

# Fatih Omer Ilday

## List of Publications by Year in descending order

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154  
papers

6,167  
citations

87888

38  
h-index

66911

78  
g-index

155  
all docs

155  
docs citations

155  
times ranked

3741  
citing authors

#	ARTICLE	IF	CITATIONS
1	Self-Similar Evolution of Parabolic Pulses in a Laser. <i>Physical Review Letters</i> , 2004, 92, 213902.	7.8	773
2	Ablation-cooled material removal with ultrafast bursts of pulses. <i>Nature</i> , 2016, 537, 84-88.	27.8	596
3	Soliton-like similariton fibre laser. <i>Nature Photonics</i> , 2010, 4, 307-311.	31.4	456
4	Highly nonlinear As <sub>2</sub> S <sub>3</sub> glasses for all-optical switching. <i>Optics Letters</i> , 2002, 27, 119.	3.3	348
5	Nonlinear laser lithography for indefinitely large-area nanostructuring with femtosecond pulses. <i>Nature Photonics</i> , 2013, 7, 897-901.	31.4	267
6	High-performance, tensile-strained Ge p-i-n photodetectors on a Si platform. <i>Applied Physics Letters</i> , 2005, 87, 103501.	3.3	205
7	Femtosecond fiber lasers with pulse energies above 10 <sup>2</sup> nJ. <i>Optics Letters</i> , 2005, 30, 1888.	3.3	182
8	Generation of 50-fs, 5-nJ pulses at 1031.4nm from a wave-breaking-free fiber laser. <i>Optics Letters</i> , 2003, 28, 1365.	3.3	173
9	Highly nonlinear Ge-As-S and Ge-As-S-Se glasses for all-optical switching. <i>IEEE Photonics Technology Letters</i> , 2002, 14, 822-824.	2.5	167
10	All-fiber all-normal dispersion laser with a fiber-based Lyot filter. <i>Optics Letters</i> , 2010, 35, 1296.	3.3	158
11	83 W, 31 MHz, square-shaped, 1 ns-pulsed all-fiber-integrated laser for micromachining. <i>Optics Express</i> , 2011, 19, 17647.	3.4	141
12	High-energy femtosecond stretched-pulse fiber laser with a nonlinear optical loop mirror. <i>Optics Letters</i> , 2002, 27, 1531.	3.3	132
13	Femtosecond ytterbium fiber laser with photonic crystal fiber for dispersion control. <i>Optics Express</i> , 2002, 10, 1497.	3.4	131
14	Generation of 2-nJ pulses from a femtosecond ytterbium fiber laser. <i>Optics Letters</i> , 2003, 28, 660.	3.3	126
15	Generation of 36-femtosecond pulses from a ytterbium fiber laser. <i>Optics Express</i> , 2003, 11, 3550.	3.4	111
16	In-chip microstructures and photonic devices fabricated by nonlinear laser lithography deep inside silicon. <i>Nature Photonics</i> , 2017, 11, 639-645.	31.4	101
17	Highly stable ultrabroadband mid-IR optical parametric chirped-pulse amplifier optimized for superfluorescence suppression. <i>Optics Letters</i> , 2009, 34, 1639.	3.3	96
18	Breaking crosstalk limits to dynamic holography using orthogonality of high-dimensional random vectors. <i>Nature Photonics</i> , 2019, 13, 251-256.	31.4	88

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19	Generation of parabolic bound pulses from a Yb-fiber laser. Optics Express, 2006, 14, 6075.	3.4	78
20	Fiber delivery of femtosecond pulses from a Ti:sapphire laser. Optics Letters, 2001, 26, 1320.	3.3	72
21	Generation of sub-100-fs pulses at up to 200 MHz repetition rate from a passively mode-locked Yb-doped fiber laser. Optics Express, 2005, 13, 2716.	3.4	65
22	High-Repetition-Rate Ultrafast Fiber Lasers for Material Processing. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-12.	2.9	64
23	Controllable Raman-like nonlinearities from nonstationary, cascaded quadratic processes. Journal of the Optical Society of America B: Optical Physics, 2004, 21, 376.	2.1	63
24	All-Fiber Low-Noise High-Power Femtosecond Yb-Fiber Amplifier System Seeded by an All-Normal Dispersion Fiber Oscillator. IEEE Journal of Selected Topics in Quantum Electronics, 2009, 15, 145-152.	2.9	63
25	Nonlinearity management: a route to high-energy soliton fiber lasers. Journal of the Optical Society of America B: Optical Physics, 2002, 19, 470.	2.1	60
26	Generation of 287 W, 55 ps pulses at 78 MHz repetition rate from a cryogenically cooled Yb:YAG amplifier seeded by a fiber chirped-pulse amplification system. Optics Letters, 2008, 33, 2473.	3.3	60
27	Texturing of titanium (Ti6Al4V) medical implant surfaces with MHz-repetition-rate femtosecond and picosecond Yb-doped fiber lasers. Optics Express, 2011, 19, 10986.	3.4	57
28	Long-wavelength continuum generation about the second dispersion zero of a tapered fiber. Optics Letters, 2002, 27, 1558.	3.3	55
29	Intensity noise of mode-locked fiber lasers. Optics Letters, 2009, 34, 2516.	3.3	55
30	Femtosecond laser written waveguides deep inside silicon. Optics Letters, 2017, 42, 3028.	3.3	55
31	High-power Yb-based all-fiber laser delivering 300â€‰fs pulses for high-speed ablation-cooled material removal. Optics Letters, 2018, 43, 535.	3.3	55
32	Fibre-based source of femtosecond pulses tunable from 1.0 to 1.3â€‰[micro sign]m. Electronics Letters, 2004, 40, 1523.	1.0	54
33	1ÂµJ pulse bursts from a Yb-doped fiber amplifier. Optics Letters, 2012, 37, 2586.	3.3	51
34	Fiber amplification of pulse bursts up to 20â€‰pJ pulse energy at 1â€‰kHz repetition rate. Optics Letters, 2011, 36, 3383.	3.3	45
35	Possibility of self-similar pulse evolution in a Ti:sapphire laser. Optics Express, 2004, 12, 2731.	3.4	44
36	High-power high-repetition-rate single-mode Er-Yb-doped fiber laser system. Optics Express, 2012, 20, 9471.	3.4	42

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37	Generation of picosecond pulses directly from a 100-W, burst-mode, doping-managed Yb-doped fiber amplifier. <i>Optics Letters</i> , 2014, 39, 236.	3.3	41
38	Rich complex behaviour of self-assembled nanoparticles far from equilibrium. <i>Nature Communications</i> , 2017, 8, 14942.	12.8	40
39	Universality of dissipative self-assembly from quantum dots to human cells. <i>Nature Physics</i> , 2020, 16, 795-801.	16.7	39
40	3.5-GHz intra-burst repetition rate ultrafast Yb-doped fiber laser. <i>Optics Communications</i> , 2016, 366, 404-409.	2.1	38
41	In-Volume Laser Direct Writing of Silicon—Challenges and Opportunities. <i>Laser and Photonics Reviews</i> , 2021, 15, 2100140.	8.7	38
42	Nano patterning of AISI 316L stainless steel with Nonlinear Laser Lithography: Sliding under dry and oil-lubricated conditions. <i>Tribology International</i> , 2016, 99, 67-76.	5.9	35
43	All-fiber-integrated soliton-similariton laser with in-line fiber filter. <i>Optics Letters</i> , 2012, 37, 3489.	3.3	32
44	Burst-mode thulium all-fiber laser delivering femtosecond pulses at a 1-GHz intra-burst repetition rate. <i>Optics Letters</i> , 2017, 42, 3808.	3.3	32
45	220-fs erbium-ytterbium:glass laser mode locked by a broadband low-loss silicon/germanium saturable absorber. <i>Optics Letters</i> , 2005, 30, 329.	3.3	31
46	Diffraction-limited, 10-W, 5-ns, 100-kHz, all-fiber laser at 155- $\mu$ m. <i>Optics Letters</i> , 2014, 39, 2695.	3.3	31
47	Microjoule-energy, 1 MHz repetition rate pulses from all-fiber-integrated nonlinear chirped-pulse amplifier. <i>Optics Letters</i> , 2010, 35, 959.	3.3	30
48	Burst-mode Yb-doped fiber amplifier system optimized for low-repetition-rate operation. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2015, 32, 900.	2.1	29
49	Doping management for high-power fiber lasers: 100 W, few-picosecond pulse generation from an all-fiber-integrated amplifier. <i>Optics Letters</i> , 2012, 37, 3042.	3.3	28
50	Direct control of mode-locking states of a fiber laser. <i>Optica</i> , 2016, 3, 1312.	9.3	28
51	Sub-50-fs Yb-doped laser with anomalous-dispersion photonic crystal fiber. <i>Optics Letters</i> , 2013, 38, 956.	3.3	27
52	Pulse fidelity control in a 20-ps sub-200-fs monolithic Yb-fiber amplifier. <i>Laser Physics</i> , 2011, 21, 1329-1335.	1.2	26
53	Intracavity optical trapping of microscopic particles in a ring-cavity fiber laser. <i>Nature Communications</i> , 2019, 10, 2683.	12.8	21
54	Amplified spontaneous emission in high-power burst-mode fiber lasers. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2015, 32, 2462.	2.1	20

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55	Development of a Fiber Laser with Independently Adjustable Properties for Optical Resolution Photoacoustic Microscopy. Scientific Reports, 2016, 6, 38674.	3.3	18
56	Nonlinearity-tailored fiber laser technology for low-noise, ultra-wideband tunable femtosecond light generation. Photonics Research, 2017, 5, 750.	7.0	18
57	Nonlinear laser lithography to control surface properties of stainless steel. CIRP Annals - Manufacturing Technology, 2015, 64, 193-196.	3.6	17
58	175 fs-long pulses from a high-power single-mode Er-doped fiber laser at 1550 nm. Optics Communications, 2017, 403, 381-384.	2.1	17
59	Air-guided photonic-crystal-fiber pulse-compression delivery of multimegawatt femtosecond laser output for nonlinear-optical imaging and neurosurgery. Applied Physics Letters, 2012, 100, 101104.	3.3	15
60	NLL-Assisted Multilayer Graphene Patterning. ACS Omega, 2018, 3, 1546-1554.	3.5	15
61	All-fiber nonlinearity- and dispersion-managed dissipative soliton nanotube mode-locked laser. Applied Physics Letters, 2015, 107, .	3.3	14
62	Cavity-enhanced optical parametric chirped-pulse amplification. Optics Letters, 2006, 31, 637.	3.3	13
63	Simulations and experiments showing the origin of multiwavelength mode locking in femtosecond, Yb-fiber lasers. Journal of the Optical Society of America B: Optical Physics, 2016, 33, 1668.	2.1	11
64	Frequency shifting with local nonlinearity management in nonuniformly poled quadratic nonlinear materials. Optics Letters, 2004, 29, 763.	3.3	10
65	Generation of 2- $\mu\text{J}$ 410-fs pulses from a single-mode chirped-pulse fiber laser operating at 1550 nm. Applied Physics B: Lasers and Optics, 2018, 124, 1.	2.2	10
66	Application of a mode-locked fiber laser for highly time resolved broadband absorption spectroscopy and laser-assisted breakdown on micro-plasmas. Journal Physics D: Applied Physics, 2012, 45, 245202.	2.8	9
67	Multiscale Self-Assembly of Silicon Quantum Dots into an Anisotropic Three-Dimensional Random Network. Nano Letters, 2016, 16, 1942-1948.	9.1	9
68	Demonstration of a cavity-enhanced optical parametric chirped-pulse amplification system. Optics Letters, 2011, 36, 1206.	3.3	8
69	Semianalytic theory of self-similar optical propagation and mode locking using a shape-adaptive model pulse. Physical Review A, 2011, 83, .	2.5	8
70	Towards high-performance optical master oscillators for energy recovery linacs. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 557, 299-304.	1.6	7
71	Broadly tunable carrier envelope phase stable optical parametric amplifier pumped by a monolithic ytterbium fiber amplifier. Optics Letters, 2009, 34, 2799.	3.3	7
72	Fiber laser-microscope system for femtosecond photodisruption of biological samples. Biomedical Optics Express, 2012, 3, 605.	2.9	7

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73	Prediction of pulse-to-pulse intensity fluctuation characteristics of high power ultrafast fiber amplifiers. Applied Physics Letters, 2014, 105, 011111.	3.3	7
74	Phase Noise Characteristics of Fiber Lasers as Potential Ultra-Stable Master Oscillators. , 0, , .		6
75	Discrete Similariton and Dissipative Soliton Modelocking for Energy Scaling Ultrafast Thin-Disk Laser Oscillators. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-12.	2.9	6
76	The alignment of nematic liquid crystal by the Ti layer processed by nonlinear laser lithography. Liquid Crystals, 2018, 45, 1265-1271.	2.2	5
77	Stabilized Optical Fiber Links for the XFEL. , 0, , .		4
78	Automatic feedback control of an Er-doped fiber laser with an intracavity loss modulator. Optics Letters, 2005, 30, 1066.	3.3	4
79	Ansatz from nonlinear optics applied to trapped Bose-Einstein condensates. Physical Review A, 2007, 75, .	2.5	4
80	Tailored Design of Mode-Locking Dynamics for Low-Noise Frequency-Comb Generation. Physical Review Applied, 2018, 10, .	3.8	4
81	Turbulent times. Nature Photonics, 2013, 7, 767-769.	31.4	3
82	All-fiber Yb-doped laser mode-locked by nanotubes. , 2013, , .		3
83	Development of a rapid-scan fiber-integrated terahertz spectrometer. Optical and Quantum Electronics, 2014, 46, 495-503.	3.3	3
84	Focus issue introduction: Advanced Solid-State Lasers (ASSL) 2014. Optics Express, 2015, 23, 8170.	3.4	3
85	Mode-locking dissected. Nature Physics, 2020, 16, 504-505.	16.7	3
86	Progress in Large-Scale Femtosecond Timing Distribution and RF-Synchronization. , 0, , .		2
87	Timing distribution and RF-synchronization with mode-locked lasers. , 0, , .		2
88	Ultra-low timing-jitter passively mode-locked fiber lasers for long-distance timing synchronization. , 2006, , .		2
89	Theoretical analysis of doping management. , 2013, , .		2
90	A novel fiber laser development for photoacoustic microscopy. Proceedings of SPIE, 2013, , .	0.8	2

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91	Non-thermal material and tissue processing with 100 MHz and 500 MHz repetition rate bursts. , 2013, , .		2
92	Balancing gain narrowing with self phase modulation: 100-fs, 800-nJ from an all-fiber-integrated Yb amplifier. , 2013, , .		2
93	High-speed, thermal damage-free ablation of brain tissue with femtosecond pulse bursts. , 2015, , .		2
94	All-fiber burst mode laser system integrated with OCT for cataract surgery. , 2015, , .		2
95	Theoretical analysis of doping management and its effects on power scaling. Turkish Journal of Electrical Engineering and Computer Sciences, 2016, 24, 2336-2348.	1.4	2
96	Focus issue introduction: Advanced Solid-State Lasers (ASSL) 2015. Optics Express, 2016, 24, 5674.	3.4	2
97	Pulse Shaping for a Long-Distance Optical Synchronization System. IEICE Transactions on Electronics, 2007, E90-C, 450-456.	0.6	2
98	Computer-generated holograms embedded in bulk silicon with nonlinear laser lithography. , 2016, , .		2
99	High-energy femtosecond fiber lasers. , 2004, 5335, 253.		1
100	Theory of the self-similar laser oscillator. , 2006, , .		1
101	Intracavity optical trapping with Ytterbium doped fiber ring laser. , 2013, , .		1
102	33-fs Yb-fiber laser comb locked to Cs-atomic clock. , 2013, , .		1
103	Generation of 1.2-nJ, 62-fs, chirp-free pulses directly from a Yb-doped fiber oscillator. , 2015, , .		1
104	Generation of dissipative solitons in normal-dispersion Raman fiber laser. , 2015, , .		1
105	Laser-slicing of silicon with 3D nonlinear laser lithography. , 2017, , .		1
106	Ablation-cooled material removal at high speed with femtosecond pulse bursts. , 2015, , .		1
107	Micromachining with square-shaped 1 ns-long pulses from an all-fiber Yb-doped laser-amplifier system. , 2011, , .		1
108	Nonlinear chirped-pulse amplification of a soliton-similariton laser to $\sim 1 \text{ } \mu\text{J}$ at 1550 nm. , 2012, , .		1

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109	Spectrally breathing femtosecond pulses from an Er-doped fiber laser. , 2008, , .		1
110	Nonlinear Laser Lithography for Enhanced Tribological Properties. , 2015, , .		1
111	Applying the principle of orthogonality of high dimensional random vectors to obtain high-density, large-volume 3D holographic display. , 2018, , .		1
112	Laser writing of nanostructures deep inside Gallium Arsenide (GaAs). , 2018, , .		1
113	Cavity-enhanced optical parametric chirped-pulse amplification. , 2006, , .		0
114	A balanced optical-RF phase detector. , 2006, , .		0
115	Soliton self-frequency shift from 1.03 $\mu\text{m}$ to 1.55 $\mu\text{m}$ and related timing jitter. , 2006, , .		0
116	Large Scale, Femtosecond Timing Distribution. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	0
117	All-fiber high-energy yb-doped fiber amplifier. , 2009, , .		0
118	Filterless all-normal dispersion fiber laser. , 2009, , .		0
119	All-normal-dispersion fiber lasers for frequency metrology. , 2011, , .		0
120	83 W, 1 ns, 3.1 MHz all-fiber laser for micromachining. , 2011, , .		0
121	Nonlinearity engineering of mode-locked fiber lasers: Similariton and soliton-similariton lasers. , 2011, , .		0
122	Repetition rate tuning of an ultrafast ytterbium doped fiber laser for terahertz time-domain spectroscopy. , 2013, , .		0
123	All-fiber nanosecond laser system generating supercontinuum spectrum for photoacoustic imaging. , 2013, , .		0
124	Sub-50 fs all-fiber Yb-doped laser with anomalous-dispersion photonic crystal fiber. , 2013, , .		0
125	Time- and position-dependent modeling of high-power low-repetition-rate Er-Yb-fiber amplifier. , 2013, , .		0
126	Physical model for subsurface silicon writing. , 2015, , .		0

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127	Highly stable periodic structures using nonlinear laser lithography. , 2015, , .		0
128	Nonlinearity management: From fiber oscillators to amplifiers. , 2015, , .		0
129	Ultrafast micromachining of Cu and Si at ultra-high repetition rates with pulse bursts. , 2015, , .		0
130	Holograms Deep Inside Silicon. , 2016, , .		0
131	All-fiber Combining Concepts in the Wavelength Range Around 2 $\mu\text{m}$ . , 2016, , .		0
132	Single-mode spectral beam combining of high power Tm-doped fiber lasers with WDM cascades. , 2016, , .		0
133	Noise induced creation and annihilation of solitons in dispersion managed fiber oscillators. Proceedings of SPIE, 2017, , .	0.8	0
134	Optical waveguides written deep inside silicon by femtosecond laser. , 2017, , .		0
135	3.5-W, femtosecond chirped pulse amplification fiber laser system at 1560 nm. , 2017, , .		0
136	50-W, 1.6-GHz pulse repetition rate from a burst-mode Yb-doped fiber laser. , 2017, , .		0
137	Buried waveguides written deep inside silicon. , 2017, , .		0
138	Two-photon excitation of quantum dots in 3D via stacked fresnel hologram algorithm. , 2017, , .		0
139	Slicing Crystalline Silicon Wafer by Deep Subsurface Laser Processing and Selective Chemical Etching. , 2019, , .		0
140	Low-noise femtosecond Cherenkov fiber laser, continuously tunable across the entire red-green-blue spectral range. EPJ Web of Conferences, 2019, 205, 01002.	0.3	0
141	2-micron optical parametric chirped pulse amplifier for long-wavelength driven high harmonic generation. , 2008, , .		0
142	Demonstration of Cavity-Enhanced Optical Parametric Chirped-Pulse Amplification System at High Repetition Rate. , 2010, , .		0
143	Microjoule Pulse Energies at 1 MHz Repetition Rate from an All-Fiber Nonlinear Chirped-Pulse Amplifier. , 2010, , .		0
144	Laser oscillator with nonlinear saturable absorber: A pump to signal noise transfer function model. , 2011, , .		0

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145	Development and characterization of all-normal dispersion fiber laser for frequency comb generation. , 2011, , .		0
146	Semi-Analytic Theory of Similariton Amplifiers and Laser Oscillators Using a Shape-Adaptive Model Pulse. , 2011, , .		0
147	High energy dissipative Raman soliton laser through XPM stabilization. , 2015, , .		0
148	All-Fiber, Single-Mode Spectral Beam Combining of High Power Tm-Doped Fiber Lasers. , 2015, , .		0
149	Nonlinearity Management of Fiber Oscillator with Multiple Gain Segments. , 2015, , .		0
150	Influence of Pump Noise on Mode-locked Fiber Oscillators. , 2015, , .		0
151	Ultrafast Burst-Mode Fiber Lasers: Source Development and Material Processing. , 2015, , .		0
152	Intracavity Dissipative Four-Wave Mixing at Different Dispersion Regimes of an Ultrafast Fiber Laser. , 2016, , .		0
153	All-Fiber Laser Systems That Can Operate in Burst Mode. , 2016, , .		0
154	Multi-GHz Burst-Mode Fiber Lasers. , 2020, , .		0