Christophe Moser

List of Publications by Year
in descending order

168 papers	4,527 citations	145106 33 h-index	129628 63 g-index
169 all docs	169 docs citations	169 times ranked	4414 citing authors

#	Article	IF	Citations
1	Lock-in incoherent differential phase contrast imaging. Photonics Research, 2022, 10, 237.	3.4	4
2	Learning to image and compute with multimode optical fibers. Nanophotonics, 2022, 11, 1071-1082.	2.9	15
3	Tomographic Volumetric Additive Manufacturing of Silicon Oxycarbide Ceramics. Advanced Engineering Materials, 2022, 24, .	1.6	25
4	A constrained method for lensless coherent imaging of thin samples. Applied Optics, 2022, 61, F34.	0.9	3
5	Lock-in amplified differential phase contrast. , 2022, , .		0
6	Volumetric Bioprinting of Organoids and Optically Tuned Hydrogels to Build Liverâ€Like Metabolic Biofactories. Advanced Materials, 2022, 34, e2110054.	11.1	100
7	Controlling Light in Scattering Materials for Volumetric Additive Manufacturing. Advanced Science, 2022, 9, e2105144.	5.6	41
8	Lock-in Raman difference spectroscopy. Optics Express, 2022, 30, 28601.	1.7	2
9	Fully automated detection, segmentation, and analysis of in vivo RPE single cells. Eye, 2021, 35, 1473-1481.	1.1	2
10	An Intrinsicallyâ€Adhesive Family of Injectable and Photoâ€Curable Hydrogels with Functional Physicochemical Performance for Regenerative Medicine. Macromolecular Rapid Communications, 2021, 42, e2000660.	2.0	25
11	Reusability report: Predicting spatiotemporal nonlinear dynamics in multimode fibre optics with a recurrent neural network. Nature Machine Intelligence, 2021, 3, 387-391.	8.3	20
12	Full characterization of partially measured systems with neural networks. , 2021, , .		0
13	Smart 3D Volumetric Printing. , 2021, , .		0
14	Degradation study on molecules released from laser-based jet injector. International Journal of Pharmaceutics, 2021, 602, 120664.	2.6	5
15	Volumetric Additive Manufactuing of Ceramics. , 2021, , .		0
16	Spatial self-beam cleaning in spatiotemporally mode-locked fiber lasers. , 2021, , .		0
17	Tomographic Volumetric Additive Manufacturing in Scattering Resins. , 2021, , .		4
18	Optical computing with spatiotemporal fiber nonlinearities. , 2021, , .		0

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19	High-resolution microfabrication through a graded-index multimode optical fiber. , 2021, , .		0
20	Scalable optical learning operator. Nature Computational Science, 2021, 1, 542-549.	3.8	67
21	Direct (3+1)D laser writing of graded-index optical elements. Optica, 2021, 8, 1281.	4.8	31
22	Lock-In Amplified Differential Phase Contrast. , 2021, , .		0
23	Learning to See and Compute through Multimode Fibers. , 2021, , .		0
24	Actor neural networks for the robust control of partially measured nonlinear systems showcased for image propagation through diffuse media. Nature Machine Intelligence, 2020, 2, 403-410.	8.3	46
25	Spectral and Spatial Shaping of Spatiotemporal Nonlinearities in Multimode Fibers. , 2020, , .		0
26	Needle-free delivery of fluids from compact laser-based jet injector. Lab on A Chip, 2020, 20, 3784-3791.	3.1	14
27	Fabrication of Sub-Micron Polymer Waveguides through Two-Photon Polymerization in Polydimethylsiloxane. Polymers, 2020, 12, 2485.	2.0	24
28	Deep Learning-Based Image Classification through a Multimode Fiber in the Presence of Wavelength Drift. Applied Sciences (Switzerland), 2020, 10, 3816.	1.3	16
29	Additive micro-manufacturing of crack-free PDCs by two-photon polymerization of a single, low-shrinkage preceramic resin. Additive Manufacturing, 2020, 35, 101343.	1.7	24
30	Repetitive regime of highly focused liquid microjets for needle-free injection. Scientific Reports, 2020, 10, 5067.	1.6	19
31	Transscleral optical phase imaging of the human retina. Nature Photonics, 2020, 14, 439-445.	15.6	25
32	High-resolution tomographic volumetric additive manufacturing. Nature Communications, 2020, 11, 852.	5.8	217
33	In vitro Implementation of Photopolymerizable Hydrogels as a Potential Treatment of Intracranial Aneurysms. Frontiers in Bioengineering and Biotechnology, 2020, 8, 261.	2.0	11
34	Pulsatile Flow-Induced Fatigue-Resistant Photopolymerizable Hydrogels for the Treatment of Intracranial Aneurysms. Frontiers in Bioengineering and Biotechnology, 2020, 8, 619858.	2.0	7
35	Single-mode output by controlling the spatiotemporal nonlinearities in mode-locked femtosecond multimode fiber lasers. Advanced Photonics, 2020, 2, .	6.2	75
36	Dispersion-Managed Soliton Multimode Fiber Laser. , 2020, , .		4

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37	All-fiber spatiotemporally mode-locked laser with multimode fiber-based filtering. Optics Express, 2020, 28, 23433.	1.7	37
38	Computer generated optical volume elements by additive manufacturing. Nanophotonics, 2020, 9, 4173-4181.	2.9	19
39	Multimode fiber projection with machine learning. , 2020, , .		0
40	Phase sensitivity in differential phase contrast microscopy: limits and strategies to improve it. Optics Express, 2020, 28, 33767.	1.7	10
41	Imaging through multimode fibers using deep learning: The effects of intensity versus holographic recording of the speckle pattern. Optical Fiber Technology, 2019, 52, 101985.	1.4	47
42	Volumetric Bioprinting of Complex Livingâ€Tissue Constructs within Seconds. Advanced Materials, 2019, 31, e1904209.	11.1	286
43	Editors' Choiceâ€"Solar-Electrochemical Platforms for Sodium Hypochlorite Generation in Developing Countries. Journal of the Electrochemical Society, 2019, 166, E336-E346.	1.3	6
44	Learning Spatiotemporal Nonlinearities in Graded-Index Multimode Fibers with Deep Neural Networks. , 2019, , .		0
45	Biofabrication: Volumetric Bioprinting of Complex Livingâ€Tissue Constructs within Seconds (Adv.) Tj ETQq1 1 0.784314 rgBT /Overlock	11.1	9
46	A versatile and membrane-less electrochemical reactor for the electrolysis of water and brine. Energy and Environmental Science, 2019, 12, 1592-1604.	15.6	80
47	Wavelength Independent Image Classification through a Multimode Fiber using Deep Neural Networks. , 2019, , .		1
48	Selective femtosecond laser ablation via two-photon fluorescence imaging through a multimode fiber. Biomedical Optics Express, 2019, 10, 423.	1.5	35
49	Efficient Image Classification through a Multimode Fiber using Deep Neural Networks in presence of Wavelength Drifting. , 2019, , .		2
50	Raman imaging through multimode sapphire fiber. Optics Express, 2019, 27, 1090.	1.7	14
51	Photoinitiator-free multi-photon fabrication of compact optical waveguides in polydimethylsiloxane. Optical Materials Express, 2019, 9, 128.	1.6	22
52	Spatiotemporal self-similar fiber laser. Optica, 2019, 6, 1412.	4.8	102
53	Deep learning assisted image transmission in multimode fibers. , 2019, , .		0
54	Two-photon imaging and selective laser ablation of cochlea hair cells through a multimode fiber probe. , 2019, , .		0

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55	Deep neural networks for seeing through multimode fibers. , 2019, , .		1
56	Integrated Platform for Multi-resolution Additive Manufacturing. , 2018, , 145-151.		1
57	Compact in-line lensfree digital holographic microscope. Methods, 2018, 136, 17-23.	1.9	16
58	Multimode optical fiber transmission with a deep learning network. Light: Science and Applications, 2018, 7, 69.	7.7	221
59	Composite Double-Network Hydrogels To Improve Adhesion on Biological Surfaces. ACS Applied Materials & Interfaces, 2018, 10, 38692-38699.	4.0	81
60	Transmission in Multimode Fiber with Deep Learning. , 2018, , .		0
61	Depth-controlled laser-induced jet injection for direct three-dimensional liquid delivery. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	1.1	10
62	Single-photon three-dimensional microfabrication through a multimode optical fiber. Optics Express, 2018, 26, 1766.	1.7	29
63	Compact lensless subpixel resolution large field of view microscope. Optics Letters, 2018, 43, 1654.	1.7	10
64	Effect of backscattering in phase contrast imaging of the retina. Optics Express, 2018, 26, 6785.	1.7	8
65	Learning to see through multimode fibers. Optica, 2018, 5, 960.	4.8	274
66	Wavefront shaping for ultrashort pulse delivery through optical fibers for imaging and ablation. , 2018, , .		0
67	Photoinitiator-free laser fabrication of ultra-compact, low-loss waveguides in polydimethylsiloxane. , 2018, , .		0
68	Multiple speckle illumination for optical-resolution photoacoustic imaging. Proceedings of SPIE, 2017, , .	0.8	2
69	See-through ophthalmoscope for retinal imaging. Journal of Biomedical Optics, 2017, 22, 056006.	1.4	3
70	A 25.1% Efficient Standâ€Alone Solar Chloralkali Generator Employing a Microtracking Solar Concentrator. Global Challenges, 2017, 1, 1700095.	1.8	6
71	Imaging and pattern projection through multicore fibers using the memory effect. , 2017, , .		0
72	Compact lensless phase imager. Optics Express, 2017, 25, 4438.	1.7	8

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73	Three-dimensional microfabrication through a multimode optical fiber. Optics Express, 2017, 25, 7031.	1.7	28
74	High power, ultrashort pulse control through a multi-core fiber for ablation. Optics Express, 2017, 25, 11491.	1.7	21
75	Compact lensless off-axis transmission digital holographic microscope. Optics Express, 2017, 25, 16652.	1.7	29
76	Bend translation in multimode fiber imaging. Optics Express, 2017, 25, 6263.	1.7	47
77	Dynamic control of laser-induced flow-focused microjets.. , 2017, , .		0
78	Femtosecond pulse delivery through multi-core fibers for imaging and ablation. , 2017, , .		0
79	Versatile spectral modulation of a broadband source for digital holographic microscopy. Optics Express, 2016, 24, 27791.	1.7	6
80	Calibration-free imaging through a multicore fiber using speckle scanning microscopy. Optics Letters, 2016, 41, 3078.	1.7	41
81	Two-photon fluorescence imaging through multicore fiber with digital phase conjugation. Proceedings of SPIE, 2016, , .	0.8	0
82	Laser-assisted inkjet printing of highly viscous fluids with sub-nozzle resolution. Proceedings of SPIE, 2016, , .	0.8	2
83	Imaging with Multimode Fibers. Optics and Photonics News, 2016, 27, 24.	0.4	31
84	Two-photon excitation endoscopy through a multimode optical fiber. Proceedings of SPIE, 2016, , .	0.8	0
85	Inkjet Printing of Viscous Monodisperse Microdroplets by Laser-Induced Flow Focusing. Physical Review Applied, 2016, 6, .	1.5	55
86	Solar-to-Hydrogen Production at 14.2% Efficiency with Silicon Photovoltaics and Earth-Abundant Electrocatalysts. Journal of the Electrochemical Society, 2016, 163, F1177-F1181.	1.3	85
87	Lensless two-photon imaging through a multicore fiber with coherence-gated digital phase conjugation. Journal of Biomedical Optics, 2016, 21, 045002.	1.4	28
88	In-situ photopolymerized and monitored implants: successful application to an intervertebral disc replacement. Proceedings of SPIE, 2016, , .	0.8	0
89	Confocal microscopy via multimode fibers: fluorescence bandwidth. Proceedings of SPIE, 2016, , .	0.8	1
90	Complex light in 3D printing. , 2016, , .		1

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91	Fluorescence and optical-resolution photoacoustic imaging through capillary waveguides. , 2016, , .		0
92	Flat lensless phase imager. Proceedings of SPIE, 2016, , .	0.8	0
93	A photopolymerized composite hydrogel and surgical implanting tool for a nucleus pulposus replacement. Biomaterials, 2016, 88, 110-119.	5.7	51
94	The memory effect in multicore fibers. , 2016, , .		0
95	Focusing and scanning of femtosecond pulses through a multimode fiber: applications in two-photon imaging and polymerization. , 2016, , .		1
96	Two-photon imaging through a multimode fiber. Optics Express, 2015, 23, 32158.	1.7	97
97	Enhanced resolution in a multimode fiber imaging system. Optics Express, 2015, 23, 27484.	1.7	16
98	Light control in a multicore fiber using the memory effect. Optics Express, 2015, 23, 30532.	1.7	38
99	Towards new applications using capillary waveguides. Biomedical Optics Express, 2015, 6, 4619.	1.5	20
100	Delivery of an ultrashort spatially focused pulse to the other end of a multimode fiber using digital phase conjugation. , 2015, , .		0
101	Optical-resolution photoacoustic imaging through thick tissue with a thin capillary as a dual optical-in acoustic-out waveguide. Applied Physics Letters, 2015, 106, .	1.5	20
102	Miniature probe for the delivery and monitoring of a photopolymerizable material. Journal of Biomedical Optics, 2015, 20, 127001.	1.4	14
103	Time-gated digital phase conjugation for two-photon excitation microscopy through multimode optical fibers. , 2015, , .		0
104	Confocal microscopy through a multimode fiber using optical correlation. Optics Letters, 2015, 40, 5754.	1.7	31
105	Photo-polymerization, swelling and mechanical properties of cellulose fibre reinforced poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Over	3.8	48
106	Development of an in situ controllable polymerization tool and process for hydrogel used to replace nucleus pulposus. Proceedings of SPIE, 2015, , .	0.8	0
107	Delivery of ultrashort spatially focused pulses through a multimode fiber. , 2015, , .		0
108	Delivery of ultrashort spatially focused pulses through a multimode fiber for two photon endoscopic imaging. Proceedings of SPIE, 2015, , .	0.8	0

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109	In-situ photopolymerization and monitoring device for controlled shaping of tissue fillers, replacements, or implants. , 2015, , .		2
110	Complex pattern projection through a multimode fiber. Proceedings of SPIE, 2015, , .	0.8	3
111	Vapor-fed microfluidic hydrogen generator. Lab on A Chip, 2015, 15, 2287-2296.	3.1	37
112	Delivery of focused short pulses through a multimode fiber. Optics Express, 2015, 23, 9109.	1.7	93
113	Digital confocal microscopy through a multimode fiber. Optics Express, 2015, 23, 23845.	1.7	132
114	Digital confocal microscopy through a multimode fiber. , 2015, , .		0
115	Self-tracking solar concentration: Improvements to the demonstrator. , 2014, , .		0
116	Photopolymerizable hydrogels for implants: Monte-Carlo modeling and experimentalin vitrovalidation. Journal of Biomedical Optics, 2014, 19, 035004.	1.4	15
117	Minimally invasive photopolymerization in intervertebral disc tissue cavities. , 2014, , .		2
118	Proof of principle demonstration of a self-tracking concentrator. Optics Express, 2014, 22, A498.	1.7	29
119	Off-axis digital holographic camera for quantitative phase microscopy. Biomedical Optics Express, 2014, 5, 1721.	1.5	13
120	Self-tracking solar concentrator with an acceptance angle of 32Â°. Optics Express, 2014, 22, A1880.	1.7	28
121	Curved Holographic Combiner for Color Head Worn Display. Journal of Display Technology, 2014, 10, 444-449.	1.3	13
122	Design principles of deployable solar-hydrogen generators. , 2014, , .		0
123	Design and cost considerations for practical solar-hydrogen generators. Energy and Environmental Science, 2014, 7, 3828-3835.	15.6	140
124	Focusing of an ultrashort pulse through a multimode fiber using Digital Phase Conjugation. , 2014, , .		0
125	Curved transflective holographic screens for head-mounted display. , 2013, , .		3
126	Optical-resolution photoacoustic microscopy by use of a multimode fiber. Applied Physics Letters, 2013, 102, .	1.5	38

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127	Multi-scale modeling of photopolymerization for medical hydrogel-implant design. , 2013, , .		3
128	Increasing the imaging capabilities of multimode fibers by exploiting the properties of highly scattering media. Optics Letters, 2013, 38, 2776.	1.7	31
129	Full field vertical scanning in short coherence digital holographic microscope. Optics Express, 2013, 21, 12643.	1.7	7
130	High-resolution, lensless endoscope based on digital scanning through a multimode optical fiber. Biomedical Optics Express, 2013, 4, 260.	1.5	277
131	Dynamic bending compensation while focusing through a multimode fiber. Optics Express, 2013, 21, 22504.	1.7	99
132	Focused light delivery and all optical scanning from a multimode optical fiber using digital phase conjugation. , 2013, , .		3
133	Quantitative phase noise in a two-color low coherence digital holographic microscope. Proceedings of SPIE, 2013, , .	0.8	3
134	Self-tracking planar concentrator using a solar actuated phase-change mechanism. , 2013, , .		4
135	Microscopy with multimode fibers. Proceedings of SPIE, 2013, , .	0.8	0
136	Imaging using multimode fibers. , 2013, , .		3
137	Proof-of concept for a self-tracking solar concentrator. , 2013, , .		1
138	Multimode fiber based endoscope. , 2013, , .		0
139	Light induced fluidic waveguide coupling. Optics Express, 2012, 20, A924.	1.7	21
140	Discrete tunable laser for 3D imaging. , 2012, , .		1
141	Single shot dual wavelength full field imaging in low coherence digital holographic microscopy. , 2012, , .		0
142	Trackfree planar solar concentrator system. Proceedings of SPIE, 2012, , .	0.8	3
143	Miniature self-aligned external cavity tunable single frequency laser for THz generation. Proceedings of SPIE, 2012, , .	0.8	0
144	Focusing and scanning light through a multimode optical fiber using digital phase conjugation. Optics Express, 2012, 20, 10583.	1.7	341

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145	Light induced fluidic waveguide coupling. Optics Express, 2012, 20, A924-31.	1.7	0
146	Compact single mode tunable laser using a digital micromirror device. Optics Express, 2011, 19, 14642.	1.7	7
147	Dual wavelength full field imaging in low coherence digital holographic microscopy. Optics Express, 2011, 19, 24005.	1.7	38
148	Compact fast multi-wavelength switchable single frequency laser. Proceedings of SPIE, 2010, , .	0.8	0
149	Distortion free pulse stretching and compression by chirped volume holographic gratings. Proceedings of SPIE, 2010, , .	0.8	1
150	Compact Raman spectrometer system for low frequency spectroscopy. Proceedings of SPIE, 2010, , .	0.8	3
151	Compact Low Frequency Raman Spectroscopy System. , 2010, , .		3
152	A novel tunable diode laser using volume holographic gratings. , 2009, , .		2
153	Ultra-narrow-band tunable laserline notch filter. Applied Physics B: Lasers and Optics, 2009, 95, 597-601.	1.1	26
154	External-cavity lasers based on a volume holographic grating at normal incidence for spectroscopy in the visible range. Optics Communications, 2009, 282, 3119-3123.	1.0	19
155	Compact self-aligned external cavity lasers using volume gratings. Proceedings of SPIE, 2009, , .	0.8	0
156	Fabrication and applications of volume holographic optical filters in glass. Journal Physics D: Applied Physics, 2008, 41, 224003.	1.3	11
157	Self-aligned non-dispersive external cavity tunable laser. Optics Express, 2008, 16, 16691.	1.7	17
158	Volume Holographic Grating Wavelength Stabilized Laser Diodes. IEEE Journal of Selected Topics in Quantum Electronics, 2007, 13, 672-678.	1.9	59
159	Holographic Filters. , 2007, , 295-319.		1
160	Fabrication and applications of holographic optical filters. , 2007, , .		0
161	Beam-width-dependent filtering properties of strong volume holographic gratings. Applied Optics, 2006, 45, 3774.	2.1	13
162	Volume holographic grating-based continuously tunable optical filter. Optical Engineering, 2004, 43, 2017.	0.5	39

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163	Multi-notch holographic filters for atmospheric lines suppression. , 2004, 5494, 554.		12
164	Folded shift multiplexing. Optics Letters, 2003, 28, 899.	1.7	3
165	Holographic memory with localized recording. Applied Optics, 2001, 40, 3909.	2.1	9
166	<title>Localized holographic recording in doubly doped lithium niobate</title>. , 2000, 4089, 118.		0
167	Localized holographic recording in doubly doped lithium niobate. Optics Letters, 2000, 25, 162.	1.7	24
168	Diffraction efficiency of localized holograms in doubly doped LiNbO_3 crystals. Optics Letters, 2000, 25, 1243.	1.7	17