	19
48	Comparative study between the standard type I and the type A femtosecond laser induced refractive index change in silver containing glasses. <i>Optical Materials Express</i> , 2019, 9, 2640.	1.6	18
49	Planar waveguides formed by Ag <sup>+</sup> /Na <sup>+</sup> ion exchange in nonlinear optical glasses: diffusion and optical properties. <i>Applied Optics</i> , 2000, 39, 435.	2.1	17
50	Preparation and characterization of germanium oxysulfide glassy films for optics. <i>Materials Research Bulletin</i> , 2008, 43, 1179-1187.	2.7	17
51	Local thermodynamic equilibrium and related metrological issues involving collisional-radiative model in laser-induced aluminum plasmas. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2009, 64, 931-937.	1.5	17
52	XANES and EXAFS study of glasses of the TiO <sub>2</sub> -Na <sub>2</sub> O-P <sub>2</sub> O <sub>5</sub> system. <i>Journal of Non-Crystalline Solids</i> , 1994, 168, 132-136.	1.5	16
53	Femtosecond laser structuring of silver-containing glass: Silver redistribution, selective etching, and surface topology engineering. <i>Journal of Applied Physics</i> , 2015, 118, .	1.1	16
54	Structural influence on the femtosecond laser ability to create fluorescent patterns in silver-containing sodium-gallium phosphate glasses. <i>Optical Materials Express</i> , 2018, 8, 3748.	1.6	16

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55	Visualization of intracellular Ca <sup>2+</sup> dynamics with simultaneous two-photon-excited fluorescence and third-harmonic generation microscopes. <i>Applied Physics Letters</i> , 2001, 79, 4045-4047.	1.5	15
56	Towards second-harmonic generation micropatterning of glass surface. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	15
57	Analytical solution of a personalized intraocular lens design for the correction of spherical aberration and coma of a pseudophakic eye. <i>Biomedical Optics Express</i> , 2020, 11, 850.	1.5	15
58	Measurements of complex third-order optical susceptibility in a collinear pump-probe experiment. <i>Optics Letters</i> , 1998, 23, 1874.	1.7	14
59	Dual-color control and inhibition of direct laser writing in silver-containing phosphate glasses. <i>Optics Letters</i> , 2015, 40, 4134.	1.7	14
60	HOBIT. , 2017, , .		14
61	Refractive index change measurement by quantitative microscopy phase imaging for femtosecond laser written structures. <i>Optics Communications</i> , 2021, 485, 126731.	1.0	14
62	Heavy-oxide glasses with superior mechanical assets for nonlinear fiber applications in the mid-infrared. <i>Optical Materials Express</i> , 2021, 11, 1420.	1.6	14
63	Amplitude and phase measurements of femtosecond pulses shaped by use of spectral hole burning in free-base naphthalocyanine-doped films. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2003, 20, 1555.	0.9	13
64	Strong nuclear contribution to the optical Kerr effect in niobium oxide containing glasses. <i>Physical Review B</i> , 2007, 75, .	1.1	13
65	Enhancement of nanograting formation assisted by silver ions in a sodium gallophosphate glass. <i>Optics Letters</i> , 2014, 39, 5491.	1.7	13
66	Dense arrays of microscopic optical vortex generators from femtosecond direct laser writing of radial birefringence in glass. <i>Applied Physics Letters</i> , 2012, 100, 181901.	1.5	12
67	Direct-laser-written integrated mid-IR directional couplers in a BGG glass. <i>Optics Express</i> , 2021, 29, 8531.	1.7	12
68	Experimental and theoretical investigation of highly nonlinear optical glasses. <i>Solid State Communications</i> , 1992, 84, 1065-1067.	0.9	11
69	Durability study of a fluorescent optical memory in glass studied by luminescence spectroscopy. <i>Microelectronics Reliability</i> , 2013, 53, 1514-1518.	0.9	11
70	Nanoparticle generation inside Ag-doped LBG glass by femtosecond laser irradiation. <i>Optical Materials Express</i> , 2016, 6, 743.	1.6	10
71	Sub-diffraction-limited fluorescent patterns by tightly focusing polarized femtosecond vortex beams in a silver-containing glass. <i>Optics Express</i> , 2017, 25, 10565.	1.7	10
72	Femtosecond laser micro-patterning of optical properties and functionalities in novel photosensitive silver-containing fluorophosphate glasses. <i>Journal of Non-Crystalline Solids</i> , 2019, 517, 51-56.	1.5	10

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73	Laser writing of nonlinear optical properties in silver-doped phosphate glass. Optics Letters, 2017, 42, 1688.	1.7	9
74	Silver centers luminescence in phosphate glasses subjected to X-rays or combined X-rays and femtosecond laser exposure. International Journal of Applied Glass Science, 2020, 11, 15-26.	1.0	9
75	Complete pulse characterization: measurements of linear and nonlinear properties. Optics Communications, 2000, 181, 425-435.	1.0	8
76	Third-Harmonic Generation Microscopy for Material Characterization. Journal of the Optical Society of Korea, 2006, 10, 188-195.	0.6	8
77	Structural and Dynamical Insights from Vibrational Multipolar Analyses of Isotropic Media: Application to Molecular Liquid $CCl_4$ and Silica Glass $SiO_2$ . Journal of Physical Chemistry C, 2008, 112, 17906-17915.	1.5	8
78	Luminescence properties of micrometric structures induced by direct laser writing in silver containing phosphate glass. Journal of Non-Crystalline Solids, 2013, 377, 142-145.	1.5	8
79	Second-harmonic generation in sodium and niobium borophosphate glasses after poling under field-assisted silver ions anodic injection. Journal of Applied Physics, 2008, 104, 053114.	1.1	6
80	Non-collinear generation of third harmonic of IR ultrashort laser pulses by PTR glass volume Bragg gratings. Optics Express, 2009, 17, 3564.	1.7	6
81	Time-resolved cross-induced beam deformation: application to the determination of the femtosecond nonlinear processes involved in $CS_2$ . Optics Communications, 1996, 132, 583-592.	1.0	5
82	Precise and absolute measurements of complex third-order optical susceptibility. , 2000, , .		5
83	Efficient selection of focusing optics in non linear microscopy design through THG analysis. Optics Express, 2004, 12, 2317.	1.7	5
84	Two-photon excited fluorescence in the $LYB:Eu$ monoclinic crystal: towards a new scheme of single-beam dual-voxel direct laser writing in crystals. Optics Express, 2013, 21, 822.	1.7	5
85	Wavelength dependence of the orientation of optic axes in KGW. Applied Physics B: Lasers and Optics, 2014, 116, 831-836.	1.1	5
86	Double-Track Waveguides inside Calcium Fluoride Crystals. Crystals, 2020, 10, 109.	1.0	5
87	Ultrashort laser induced spatial redistribution of silver species and nano-patterning of etching selectivity in silver-containing glasses. Optics Express, 2019, 27, 13675.	1.7	5
88	High refractive index change in Type A laser modification using a multi-scan approach. Optical Materials Express, 2022, 12, 2297.	1.6	5
89	Nondestructive analysis of the transverse structure of novel optical fibers by third-harmonic-generation microscopy. Optics Letters, 2002, 27, 1391.	1.7	4
90	Characterization of optical nonlinearity in semiconductor photodiodes using cross-polarized autocorrelation. IEEE Journal of Quantum Electronics, 2004, 40, 1687-1694.	1.0	4

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91	Evolution of the linear and nonlinear optical properties of femtosecond laser exposed fused silica. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 2077.	0.9	4
92	Cross-correlation technique for dispersion characterization of chirped volume Bragg gratings. Applied Optics, 2009, 48, 5786.	2.1	4
93	Sectional chirped volume Bragg grating compressors for high-power chirped-pulse amplification. , 2010, , .		4
94	Examination of femtosecond laser matter interaction in multipulse regime for surface nanopatterning of vitreous substrates. Optics Express, 2013, 21, 29090.	1.7	4
95	AMI: Augmented Michelson Interferometer. Proceedings of SPIE, 2015, , .	0.8	4
96	Five-Dimensional Optical Data Storage Based on Ellipse Orientation and Fluorescence Intensity in a Silver-Sensitized Commercial Glass. Micromachines, 2020, 11, 1026.	1.4	4
97	Three-Dimensional High Spatial Localization of Efficient Resonant Energy Transfer from Laser-Assisted Precipitated Silver Clusters to Trivalent Europium Ions. Crystals, 2021, 11, 148.	1.0	4
98	Laser Direct Writing of Silver Clusters-Based Subwavelength Periodic Structures Embedded in Mid-Infrared Gallium Germanate Glass. Advanced Photonics Research, 2022, 3, .	1.7	4
99	Phase measurement in a collinear pump probe experiment: Application to molecular dynamics studies in liquids. Journal of Chemical Physics, 1998, 109, 7319-7327.	1.2	3
100	Orientation and polarization dependence of both the absorption and the laser efficiency around the optic axis in monoclinic $\text{Ho}^{3+}$ :KYW. Applied Physics B: Lasers and Optics, 2015, 120, 451-459.	1.1	3
101	Femtosecond Direct Laser Writing of Silver Clusters in Phosphate Glasses for X-ray Spatially-Resolved Dosimetry. Chemosensors, 2022, 10, 110.	1.8	3
102	Title is missing!. Journal of Fluorescence, 2002, 12, 197-199.	1.3	1
103	Strong nuclear contribution to the optical Kerr effect in niobium oxide containing glasses. , 2007, , .		1
104	Raman and fluorescence correlative microscopy in polarized light to probe local femtosecond laser-induced amorphization of the doped monoclinic crystal LYB:Eu. Chemical Physics Letters, 2013, 578, 70-75.	1.2	1
105	Optic axis dispersion in double tungstate crystals and laser operation at $2\frac{1}{4}\mu\text{m}$ . Proceedings of SPIE, 2014, , .	0.8	1
106	Individual design of aberration-free intraocular lenses. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2021, 38, 683.	0.8	1
107	Direct laser writing of double track waveguides inside calcium fluoride crystals (Conference) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tj		1
108	Fiber drawing ability and loss optimization of niobium rich borophosphate optical glass fibers. Optical Materials, 2022, 131, 112628.	1.7	1

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109	<title>Nondestructive analysis of the transverse structure of novel optical fibers by third harmonic generation microscopy</title>. , 2002, , .		0
110	Visualization of intracellular Ca <sup>2+</sup> dynamics with third-harmonic generation microscopy. , 2002, , .		0
111	Noninstantaneous femtosecond phase shift in second order cascading process. Optics Communications, 2003, 217, 381-386.	1.0	0
112	Lasers and applications as a motivation program for high school students. , 2003, 9663, 246.		0
113	Laser physics simulation program. , 2003, 9663, 76.		0
114	Moment-based Description for Assumption-free Single-shot Measurement of Femtosecond Laser Pulse Parameters via Two-photon-induced Photocurrents. , 2006, , .		0
115	Strong nuclear contribution to the optical Kerr effect in niobium oxide containing glasses. , 2007, , .		0
116	Aberrationless theory of self-focusing via spatial and angular variances for modal laser fields. Journal of the Optical Society of America B: Optical Physics, 2007, 24, 1901.	0.9	0
117	Third harmonic generation by volume Bragg grating in photo-thermo-refractive glass irradiated by IR femtosecond pulses. , 2008, , .		0
118	Plasma properties during the formation of &#x201C;nanograting&#x201D; structures inside fused silica. , 2008, , .		0
119	Direct laser writing of nonlinear properties in photosensitive glass. , 2011, , .		0
120	Wavelength dependence of the optical axis in double tungstate crystals. , 2013, , .		0
121	Raman and fluorescence correlative microscopy in polarized light to probe local femtosecond laser-induced amorphization of the doped monoclinic crystal LYB:Eu. MATEC Web of Conferences, 2013, 8, 04007.	0.1	0
122	Femtosecond Generation of Nano-Fibers. MATEC Web of Conferences, 2013, 8, 03006.	0.1	0
123	Femtosecond single-beam direct laser poling of silver-doped oxide glasses : correlation between fluorescence, metallic nanoparticles precipitation and effective second-order nonlinear optical properties. , 2014, , .		0
124	Femtosecond laser processing of silver-containing glass with optical vortex beams. Proceedings of SPIE, 2014, , .	0.8	0
125	Femtosecond laser writing of new type of waveguides in silver containing glasses (Conference) Tj ETQq1 1 0.784314 rgBT /Oylock 10		0
126	Laser Writing of 2D Nanostructures in Silver-Doped Phosphate Glass. , 2019, , .		0



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127	Angular selectivity of third harmonic generated in a PTR transmitting Bragg grating by femtosecond pulses. , 2008, , .		0
128	Femtosecond laser induced micro-structured silver containing glass as an engineered nonlinear optical material. , 2009, , .		0
129	Second harmonic generation by electro-poling in femtosecond laser induced micro-structured silver containing glass. , 2009, , .		0
130	Tailoring of the luminescence properties of a silver and zinc phosphate glass at the nanoscale. , 2010, , .		0
131	Second-harmonic generation by direct-laser-induced-poling in a femto-photo-luminescent glass. , 2010, , .		0
132	Development of photosensitive glasses for direct laser writing. , 2010, , .		0
133	Towards second harmonic generation micro-patterning of glass surface. , 2010, , .		0
134	Feature issue introduction: Progress in Ultrafast Laser Modifications of Materials. Optical Materials Express, 2013, 3, 1789.	1.6	0
135	Polarization-dependent angular distribution of the absorption behavior in ytterbium-doped monoclinic LYB and LGB laser crystals. Optical Engineering, 2017, 57, 1.	0.5	0
136	DLW of silver containing phosphate glass and fiber. , 2018, , .		0
137	Inscription of single mode waveguides for the mid-IR. , 2019, , .		0
138	Femtosecond laser writing of near-surface waveguides for refractive-index sensing. , 2020, , .		0