

# 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	Inâ€Volume Laser Direct Writing of Siliconâ€Challenges and Opportunities. Laser and Photonics Reviews, 2021, 15, 2100140.	8.7	38
2	Mode-locking dissected. Nature Physics, 2020, 16, 504-505.	16.7	3
3	Universality of dissipative self-assembly from quantum dots to human cells. Nature Physics, 2020, 16, 795-801.	16.7	39
4	Multi-GHz Burst-Mode Fiber Lasers. , 2020, , .		0
5	Slicing Crystalline Silicon Wafer by Deep Subsurface Laser Processing and Selective Chemical Etching. , 2019, , .		0
6	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
7	Intracavity optical trapping of microscopic particles in a ring-cavity fiber laser. Nature Communications, 2019, 10, 2683.	12.8	21
8	Breaking crosstalk limits to dynamic holography using orthogonality of high-dimensional random vectors. Nature Photonics, 2019, 13, 251-256.	31.4	88
9	High-Repetition-Rate Ultrafast Fiber Lasers for Material Processing. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-12.	2.9	64
10	The alignment of nematic liquid crystal by the Ti layer processed by nonlinear laser lithography. Liquid Crystals, 2018, 45, 1265-1271.	2.2	5
11	NLL-Assisted Multilayer Graphene Patterning. ACS Omega, 2018, 3, 1546-1554.	3.5	15
12	Generation of 2- $\mu\text{s}$ $\frac{1}{4}$ 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
13	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
14	High-power Yb-based all-fiber laser delivering 300â€™%â€™fs pulses for high-speed ablation-cooled material removal. Optics Letters, 2018, 43, 535.	3.3	55
15	Tailored Design of Mode-Locking Dynamics for Low-Noise Frequency-Comb Generation. Physical Review Applied, 2018, 10, .	3.8	4
16	Applying the principle of orthogonality of high dimensional random vectors to obtain high-density, large-volume 3D holographic display. , 2018, , .		1
17	Laser writing of nanostructures deep inside Gallium Arsenide (GaAs). , 2018, , .		1
18	Noise induced creation and annihilation of solitons in dispersion managed fiber oscillators. Proceedings of SPIE, 2017, , .	0.8	0

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19	Rich complex behaviour of self-assembled nanoparticles far from equilibrium. Nature Communications, 2017, 8, 14942.	12.8	40
20	In-chip microstructures and photonic devices fabricated by nonlinear laser lithography deep inside silicon. Nature Photonics, 2017, 11, 639-645.	31.4	101
21	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
22	Optical waveguides written deep inside silicon by femtosecond laser. , 2017, , .		0
23	3.5-W, femtosecond chirped pulse amplification fiber laser system at 1560 nm. , 2017, , .		0
24	50-W, 1.6-GHz pulse repetition rate from a burst-mode Yb-doped fiber laser. , 2017, , .		0
25	Nonlinearity-tailored fiber laser technology for low-noise, ultra-wideband tunable femtosecond light generation. Photonics Research, 2017, 5, 750.	7.0	18
26	Laser-slicing of silicon with 3D nonlinear laser lithography. , 2017, , .		1
27	Buried waveguides written deep inside silicon. , 2017, , .		0
28	Two-photon excitation of quantum dots in 3D via stacked fresnel hologram algorithm. , 2017, , .		0
29	Femtosecond laser written waveguides deep inside silicon. Optics Letters, 2017, 42, 3028.	3.3	55
30	Burst-mode thulium all-fiber laser delivering femtosecond pulses at a 1â€‰%â€‰GHz intra-burst repetition rate. Optics Letters, 2017, 42, 3808.	3.3	32
31	Holograms Deep Inside Silicon. , 2016, , .		0
32	Direct control of mode-locking states of a fiber laser. Optica, 2016, 3, 1312.	9.3	28
33	All-fiber Combining Concepts in the Wavelength Range Around 2 Âµm. , 2016, , .		0
34	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
35	Development of a Fiber Laser with Independently Adjustable Properties for Optical Resolution Photoacoustic Microscopy. Scientific Reports, 2016, 6, 38674.	3.3	18
36	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

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37	Ablation-cooled material removal with ultrafast bursts of pulses. Nature, 2016, 537, 84-88.	27.8	596
38	Focus issue introduction: Advanced Solid-State Lasers (ASSL) 2015. Optics Express, 2016, 24, 5674.	3.4	2
39	Single-mode spectral beam combining of high power Tm-doped fiber lasers with WDM cascades. , 2016, , .		0
40	Nano patterning of AISI 316L stainless steel with Nonlinear Laser Lithography: Sliding under dry and oil-lubricated conditions. Tribology International, 2016, 99, 67-76.	5.9	35
41	Multiscale Self-Assembly of Silicon Quantum Dots into an Anisotropic Three-Dimensional Random Network. Nano Letters, 2016, 16, 1942-1948.	9.1	9
42	3.5-GHz intra-burst repetition rate ultrafast Yb-doped fiber laser. Optics Communications, 2016, 366, 404-409.	2.1	38
43	Computer-generated holograms embedded in bulk silicon with nonlinear laser lithography. , 2016, , .		2
44	Intracavity Dissipative Four-Wave Mixing at Different Dispersion Regimes of an Ultrafast Fiber Laser. , 2016, , .		0
45	All-Fiber Laser Systems That Can Operate in Burst Mode. , 2016, , .		0
46	Generation of 1.2-nJ, 62-fs, chirp-free pulses directly from a Yb-doped fiber oscillator. , 2015, , .		1
47	Physical model for subsurface silicon writing. , 2015, , .		0
48	Highly stable periodic structures using nonlinear laser lithography. , 2015, , .		0
49	All-fiber nonlinearity- and dispersion-managed dissipative soliton nanotube mode-locked laser. Applied Physics Letters, 2015, 107, .	3.3	14
50	High-speed, thermal damage-free ablation of brain tissue with femtosecond pulse bursts. , 2015, , .		2
51	Amplified spontaneous emission in high-power burst-mode fiber lasers. Journal of the Optical Society of America B: Optical Physics, 2015, 32, 2462.	2.1	20
52	All-fiber burst mode laser system integrated with OCT for cataract surgery. , 2015, , .		2
53	Nonlinearity management: From fiber oscillators to amplifiers. , 2015, , .		0
54	Generation of dissipative solitons in normal-dispersion Raman fiber laser. , 2015, , .		1

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55	Ultrafast micromachining of Cu and Si at ultra-high repetition rates with pulse bursts. , 2015, , .		0
56	Nonlinear laser lithography to control surface properties of stainless steel. CIRP Annals - Manufacturing Technology, 2015, 64, 193-196.	3.6	17
57	Focus issue introduction: Advanced Solid-State Lasers (ASSL) 2014. Optics Express, 2015, 23, 8170.	3.4	3
58	Burst-mode Yb-doped fiber amplifier system optimized for low-repetition-rate operation. Journal of the Optical Society of America B: Optical Physics, 2015, 32, 900.	2.1	29
59	Ablation-cooled material removal at high speed with femtosecond pulse bursts. , 2015, , .		1
60	Nonlinear Laser Lithography for Enhanced Tribological Properties. , 2015, , .		1
61	High energy dissipative Raman soliton laser through XPM stabilization. , 2015, , .		0
62	All-Fiber, Single-Mode Spectral Beam Combining of High Power Tm-Doped Fiber Lasers. , 2015, , .		0
63	Nonlinearity Management of Fiber Oscillator with Multiple Gain Segments. , 2015, , .		0
64	Influence of Pump Noise on Mode-locked Fiber Oscillators. , 2015, , .		0
65	Ultrafast Burst-Mode Fiber Lasers: Source Development and Material Processing. , 2015, , .		0
66	Diffraction-limited, 10-W, 5-ns, 100-kHz, all-fiber laser at 155â€‰nm. Optics Letters, 2014, 39, 2695.	3.3	31
67	Generation of picosecond pulses directly from a 100â€‰W, burst-mode, doping-managed Yb-doped fiber amplifier. Optics Letters, 2014, 39, 236.	3.3	41
68	Prediction of pulse-to-pulse intensity fluctuation characteristics of high power ultrafast fiber amplifiers. Applied Physics Letters, 2014, 105, 011111.	3.3	7
69	Development of a rapid-scan fiber-integrated terahertz spectrometer. Optical and Quantum Electronics, 2014, 46, 495-503.	3.3	3
70	Nonlinear laser lithography for indefinitely large-area nanostructuring with femtosecond pulses. Nature Photonics, 2013, 7, 897-901.	31.4	267
71	Turbulent times. Nature Photonics, 2013, 7, 767-769.	31.4	3
72	Theoretical analysis of doping management. , 2013, , .		2

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73	Intracavity optical trapping with Ytterbium doped fiber ring laser. , 2013, , .		1
74	A novel fiber laser development for photoacoustic microscopy. Proceedings of SPIE, 2013, , .	0.8	2
75	Sub-50Åfs Yb-doped laser with anomalous-dispersion photonic crystal fiber. Optics Letters, 2013, 38, 956.	3.3	27
76	Repetition rate tuning of an ultrafast ytterbium doped fiber laser for terahertz time-domain spectroscopy. , 2013, , .		0
77	All-fiber nanosecond laser system generating supercontinuum spectrum for photoacoustic imaging. , 2013, , .		0
78	Non-thermal material and tissue processing with 100 MHz and 500 MHz repetition rate bursts. , 2013, , .		2
79	Balancing gain narrowing with self phase modulation: 100-fs, 800-nj from an all-fiber-integrated Yb amplifier. , 2013, , .		2
80	33-fs Yb-fiber laser comb locked to Cs-atomic clock. , 2013, , .		1
81	Sub-50 fs all-fiber Yb-doped laser with anomalous-dispersion photonic crystal fiber. , 2013, , .		0
82	All-fiber Yb-doped laser mode-locked by nanotubes. , 2013, , .		3
83	Time- and position-dependent modeling of high-power low-repetition-rate Er-Yb-fiber amplifier. , 2013, , .		0
84	Doping management for high-power fiber lasers: 100 W, few-picosecond pulse generation from an all-fiber-integrated amplifier. Optics Letters, 2012, 37, 3042.	3.3	28
85	Fiber laser-microscope system for femtosecond photodisruption of biological samples. Biomedical Optics Express, 2012, 3, 605.	2.9	7
86	High-power high-repetition-rate single-mode Er-Yb-doped fiber laser system. Optics Express, 2012, 20, 9471.	3.4	42
87	1ÅmJ pulse bursts from a Yb-doped fiber amplifier. Optics Letters, 2012, 37, 2586.	3.3	51
88	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
89	All-fiber-integrated solitonâ€™similariton laser with in-line fiber filter. Optics Letters, 2012, 37, 3489.	3.3	32
90	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

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91	Nonlinear chirped-pulse amplification of a soliton-similariton laser to $\sim 1 \text{ } \mu\text{J}$ at 1550 nm. , 2012, , .		1
92	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
93	83 W, 31 MHz, square-shaped, 1 ns-pulsed all-fiber-integrated laser for micromachining. Optics Express, 2011, 19, 17647.	3.4	141
94	Demonstration of a cavity-enhanced optical parametric chirped-pulse amplification system. Optics Letters, 2011, 36, 1206.	3.3	8
95	Fiber amplification of pulse bursts up to $20 \mu\text{J}$ pulse energy at 1 kHz repetition rate. Optics Letters, 2011, 36, 3383.	3.3	45
96	All-normal-dispersion fiber lasers for frequency metrology. , 2011, , .		0
97	Pulse fidelity control in a $20 \mu\text{J}$ sub-200-fs monolithic Yb-fiber amplifier. Laser Physics, 2011, 21, 1329-1335.	1.2	26
98	Semianalytic theory of self-similar optical propagation and mode locking using a shape-adaptive model pulse. Physical Review A, 2011, 83, .	2.5	8
99	83 W, 1 ns, 3.1 MHz all-fiber laser for micromachining. , 2011, , .		0
100	Nonlinearity engineering of mode-locked fiber lasers: Similariton and soliton-similariton lasers. , 2011, , .		0
101	Micromachining with square-shaped 1 ns-long pulses from an all-fiber Yb-doped laser-amplifier system. , 2011, , .		1
102	Laser oscillator with nonlinear saturable absorber: A pump to signal noise transfer function model. , 2011, , .		0
103	Development and characterization of all-normal dispersion fiber laser for frequency comb generation. , 2011, , .		0
104	Semi-Analytic Theory of Similariton Amplifiers and Laser Oscillators Using a Shape-Adaptive Model Pulse. , 2011, , .		0
105	Soliton-similariton fibre laser. Nature Photonics, 2010, 4, 307-311.	31.4	456
106	Microjoule-energy, 1 MHz repetition rate pulses from all-fiber-integrated nonlinear chirped-pulse amplifier. Optics Letters, 2010, 35, 959.	3.3	30
107	All-fiber all-normal dispersion laser with a fiber-based Lyot filter. Optics Letters, 2010, 35, 1296.	3.3	158
108	Demonstration of Cavity-Enhanced Optical Parametric Chirped-Pulse Amplification System at High Repetition Rate. , 2010, , .		0

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109	Microjoule Pulse Energies at 1 MHz Repetition Rate from an All-Fiber Nonlinear Chirped-Pulse Amplifier. , 2010, , .		0
110	All-fiber high-energy yb-doped fiber amplifier. , 2009, , .		0
111	Filterless all-normal dispersion fiber laser. , 2009, , .		0
112	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
113	Highly stable ultrabroadband mid-IR optical parametric chirped-pulse amplifier optimized for superfluorescence suppression. Optics Letters, 2009, 34, 1639.	3.3	96
114	Intensity noise of mode-locked fiber lasers. Optics Letters, 2009, 34, 2516.	3.3	55
115	Broadly tunable carrier envelope phase stable optical parametric amplifier pumped by a monolithic ytterbium fiber amplifier. Optics Letters, 2009, 34, 2799.	3.3	7
116	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
117	Spectrally breathing femtosecond pulses from an Er-doped fiber laser. , 2008, , .		1
118	2-micron optical parametric chirped pulse amplifier for long-wavelength driven high harmonic generation. , 2008, , .		0
119	Ansatz from nonlinear optics applied to trapped Bose-Einstein condensates. Physical Review A, 2007, 75, .	2.5	4
120	Large Scale, Femtosecond Timing Distribution. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	0
121	Pulse Shaping for a Long-Distance Optical Synchronization System. IEICE Transactions on Electronics, 2007, E90-C, 450-456.	0.6	2
122	Cavity-enhanced optical parametric chirped-pulse amplification. , 2006, , .		0
123	Cavity-enhanced optical parametric chirped-pulse amplification. Optics Letters, 2006, 31, 637.	3.3	13
124	Generation of parabolic bound pulses from a Yb-fiber laser. Optics Express, 2006, 14, 6075.	3.4	78
125	Ultra-low timing-jitter passively mode-locked fiber lasers for long-distance timing synchronization. , 2006, , .		2
126	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



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127	A balanced optical-RF phase detector. , 2006, , .		0
128	Soliton self-frequency shift from 1.03 $\mu\text{m}$ to 1.55 $\mu\text{m}$ and related timing jitter. , 2006, , .		0
129	Theory of the self-similar laser oscillator. , 2006, , .		1
130	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
131	220-fs erbium-ytterbium:glass laser mode locked by a broadband low-loss silicon/germanium saturable absorber. Optics Letters, 2005, 30, 329.	3.3	31
132	Automatic feedback control of an Er-doped fiber laser with an intracavity loss modulator. Optics Letters, 2005, 30, 1066.	3.3	4
133	Femtosecond fiber lasers with pulse energies above 10 <sup>2</sup> nJ. Optics Letters, 2005, 30, 1888.	3.3	182
134	High-performance, tensile-strained Ge p-i-n photodetectors on a Si platform. Applied Physics Letters, 2005, 87, 103501.	3.3	205
135	Fibre-based source of femtosecond pulses tunable from 1.0 to 1.3 $\mu\text{m}$ . Electronics Letters, 2004, 40, 1523.	1.0	54
136	Self-Similar Evolution of Parabolic Pulses in a Laser. Physical Review Letters, 2004, 92, 213902.	7.8	773
137	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
138	Possibility of self-similar pulse evolution in a Ti:sapphire laser. Optics Express, 2004, 12, 2731.	3.4	44
139	Frequency shifting with local nonlinearity management in nonuniformly poled quadratic nonlinear materials. Optics Letters, 2004, 29, 763.	3.3	10
140	High-energy femtosecond fiber lasers. , 2004, 5335, 253.		1
141	Generation of 2-nJ pulses from a femtosecond ytterbium fiber laser. Optics Letters, 2003, 28, 660.	3.3	126
142	Generation of 50-fs, 5-nJ pulses at 103 $\mu\text{m}$ from a wave-breaking-free fiber laser. Optics Letters, 2003, 28, 1365.	3.3	173
143	Generation of 36-femtosecond pulses from a ytterbium fiber laser. Optics Express, 2003, 11, 3550.	3.4	111
144	Highly nonlinear As <sub>2</sub> Se <sub>3</sub> glasses for all-optical switching. Optics Letters, 2002, 27, 119.	3.3	348

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145	High-energy femtosecond stretched-pulse fiber laser with a nonlinear optical loop mirror. Optics Letters, 2002, 27, 1531.	3.3	132
146	Long-wavelength continuum generation about the second dispersion zero of a tapered fiber. Optics Letters, 2002, 27, 1558.	3.3	55
147	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
148	Femtosecond ytterbium fiber laser with photonic crystal fiber for dispersion control. Optics Express, 2002, 10, 1497.	3.4	131
149	Highly nonlinear Ge-As-Se and Ge-As-S-Se glasses for all-optical switching. IEEE Photonics Technology Letters, 2002, 14, 822-824.	2.5	167
150	Fiber delivery of femtosecond pulses from a Ti:sapphire laser. Optics Letters, 2001, 26, 1320.	3.3	72
151	Stabilized Optical Fiber Links for the XFEL. , 0, , .		4
152	Progress in Large-Scale Femtosecond Timing Distribution and RF-Synchronization. , 0, , .		2
153	Phase Noise Characteristics of Fiber Lasers as Potential Ultra-Stable Master Oscillators. , 0, , .		6
154	Timing distribution and RF-synchronization with mode-locked lasers. , 0, , .		2