Matthieu Lancry

List of Publications by Year in descending order

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Version: 2024-02-01

97	1,728	304602	330025
papers	citations	22 h-index	37 g-index

99	99	99	889
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ultrafast nanoporous silica formation driven by femtosecond laser irradiation. Laser and Photonics Reviews, 2013, 7, 953-962.	4.4	151
2	Modification thresholds in femtosecond laser processing of pure silica: review of dependencies on laser parameters [Invited]. Optical Materials Express, 2011, 1, 766.	1.6	109
3	Anatomy of a femtosecond laser processed silica waveguide [Invited]. Optical Materials Express, 2011, 1, 998.	1.6	101
4	Dependence of the femtosecond laser refractive index change thresholds on the chemical composition of doped-silica glasses. Optical Materials Express, 2011, 1, 711.	1.6	72
5	Fictive temperature in silica-based glasses and its application to optical fiber manufacturing. Progress in Materials Science, 2012, 57, 63-94.	16.0	66
6	Non reciprocal writing and chirality in femtosecond laser irradiated silica. Optics Express, 2008, 16, 18354.	1.7	55
7	Three-dimensional photoprecipitation of oriented LiNbO_3-like crystals in silica-based glass with femtosecond laser irradiation. Optics Letters, 2012, 37, 2955.	1.7	47
8	UV laser processing and multiphoton absorption processes in optical telecommunication fiber materials. Physics Reports, 2013, 523, 207-229.	10.3	47
9	Systematic Control of Structural Changes in GeO₂ Glass Induced by Femtosecond Laser Direct Writing. Journal of the American Ceramic Society, 2015, 98, 1471-1477.	1.9	45
10	Modifications in lithium niobium silicate glass by femtosecond laser direct writing: morphology, crystallization, and nanostructure. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 160.	0.9	42
11	Nanoscale Phase Separation in Lithium Niobium Silicate Glass by Femtosecond Laser Irradiation. Journal of the American Ceramic Society, 2017, 100, 115-124.	1.9	40
12	Femtosecond Laser-Induced Crystallization in Glasses: Growth Dynamics for Orientable Nanostructure and Nanocrystallization. Crystal Growth and Design, 2019, 19, 2189-2205.	1.4	37
13	Nanogratings formation in multicomponent silicate glasses. Applied Physics B: Lasers and Optics, 2016, 122, 1.	1.1	35
14	Broadband anisotropy of femtosecond laser induced nanogratings in fused silica. Applied Physics Letters, 2013, 103, .	1.5	34
15	Nanoscale femtosecond laser milling and control of nanoporosity in the normal and anomalous regimes of GeO_2-SiO_2 glasses. Optical Materials Express, 2016, 6, 321.	1.6	33
16	Asymmetric Orientational Writing in glass with femtosecond laser irradiation. Optical Materials Express, 2013, 3, 1586.	1.6	32
17	Femtosecond laser written nanostructures in Ge-doped glasses. Optics Letters, 2016, 41, 1161.	1.7	30
18	Size-controlled oriented crystallization in SiO_2-based glasses by femtosecond laser irradiation. Journal of the Optical Society of America B: Optical Physics, 2014, 31, 376.	0.9	29

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19	Parity violation in chiral structure creation under femtosecond laser irradiation in silica glass?. Light: Science and Applications, 2016, 5, e16178-e16178.	7.7	29
20	Tunable angular-dependent second-harmonic generation in glass by controlling femtosecond laser polarization. Journal of the Optical Society of America B: Optical Physics, 2016, 33, 741.	0.9	28
21	Form birefringence induced in multicomponent glass by femtosecond laser direct writing. Optics Letters, 2016, 41, 2739.	1.7	27
22	The dependence of Raman defect bands in silica glasses on densification revisited. Journal of Materials Science, 2016, 51, 1659-1666.	1.7	24
23	Overview of high temperature fibre Bragg gratings and potential improvement using highly doped aluminosilicate glass optical fibres. JPhys Photonics, 2019, 1, 042001.	2.2	22
24	Pulse energy dependence of refractive index change in lithium niobium silicate glass during femtosecond laser direct writing. Optics Express, 2018, 26, 7460.	1.7	19
25	Femtosecond laser direct writing in SiO₂â€Al₂O₃ binary glasses and thermal stability of Type II permanent modifications. Journal of the American Ceramic Society, 2020, 103, 4286-4294.	1.9	19
26	An Overview of the Thermal Erasure Mechanisms of Femtosecond Laserâ€Induced Nanogratings in Silica Glass. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2100023.	0.8	19
27	Thermal stability of the 248-nm-induced presensitization process in standard H_2-loaded germanosilicate fibers. Applied Optics, 2002, 41, 7197.	2.1	18
28	Time-resolved plasma measurements in Ge-doped silica exposed to infrared femtosecond laser. Physical Review B, 2011, 84, .	1.1	18
29	Radiation hardening in sol-gel derived Er3+-doped silica glasses. Journal of Applied Physics, 2015, 118, .	1.1	18
30	Influence of photo-inscription conditions on the radiation-response of fiber Bragg gratings. Optics Express, 2015, 23, 8659.	1.7	18
31	Laser tailoring surface interactions, contact angles, drop topologies and the self-assembly of optical microwires. Optical Materials Express, 2013, 3, 284.	1.6	16
32	Kinetics of Thermally Activated Physical Processes in Disordered Media. Fibers, 2015, 3, 206-252.	1.8	16
33	Femtosecond laser processing induced low loss waveguides in multicomponent glasses. Optical Materials Express, 2017, 7, 3580.	1.6	16
34	A Comparison between Nanogratings-Based and Stress-Engineered Waveplates Written by Femtosecond Laser in Silica. Micromachines, 2020, 11, 131.	1.4	16
35	BAC activation by thermal quenching in bismuth/erbium codoped fiber. Optics Letters, 2019, 44, 1872.	1.7	16
36	Relaxation study of pre-densified silica glasses under 2.5â€‰MeV electron irradiation. Scientific Reports, 2019, 9, 1227.	1.6	15

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37	Compact Birefringent Waveplates Photo-Induced in Silica by Femtosecond Laser. Micromachines, 2014, 5, 825-838.	1.4	14
38	Ge- and Al-related point defects generated by gamma irradiation in nanostructured erbium-doped optical fiber preforms. Journal of Materials Science, 2016, 51, 10245-10261.	1.7	14
39	Thermal Stability of Type II Modifications by IR Femtosecond Laser in Silica-based Glasses. Sensors, 2020, 20, 762.	2.1	14
40	Photosensitivity of barium germano-gallate glasses under femtosecond laser direct writing for Mid-IR applications. Ceramics International, 2021, 47, 34235-34241.	2.3	14
41	Photo-induced densification in Er3+/Al doped silica preform plates using 193-nm laser light. Applied Physics B: Lasers and Optics, 2009, 94, 589-597.	1.1	13
42	Femtosecond laser direct processing in wet and dry silica glass. Journal of Non-Crystalline Solids, 2009, 355, 1057-1061.	1.5	13
43	Erasure of nanopores in silicate glasses induced by femtosecond laser irradiation in the Type II regime. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	1.1	13
44	3D Laser Engineering of Molten Core Optical Fibers: Toward a New Generation of Harsh Environment Sensing Devices. Advanced Optical Materials, 2022, 10, .	3.6	13
45	VUV and IR absorption spectra induced in H2-loaded and UV hyper-sensitized standard germanosilicate preform plates through exposure to ArF laser light. Journal of Non-Crystalline Solids, 2005, 351, 3773-3783.	1.5	12
46	Angular Dependence of the Second Harmonic Generation Induced by Femtosecond Laser Irradiation in Silica-Based Glasses: Variation with Writing Speed and Pulse Energy. World Journal of Nano Science and Engineering, 2015, 05, 96-106.	0.3	12
47	Lifetime prediction of nanogratings inscribed by a femtosecond laser in silica glass. Optics Letters, 2022, 47, 1242.	1.7	12
48	Gold Nanoparticles Reshaped by Ultrafast Laser Irradiation Inside a Silica-Based Glass, Studied Through Optical Properties. Journal of Physical Chemistry C, 2012, 116, 2647-2655.	1.5	11
49	One-step photoinscription of asymmetrically oriented fresnoite-type crystals in glass by ultrafast laser. Optics Letters, 2014, 39, 5423.	1.7	11
50	Unique silica polymorph obtained under electron irradiation. Applied Physics Letters, 2019, 115, 251101.	1.5	10
51	Radiation-induced absorption and photobleaching in erbium Alâ€“Ge-codoped optical fiber. Journal of Materials Science, 2020, 55, 14326-14335.	1.7	10
52	Towards a Rationalization of Ultrafast Laser-Induced Crystallization in Lithium Niobium Borosilicate Glasses: The Key Role of the Scanning Speed. Crystals, 2021, 11, 290.	1.0	10
53	Tunability of form birefringence induced by femtosecond laser irradiation in anionâ€doped silica glass. Journal of the American Ceramic Society, 2017, 100, 3912-3919.	1.9	9
54	Single crystal growth, optical absorption and luminescence properties under VUV-UV synchrotron excitation of type III Ce3+:KGd(PO3)4, a promising scintillator material. Scientific Reports, 2018, 8, 11002.	1.6	9

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55	Radiation hardening of silica glass through fictive temperature reduction. International Journal of Applied Glass Science, 2017, 8, 285-290.	1.0	8
56	Polarization-oriented LiNbO₃ nanocrystals by femtosecond laser irradiation in LiO₂â€“Nb₂O₅â€“SiO₂â€“B₂O₃ glasses. Optical Materials Express, 2021, 11, 1313.	1.6	8
57	Spectral dependence of femtosecond laser induced circular optical properties in silica. OSA Continuum, 2019, 2, 1233.	1.8	8
58	Application and validation of a viscosity approach to the existence of nanogratings in oxide glasses. Optical Materials, 2022, 130, 112576.	1.7	8
59	Reliable Lifetime Prediction for Passivated Fiber Bragg Gratings for Telecommunication Applications. Fibers, 2014, 2, 92-107.	1.8	7
60	Radiation hardening of sol gel-derived silica fiber preforms through fictive temperature reduction. Applied Optics, 2016, 55, 7455.	2.1	7
61	Femtosecond Laser Direct Writing of Gradient Index Fresnel Lens in GeS2-Based Chalcogenide Glass for Imaging Applications. Applied Sciences (Switzerland), 2022, 12, 4490.	1.3	7
62	Fictive-Temperature Mapping in Highly Ge-Doped Multimode Optical Fibers. Journal of Lightwave Technology, 2007, 25, 1198-1205.	2.7	6
63	New theory of femtosecond induced changes and nanopore formation. , 2012, , .		6
64	Asymmetric orientational writing dependence on polarization and direction in Li2Oâ€“Nb2O5â€“SiO2 glass with femtosecond laser irradiation. Applied Physics B: Lasers and Optics, 2014, 117, 737-747.	1.1	6
65	Ultrashort pulse laser processing of silica at high repetition ratesâ€”from network change to residual strain. International Journal of Applied Glass Science, 2017, 8, 233-238.	1.0	6
66	EPR reversible signature of self-trapped holes in fictive temperature-treated silica glass. Journal of Applied Physics, 2018, 123, .	1.1	6
67	Study of femtosecond laser-induced circular optical properties in silica by Mueller matrix spectropolarimetry. Optics Letters, 2017, 42, 4103.	1.7	6
68	Accurate modeling of radiation-induced absorption in Er-Alâ€“doped silica fibers exposed to high-energy ionizing radiations. Optics Express, 2020, 28, 4694.	1.7	5
69	Impact of Al₂O₃ doping on Bi active center photobleaching in Bi/Er-codoped fibers. Optics Letters, 2020, 45, 4016.	1.7	5
70	Helical distributed feedback fiber Bragg gratings and rocking filters in a 3D printed preform-drawn fiber. Optics Letters, 2020, 45, 5444.	1.7	5
71	Thermal and Electron Plasma Effects on Phase Separation Dynamics Induced by Ultrashort Laser Pulses. Crystals, 2022, 12, 496.	1.0	5
72	Mechanisms of Bragg grating formation in UV hypersensitized standard germanosilicate fibers with KrF laser light. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 1556.	0.9	4

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73	Abnormal elemental redistribution in silicate glasses irradiated by ultrafast laser. Journal of Alloys and Compounds, 2017, 727, 444-448.	2.8	4
74	Space-Selective Control of Functional Crystals by Femtosecond Laser: A Comparison between SrO-TiO2-SiO2 and Li2O-Nb2O5-SiO2 Glasses. Crystals, 2020, 10, 979.	1.0	4
75	Thermal Stability of Type II Modifications Inscribed by Femtosecond Laser in a Fiber Drawn from a 3D Printed Preform. Applied Sciences (Switzerland), 2021, 11, 600.	1.3	4
76	Stress-induced optical waveguides written by an ultrafast laser in Nd³⁺, Y³⁺ co-doped SrF₂ crystals. Applied Optics, 2019, 58, 984.	0.9	4
77	Fictive Temperature Measurements in Silicabased Optical Fibers and Its Application to Rayleigh Loss Reduction. , 0, , .		4
78	Self-organized submicron fibers in single crystal from high temperature elaboration. Solid State Sciences, 2008, 10, 508-512.	1.5	3
79	Study of Radiation Effects on Er3+-Doped Nanoparticles Germano-Silica Fibers. Journal of Lightwave Technology, 2016, 34, 4981-4987.	2.7	3
80	Single crystal growth, optical absorption and luminescence properties under VUV-UV synchrotron excitation of type III Pr3+:KGd(PO3)4. Scientific Reports, 2020, 10, 6712.	1.6	3
81	Grating writing in structured optical fibers. Photonic Sensors, 2011, 1, 199-203.	2.5	2
82	Low Loss Multimode Optical Fibers via Fictive Temperature Reduction by Means of Outer-Cladding Na Doping. Journal of Lightwave Technology, 2016, 34, 1238-1241.	2.7	2
83	Femtosecond laser-induced circular dichroism in silica: Dependence on energy and focusing depth. Nuclear Instruments & Methods in Physics Research B, 2018, 435, 258-262.	0.6	2
84	Study of femtosecond laser writing in the bulk of Nd3+, Y3+ co-doped CaF2 crystals. OSA Continuum, 2019, 2, 151.	1.8	2
85	Photonic crystal-like material synthesized by self-organization. Journal of Crystal Growth, 2009, 311, 1152-1155.	0.7	1
86	Structure Characterizations and Molecular Dynamics Simulations of Melt, Glass, and Glass Fibers. , 2021, , 89-216.		1
87	Femtosecond laser direct writing of a Fresnel zone plate in glasses for mid-infrared imaging applications. , 2021, , .		1
88	Elaboration of a Specific Class of Metamaterial: Glass in Single Crystal. , 0, , .		0
89	Asymmetric orientational writing dependence on polarization and direction in glass with femtosecond laser irradiation. MATEC Web of Conferences, 2013, 8, 04003.	0.1	0
90	A review of viscoelastic tuning of FBGs during regeneration. , 2014, , .		0

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91	Viscoelastic tuning of fibre Bragg gratings during regeneration. Proceedings of SPIE, 2014, , .	0.8	0
92	Temperature Evolution in the Thin Silica Film on Industrial Glass Due to Treatment with ns UV Laser. , 2019, , .		0
93	Thermal Stability of Type II Modifications by IR Femtosecond Laser in Highly-Doped Aluminosilicate Glass Optical Fibers. , 2021, , .		0
94	Polarization controlled orientation of LiNbO3 nanocrystals induced in Li2O â€“ Nb2O5 â€“ SiO2 â€“ B2O3 glasses by femtosecond laser irradiation. , 2021, , .		0
95	Investigation of radiation resistance of Er3+ doped germano-silica fibers by means of SiO2 and Al2O3 nanoparticles. , 2016, , .		0
96	Improving optical fiber preform radiation resistance through fictive temperature reduction. , 2016, , .		0
97	Temperature reversible Self-Trapped Holes in fictive temperature-treated silica. , 2018, , .		0