

# Lionel Canioni

## List of Publications by Year in descending order

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138  
papers

3,570  
citations

136950

32  
h-index

144013

57  
g-index

138  
all docs

138  
docs citations

138  
times ranked

3157  
citing authors

#	ARTICLE	IF	CITATIONS
1	Femtosecond Direct Laser Writing of Silver Clusters in Phosphate Glasses for X-ray Spatially-Resolved Dosimetry. Chemosensors, 2022, 10, 110.	3.6	3
2	High refractive index change in Type A laser modification using a multi-scan approach. Optical Materials Express, 2022, 12, 2297.	3.0	5
3	Laser Direct Writing of Silver Clusters-Based Subwavelength Periodic Structures Embedded in Mid-Infrared Gallo-Germanate Glass. Advanced Photonics Research, 2022, 3, .	3.6	4
4	Fiber drawing ability and loss optimization of niobium rich borophosphate optical glass fibers. Optical Materials, 2022, 131, 112628.	3.6	1
5	Three-Dimensional High Spatial Localization of Efficient Resonant Energy Transfer from Laser-Assisted Precipitated Silver Clusters to Trivalent Europium Ions. Crystals, 2021, 11, 148.	2.2	4
6	Direct-laser-written integrated mid-IR directional couplers in a BGG glass. Optics Express, 2021, 29, 8531.	3.4	12
7	Refractive index change measurement by quantitative microscopy phase imaging for femtosecond laser written structures. Optics Communications, 2021, 485, 126731.	2.1	14
8	Individual design of aberration-free intraocular lenses. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2021, 38, 683.	1.5	1
9	Heavy-oxide glasses with superior mechanical assets for nonlinear fiber applications in the mid-infrared. Optical Materials Express, 2021, 11, 1420.	3.0	14
10	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.	2.0	9
11	Direct 3D-printing of phosphate glass by fused deposition modeling. Materials and Design, 2020, 194, 108957.	7.0	31
12	Five-Dimensional Optical Data Storage Based on Ellipse Orientation and Fluorescence Intensity in a Silver-Sensitized Commercial Glass. Micromachines, 2020, 11, 1026.	2.9	4
13	Double-Track Waveguides inside Calcium Fluoride Crystals. Crystals, 2020, 10, 109.	2.2	5
14	Analytical solution of a personalized intraocular lens design for the correction of spherical aberration and coma of a pseudophakic eye. Biomedical Optics Express, 2020, 11, 850.	2.9	15
15	Femtosecond laser writing of near-surface waveguides for refractive-index sensing. , 2020, , .		0
16	Femtosecond laser micro-patterning of optical properties and functionalities in novel photosensitive silver-containing fluorophosphate glasses. Journal of Non-Crystalline Solids, 2019, 517, 51-56.	3.1	10
17	Laser Writing of 2D Nanostructures in Silver-Doped Phosphate Glass. , 2019, , .		0
18	Ultrashort laser induced spatial redistribution of silver species and nano-patterning of etching selectivity in silver-containing glasses. Optics Express, 2019, 27, 13675.	3.4	5

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19	Femtosecond laser writing of near-surface waveguides for refractive-index sensing. Optics Express, 2019, 27, 31130.	3.4	29
20	Comparative study between the standard type I and the type A femtosecond laser induced refractive index change in silver containing glasses. Optical Materials Express, 2019, 9, 2640.	3.0	18
21	Inscription of single mode waveguides for the mid-IR. , 2019, , .		0
22	Structural influence on the femtosecond laser ability to create fluorescent patterns in silver-containing sodium-gallium phosphate glasses. Optical Materials Express, 2018, 8, 3748.	3.0	16
23	On the femtosecond laser-induced photochemistry in silver-containing oxide glasses: mechanisms, related optical and physico-chemical properties, and technological applications. Advanced Optical Technologies, 2018, 7, 291-309.	1.7	41
24	Direct laser writing of double track waveguides inside calcium fluoride crystals (Conference) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 542 T		
25	DLW of silver containing phosphate glass and fiber. , 2018, , .		0
26	Femtosecond laser writing of new type of waveguides in silver containing glasses (Conference) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 46		
27	Direct laser writing of a new type of waveguides in silver containing glasses. Scientific Reports, 2017, 7, 11124.	3.3	46
28	HOBIT. , 2017, , .		14
29	Femtosecond laser direct inscription of mid-IR transmitting waveguides in BCG glasses. Optical Materials Express, 2017, 7, 3124.	3.0	29
30	Laser writing of nonlinear optical properties in silver-doped phosphate glass. Optics Letters, 2017, 42, 1688.	3.3	9
31	Sub-diffraction-limited fluorescent patterns by tightly focusing polarized femtosecond vortex beams in a silver-containing glass. Optics Express, 2017, 25, 10565.	3.4	10
32	Polarization-dependent angular distribution of the absorption behavior in ytterbium-doped monoclinic LYB and LGB laser crystals. Optical Engineering, 2017, 57, 1.	1.0	0
33	Nanoparticle generation inside Ag-doped LBG glass by femtosecond laser irradiation. Optical Materials Express, 2016, 6, 743.	3.0	10
34	Photowritable Silver-Containing Phosphate Glass Ribbon-Fibers. Advanced Optical Materials, 2016, 4, 162-168.	7.3	22
35	Modeling of cluster organization in metal-doped oxide glasses irradiated by a train of femtosecond laser pulses. Physical Review A, 2016, 93, .	2.5	20
36	High repetition rate femtosecond laser irradiation of fused silica studied by Raman spectroscopy. Optical Materials Express, 2016, 6, 79.	3.0	19

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37	Femtosecond laser structuring of silver-containing glass: Silver redistribution, selective etching, and surface topology engineering. Journal of Applied Physics, 2015, 118, .	2.5	16
38	AMI: Augmented Michelson Interferometer. Proceedings of SPIE, 2015, , .	0.8	4
39	Patterning linear and nonlinear optical properties of photosensitive glasses by femtosecond structured light. Optics Letters, 2015, 40, 201.	3.3	19
40	Dual-color control and inhibition of direct laser writing in silver-containing phosphate glasses. Optics Letters, 2015, 40, 4134.	3.3	14
41	Orientation and polarization dependence of both the absorption and the laser efficiency around the optic axis in monoclinic $\text{Ho}^{3+}:\text{KYW}$ . Applied Physics B: Lasers and Optics, 2015, 120, 451-459.	2.2	3
42	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
43	Enhancement of nanograting formation assisted by silver ions in a sodium gallophosphate glass. Optics Letters, 2014, 39, 5491.	3.3	13
44	Laser action along and near the optic axis of a holmium-doped $\text{KY}(\text{WO}_4)_2$ crystal. Optics Letters, 2014, 39, 6407.	3.3	23
45	Femtosecond laser processing of silver-containing glass with optical vortex beams. Proceedings of SPIE, 2014, , .	0.8	0
46	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
47	Application of a series of artificial neural networks to on-site quantitative analysis of lead into real soil samples by laser induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2014, 97, 57-64.	2.9	58
48	Review of Terahertz Tomography Techniques. Journal of Infrared, Millimeter, and Terahertz Waves, 2014, 35, 382-411.	2.2	201
49	Wavelength dependence of the orientation of optic axes in KGW. Applied Physics B: Lasers and Optics, 2014, 116, 831-836.	2.2	5
50	Good practices in LIBS analysis: Review and advices. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2014, 101, 171-182.	2.9	247
51	Femtosecond single-beam direct laser poling of stable and efficient second-order nonlinear optical properties in glass. Journal of Applied Physics, 2014, 115, .	2.5	27
52	Chemometrics Applied to Quantitative Analysis of Ternary Mixtures by Terahertz Spectroscopy. Analytical Chemistry, 2014, 86, 4927-4933.	6.5	71
53	Wavelength dependence of the optical axis in double tungstate crystals. , 2013, , .		0
54	Formation and thermo-assisted stabilization of luminescent silver clusters in photosensitive glasses. Materials Research Bulletin, 2013, 48, 1637-1644.	5.2	36

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55	Review in terahertz spectral analysis. TrAC - Trends in Analytical Chemistry, 2013, 44, 98-105.	11.4	149
56	Durability study of a fluorescent optical memory in glass studied by luminescence spectroscopy. Microelectronics Reliability, 2013, 53, 1514-1518.	1.7	11
57	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.	2.6	1
58	Luminescence properties of micrometric structures induced by direct laser writing in silver containing phosphate glass. Journal of Non-Crystalline Solids, 2013, 377, 142-145.	3.1	8
59	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.	3.4	5
60	Examination of femtosecond laser matter interaction in multipulse regime for surface nanopatterning of vitreous substrates. Optics Express, 2013, 21, 29090.	3.4	4
61	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. Optical Materials Express, 2013, 3, 1855.	3.0	26
62	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.	0.2	0
63	Femtosecond Generation of Nano-Fibers. MATEC Web of Conferences, 2013, 8, 03006.	0.2	0
64	Feature issue introduction: Progress in Ultrafast Laser Modifications of Materials. Optical Materials Express, 2013, 3, 1789.	3.0	0
65	Propagation beam consideration for 3D THz computed tomography. Optics Express, 2012, 20, 5817.	3.4	68
66	Three-dimensional direct femtosecond laser writing of second-order nonlinearities in glass. Optics Letters, 2012, 37, 1029.	3.3	43
67	Dense arrays of microscopic optical vortex generators from femtosecond direct laser writing of radial birefringence in glass. Applied Physics Letters, 2012, 100, 181901.	3.3	12
68	In Situ Semi-Quantitative Analysis of Polluted Soils by Laser-Induced Breakdown Spectroscopy (LIBS). Applied Spectroscopy, 2011, 65, 467-473.	2.2	45
69	Femtosecond laser induced photochemistry in materials tailored with photosensitive agents [Invited]. Optical Materials Express, 2011, 1, 866.	3.0	74
70	Direct laser writing of nonlinear properties in photosensitive glass. , 2011, , .		0
71	Silver Clusters Embedded in Glass as a Perennial High Capacity Optical Recording Medium. Advanced Materials, 2010, 22, 5282-5286.	21.0	200
72	Sectional chirped volume Bragg grating compressors for high-power chirped-pulse amplification. , 2010, , .		4

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73	Towards second-harmonic generation micropatterning of glass surface. Applied Physics Letters, 2010, 96, .	3.3	15
74	3D Patterning at the Nanoscale of Fluorescent Emitters in Glass. Journal of Physical Chemistry C, 2010, 114, 15584-15588.	3.1	76
75	Femtosecond laser structuring and optical properties of a silver and zinc phosphate glass. Journal of Non-Crystalline Solids, 2010, 356, 2658-2665.	3.1	43
76	Tailoring of the luminescence properties of a silver and zinc phosphate glass at the nanoscale. , 2010, , .		0
77	Second-harmonic generation by direct-laser-induced-poling in a femto-photo-luminescent glass. , 2010, , .		0
78	Development of photosensitive glasses for direct laser writing. , 2010, , .		0
79	Towards second harmonic generation micro-patterning of glass surface. , 2010, , .		0
80	Luminescence properties of silver zinc phosphate glasses following different irradiations. Journal of Luminescence, 2009, 129, 1514-1518.	3.1	59
81	Local thermodynamic equilibrium and related metrological issues involving collisional-radiative model in laser-induced aluminum plasmas. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2009, 64, 931-937.	2.9	17
82	Ultrashort laser pulse diffraction by transmitting volume Bragg gratings in photo-thermo-refractive glass. Optics Letters, 2009, 34, 2572.	3.3	19
83	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.	2.1	4
84	Non-collinear generation of third harmonic of IR ultrashort laser pulses by PTR glass volume Bragg gratings. Optics Express, 2009, 17, 3564.	3.4	6
85	Beat the diffraction limit in 3D direct laser writing in photosensitive glass. Optics Express, 2009, 17, 10304.	3.4	86
86	Cross-correlation technique for dispersion characterization of chirped volume Bragg gratings. Applied Optics, 2009, 48, 5786.	2.1	4
87	Femtosecond laser induced micro-structured silver containing glass as an engineered nonlinear optical material. , 2009, , .		0
88	Second harmonic generation by electro-poling in femtosecond laser induced micro-structured silver containing glass. , 2009, , .		0
89	Development of a mobile system based on laser-induced breakdown spectroscopy and dedicated to in situ analysis of polluted soils. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2008, 63, 1085-1090.	2.9	54
90	Preparation and characterization of germanium oxysulfide glassy films for optics. Materials Research Bulletin, 2008, 43, 1179-1187.	5.2	17

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91	Three-dimensional optical data storage using third-harmonic generation in silver zinc phosphate glass. Optics Letters, 2008, 33, 360.	3.3	102
92	Structural and Dynamical Insights from Vibrational Multipolar Analyses of Isotropic Media: Application to Molecular Liquid CCl <sub>4</sub> and Silica Glass SiO <sub>2</sub> . Journal of Physical Chemistry C, 2008, 112, 17906-17915.	3.1	8
93	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.	2.5	6
94	Third harmonic generation by volume Bragg grating in photo-thermo-refractive glass irradiated by IR femtosecond pulses. , 2008, , .		0
95	Plasma properties during the formation of nanograting structures inside fused silica. , 2008, , .		0
96	Angular selectivity of third harmonic generated in a PTR transmitting Bragg grating by femtosecond pulses. , 2008, , .		0
97	Strong nuclear contribution to the optical Kerr effect in niobium oxide containing glasses. , 2007, , .		1
98	Strong nuclear contribution to the optical Kerr effect in niobium oxide containing glasses. , 2007, , .		0
99	Strong nuclear contribution to the optical Kerr effect in niobium oxide containing glasses. Physical Review B, 2007, 75, .	3.2	13
100	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.	2.1	0
101	Towards quantitative laser-induced breakdown spectroscopy analysis of soil samples. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2007, 62, 1582-1589.	2.9	115
102	Laser-Induced Breakdown Spectroscopy of Composite Samples: A Comparison of Advanced Chemometrics Methods. Analytical Chemistry, 2006, 78, 1462-1469.	6.5	167
103	Third-Harmonic Generation Microscopy for Material Characterization. Journal of the Optical Society of Korea, 2006, 10, 188-195.	0.6	8
104	Effect of niobium oxide introduction on erbium luminescence in borophosphate glasses. Optical Materials, 2006, 28, 172-180.	3.6	38
105	Nonlinear refractive index of photo-thermo-refractive glass. Optical Materials, 2006, 28, 401-407.	3.6	21
106	Qualitative and quantitative investigation of chromium-polluted soils by laser-induced breakdown spectroscopy combined with neural networks analysis. Analytical and Bioanalytical Chemistry, 2006, 385, 256-262.	3.7	150
107	Moment-based Description for Assumption-free Single-shot Measurement of Femtosecond Laser Pulse Parameters via Two-photon-induced Photocurrents. , 2006, , .		0
108	Optical properties of infrared femtosecond laser-modified fused silica and application to waveguide fabrication. Journal of the Optical Society of America B: Optical Physics, 2005, 22, 2138.	2.1	59

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109	Characterization of optical nonlinearity in semiconductor photodiodes using cross-polarized autocorrelation. IEEE Journal of Quantum Electronics, 2004, 40, 1687-1694.	1.9	4
110	Time-resolved and time-integrated single-shot laser-induced plasma experiments using nanosecond and femtosecond laser pulses. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2004, 59, 1033-1039.	2.9	52
111	Precise and absolute measurements of the complex third-order optical susceptibility. Journal of the Optical Society of America B: Optical Physics, 2004, 21, 2180.	2.1	36
112	Efficient selection of focusing optics in non linear microscopy design trough THG analysis. Optics Express, 2004, 12, 2317.	3.4	5
113	Noninstantaneous femtosecond phase shift in second order cascading process. Optics Communications, 2003, 217, 381-386.	2.1	0
114	Second harmonic generation in poled tellurite glass. Journal of Non-Crystalline Solids, 2003, 332, 207-218.	3.1	19
115	Amplitude and phase measurements of femtosecond pulses shaped by use of spectral hole burning in free-base naphthalocyanine-doped films. Journal of the Optical Society of America B: Optical Physics, 2003, 20, 1555.	2.1	13
116	Lasers and applications as a motivation program for high school students. , 2003, 9663, 246.		0
117	Laser physics simulation program. , 2003, 9663, 76.		0
118	<title>Nondestructive analysis of the transverse structure of novel optical fibers by third harmonic generation microscopy</title>. , 2002, , .		0
119	Visualization of intracellular Ca <sup>2+</sup> dynamics with third-harmonic generation microscopy. , 2002, , .		0
120	Nondestructive analysis of the transverse structure of novel optical fibers by third-harmonic-generation microscopy. Optics Letters, 2002, 27, 1391.	3.3	4
121	Title is missing!. Journal of Fluorescence, 2002, 12, 197-199.	2.5	1
122	Imaging of Ca <sup>2+</sup> intracellular dynamics with a third-harmonic generation microscope. Optics Letters, 2001, 26, 515.	3.3	52
123	Coherent broadband pulse shaping in the mid infrared. Optics Letters, 2001, 26, 743.	3.3	35
124	Thermally poled new borate glasses for second harmonic generation. Journal of Non-Crystalline Solids, 2001, 290, 73-85.	3.1	27
125	Visualization of intracellular Ca <sup>2+</sup> dynamics with simultaneous two-photon-excited fluorescence and third-harmonic generation microscopes. Applied Physics Letters, 2001, 79, 4045-4047.	3.3	15
126	Complete pulse characterization: measurements of linear and nonlinear properties. Optics Communications, 2000, 181, 425-435.	2.1	8



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127	Planar waveguides formed by Ag <sup>+</sup> Na <sup>+</sup> ion exchange in nonlinear optical glasses: diffusion and optical properties. Applied Optics, 2000, 39, 435.	2.1	17
128	Precise and absolute measurements of complex third-order optical susceptibility. , 2000, , .		5
129	Glass Structure and Optical Nonlinearities in Thallium(I) Tellurium(IV) Oxide Glasses. Journal of Solid State Chemistry, 1999, 146, 329-335.	2.9	98
130	Precise measurements and analysis of linear and nonlinear optical properties of glass materials near 1.5 $\mu$ m. Optics Communications, 1998, 151, 241-246.	2.1	21
131	Measurements of complex third-order optical susceptibility in a collinear pump-probe experiment. Optics Letters, 1998, 23, 1874.	3.3	14
132	Phase measurement in a collinear pump probe experiment: Application to molecular dynamics studies in liquids. Journal of Chemical Physics, 1998, 109, 7319-7327.	3.0	3
133	Nonlinear optical properties for TiO <sub>2</sub> containing phosphate, borophosphate, and silicate glasses. Journal of Applied Physics, 1997, 81, 1481-1487.	2.5	34
134	Optical non-linearity in oxide glasses. Journal of Non-Crystalline Solids, 1996, 203, 96-101.	3.1	93
135	Time-resolved cross-induced beam deformation: application to the determination of the femtosecond nonlinear processes involved in CS <sub>2</sub> . Optics Communications, 1996, 132, 583-592.	2.1	5
136	Nonlinear optical properties of some tellurium (IV) oxide glasses. Materials Research Bulletin, 1994, 29, 933-941.	5.2	85
137	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. Journal of Non-Crystalline Solids, 1994, 168, 132-136.	3.1	16
138	Experimental and theoretical investigation of highly nonlinear optical glasses. Solid State Communications, 1992, 84, 1065-1067.	1.9	11