

Stelios Tzortzakis

List of Publications by Year in descending order

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155
papers

7,841
citations

53794

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h-index

51608

86
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all docs

156
docs citations

156
times ranked

4878
citing authors

#	ARTICLE	IF	CITATIONS
1	Terahertz emission from curved plasma filaments induced by two-color 2D-Airy wave packets. Optics Letters, 2022, 47, 1271-1274.	3.3	0
2	Submicron Organic-Inorganic Hybrid Radiative Cooling Coatings for Stable, Ultrathin, and Lightweight Solar Cells. ACS Photonics, 2022, 9, 1327-1337.	6.6	22
3	Altering the Surface Properties of Metal Alloys Utilizing Facile and Ecological Methods. Langmuir, 2022, 38, 4826-4838.	3.5	5
4	Ultrafast THz Self-action Graphene Based Modulators. , 2021, , .		0
5	Passive radiative cooling for the temperature and efficiency control of photovoltaics. , 2021, , .		1
6	Terahertz Generation from Curved Two-Color Filaments Induced by 2D Airy Wave Packets. , 2021, , .		0
7	Femtosecond Broadband Frequency Switch of Terahertz Three-Dimensional Meta-Atoms. ACS Photonics, 2021, 8, 1097-1102.	6.6	7
8	Combined nano and micro structuring for enhanced radiative cooling and efficiency of photovoltaic cells. Scientific Reports, 2021, 11, 11552.	3.3	30
9	Emission of Terahertz Waves from Curved Two-Color Filaments Produced by 2D Airy Wave Packets. , 2021, , .		0
10	Passive radiative cooler for solar cells™ temperature and efficiency control. , 2021, , .		0
11	Observation of Ultrafast THz Self-actions in Graphene Based Modulators. , 2021, , .		0
12	The Role of Gas Dynamics on Laser Filamentation THz Sources Operating at High Repetition Rates. , 2021, , .		0
13	In-Volume Laser Direct Writing of Silicon Challenges and Opportunities. Laser and Photonics Reviews, 2021, 15, 2100140.	8.7	38
14	Gas dynamics effect on laser filamentation THz sources at high repetition rates. , 2021, , .		0
15	Taming Ultrafast Laser Filaments for Optimized Semiconductor-Metal Welding. Laser and Photonics Reviews, 2021, 15, 2000433.	8.7	31
16	Laser-Driven Strong-Field Terahertz Sources. Advanced Optical Materials, 2020, 8, 1900681.	7.3	211
17	Powerful terahertz waves from long-wavelength infrared laser filaments. Light: Science and Applications, 2020, 9, 186.	16.6	35
18	Observation of extremely efficient terahertz generation from mid-infrared two-color laser filaments. Nature Communications, 2020, 11, 292.	12.8	186

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19	Passive radiative cooling and other photonic approaches for the temperature control of photovoltaics: a comparative study for crystalline silicon-based architectures. <i>Optics Express</i> , 2020, 28, 18548.	3.4	45
20	Impact of gas dynamics on laser filamentation THz sources at high repetition rates. <i>Optics Letters</i> , 2020, 45, 6835.	3.3	16
21	3D holographic light shaping for advanced multiphoton polymerization. <i>Optics Letters</i> , 2020, 45, 85.	3.3	27
22	Ultraviolet radiation impact on the efficiency of commercial crystalline silicon-based photovoltaics: a theoretical thermal-electrical study in realistic device architectures. <i>OSA Continuum</i> , 2020, 3, 1436.	1.8	8
23	Demonstration of Ultrafast THz Absorption Modulation in a Graphene-Based Thin Absorber. , 2019, , .		0
24	Experimental Demonstration of Ultrafast THz Modulation in a Graphene-Based Thin Film Absorber through Negative Photoinduced Conductivity. <i>ACS Photonics</i> , 2019, 6, 720-727.	6.6	128
25	Two-Color Mid-Infrared Laser Filaments Produce Terahertz Pulses with Extreme Efficiency. , 2019, , .		1
26	Influence of air humidity on 248-nm ultraviolet laser pulse filamentation. <i>Optics Letters</i> , 2019, 44, 2165.	3.3	6
27	Transformation of ring-Airy beams during efficient harmonic generation. <i>Optics Letters</i> , 2019, 44, 2974.	3.3	7
28	Long-scale multiphoton polymerization voxel growth investigation using engineered Bessel beams. <i>Optical Materials Express</i> , 2019, 9, 2838.	3.0	11
29	Ring-Airy beams at the wavelength limit. <i>Optics Letters</i> , 2018, 43, 1063.	3.3	15
30	Extremely Bright THz Radiation from Two-color Filamentation of Mid-infrared Laser Pulses. , 2018, , .		2
31	Extreme THz fields from two-color filamentation of midinfrared laser pulses. <i>Physical Review A</i> , 2018, 97, .	2.5	48
32	Observation of Strong THz Fields from Mid-Infrared Two-Color Laser Filaments. , 2018, , .		3
33	Optimal wavelength for two-color filamentation-induced terahertz sources. <i>Optics Express</i> , 2018, 26, 31150.	3.4	34
34	Advanced Multiphoton Polymerization using Tunable Shaped Laser Wavepackets. , 2018, , .		0
35	Precise Holographic Measurements Reveal High Electron Densities in Mid-Infrared Laser Filaments in Air. , 2018, , .		0
36	Impact of Polarization on Mid-IR Air Filaments. , 2018, , .		0

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37	Invariant superoscillatory electromagnetic fields in 3D-space. Journal of Optics (United Kingdom), 2017, 19, 014003.	2.2	7
38	Highly efficient broadband terahertz generation from ultrashort laser filamentation in liquids. Nature Communications, 2017, 8, 1184.	12.8	132
39	Crossing the threshold of ultrafast laser writing in bulk silicon. Nature Communications, 2017, 8, 773.	12.8	64
40	Non-diffracting states in one-dimensional Floquet photonic topological insulators. Europhysics Letters, 2017, 119, 14003.	2.0	19
41	Phase Memory Preserving Harmonics from Abruptly Autofocusing Beams. Physical Review Letters, 2017, 119, 223901.	7.8	26
42	THz generation by two-color femtosecond filaments with complex polarization states: four-wave mixing versus photocurrent contributions. Plasma Physics and Controlled Fusion, 2017, 59, 014025.	2.1	24
43	Diffraction properties of Floquet topological states in photonic lattices. , 2017, , .		0
44	Exceeding the bulk modification threshold of silicon with hyper-focused infrared femtosecond laser pulses. , 2017, , .		0
45	Sculptured ultrashort laser wave packets for advanced materials engineering. , 2017, , .		0
46	Janus waves. Optics Letters, 2016, 41, 4656.	3.3	25
47	Abruptly autofocusing beams enable advanced multiscale photo-polymerization. Optica, 2016, 3, 525.	9.3	127
48	Nonlinear plasma-assisted collapse of ring-Airy wave packets. Physical Review A, 2016, 93, .	2.5	24
49	Spectral bandwidth scaling laws and reconstruction of THz wave packets generated from two-color laser plasma filaments. Physical Review A, 2016, 93, .	2.5	27
50	Accessing Extreme Spatiotemporal Localization of High-Power Laser Radiation through Transformation Optics and Scalar Wave Equations. Physical Review Letters, 2016, 117, 043902.	7.8	41
51	Tailored light sheets through opaque cylindrical lenses. Optica, 2016, 3, 1237.	9.3	17
52	Robust authentication through stochastic femtosecond laser filament induced scattering surfaces. Applied Physics Letters, 2016, 108, .	3.3	17
53	Enhanced terahertz wave emission from air-plasma tailored by abruptly autofocusing laser beams. Optica, 2016, 3, 605.	9.3	64
54	Structured adaptive focusing through scattering media. , 2016, , .		0

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55	Extreme events in complex linear and nonlinear photonic media. Chaos, Solitons and Fractals, 2016, 84, 73-80.	5.1	24
56	Enhancing THz radiation from two-color laser-induced air-plasma by using abruptly autofocusing beams. , 2016, , .		0
57	Study of THz emission from ring-Airy beam induced plasma. , 2015, , .		2
58	Fano resonances in THz metamaterials composed of continuous metallic wires and split ring resonators. Optics Express, 2014, 22, 26572.	3.4	25
59	Physics of the conical broadband terahertz emission from two-color laser-induced plasma filaments. Physical Review A, 2014, 89, .	2.5	80
60	Ultrafast electron and material dynamics following femtosecond filamentation induced excitation of transparent solids. Applied Physics A: Materials Science and Processing, 2014, 114, 161-168.	2.3	22
61	State Transfer Hamiltonians in Photonic Lattices. , 2014, , 223-245.		1
62	Controlling high-power autofocusing waves with periodic lattices. Optics Letters, 2014, 39, 4958.	3.3	16
63	Monitoring adsorption and sedimentation using evanescent-wave cavity ringdown ellipsometry. Applied Optics, 2013, 52, 1086.	1.8	9
64	Sharply autofocused ring-Airy beams transforming into non-linear intense light bullets. Nature Communications, 2013, 4, 2622.	12.8	290
65	Dynamical tailoring of intense femtosecond gas-plasma THz sources. , 2013, , .		1
66	Ultrashort laser pulse filamentation with Airy and Bessel beams. Proceedings of SPIE, 2013, , .	0.8	9
67	Eutectic epsilon-near-zero metamaterial terahertz waveguides. Optics Letters, 2013, 38, 1140.	3.3	36
68	Polarization characteristics of superoscillatory beams. , 2013, , .		0
69	Tailoring femtosecond laser pulse filamentation using plasma photonic lattices. Applied Physics Letters, 2013, 103, .	3.3	14
70	Eutectic terahertz metamaterials. , 2013, , .		0
71	Understanding and controlling on-axis and off-axis THz emission patterns from 2-color femtosecond laser filaments. , 2013, , .		1
72	Experimental demonstration of rogue waves in disordered Luneburg-type photonic networks. , 2013, , .		0

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73	Linear and nonlinear light dynamics in photonic lattices. MATEC Web of Conferences, 2013, 8, 01007.	0.2	0
74	Detection of Harmful Residues in Honey Using Terahertz Time-Domain Spectroscopy. Applied Spectroscopy, 2013, 67, 1264-1269.	2.2	108
75	Taming light with photonic lattices written by femtosecond laser. MATEC Web of Conferences, 2013, 8, 01005.	0.2	0
76	Optically switchable and tunable terahertz metamaterials through photoconductivity. Journal of Optics (United Kingdom), 2012, 14, 114008.	2.2	47
77	Linear and nonlinear waves in surface and wedge index potentials. Optics Letters, 2012, 37, 1874.	3.3	1
78	Nonlinear propagation dynamics of finite-energy Airy beams. Physical Review A, 2012, 86, .	2.5	83
79	Nonlinear propagation and filamentation of intense Airy beams in transparent media. Proceedings of SPIE, 2012, , .	0.8	3
80	Faithful communication Hamiltonian in photonic lattices. Optics Letters, 2012, 37, 4504.	3.3	79
81	Observation and Optical Tailoring of Photonic Lattice Filaments. Physical Review Letters, 2012, 109, 113905.	7.8	24
82	Cavitation dynamics and directional microbubble ejection induced by intense femtosecond laser pulses in liquids. Physical Review E, 2012, 86, 036304.	2.1	31
83	Nonlinear light-matter interaction with femtosecond high-angle Bessel beams. Physical Review A, 2012, 85, .	2.5	46
84	Nonlinear imaging and THz diagnostic tools in the service of Cultural Heritage. Applied Physics A: Materials Science and Processing, 2012, 106, 257-263.	2.3	37
85	Femtosecond laser pulse control of collapsing bubble jets and bubble ejection streams. , 2012, , .		0
86	Evanescent-Wave Cavity Ring-Down Ellipsometry. Journal of Physical Chemistry Letters, 2011, 2, 1324-1327.	4.6	7
87	Nonlinear birefringence due to non-resonant, higher-order Kerr effect in isotropic media. Optics Express, 2011, 19, 6387.	3.4	11
88	Intense dynamic bullets in a periodic lattice. Optics Express, 2011, 19, 10057.	3.4	12
89	Measuring easily electron plasma densities in gases produced by ultrashort lasers and filaments. Optics Express, 2011, 19, 16866.	3.4	30
90	Off-resonance and non-resonant dispersion of Kerr nonlinearity for symmetric molecules [Invited]. Optics Express, 2011, 19, 22486.	3.4	24

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91	Observation of abruptly autofocusing waves. <i>Optics Letters</i> , 2011, 36, 1842.	3.3	390
92	Physical mechanisms of fused silica restructuring and densification after femtosecond laser excitation [Invited]. <i>Optical Materials Express</i> , 2011, 1, 625.	3.0	35
93	Femtosecond filamentation induced micro- and nano-restructuring in the bulk of dielectrics and polymers. , 2011, , .		0
94	An intense tunable femtosecond gas-plasma THz source: Application in spectroscopic studies of polycyclic aromatic hydrocarbons. <i>Journal of Molecular Structure</i> , 2011, 1006, 28-33.	3.6	5
95	Stationary nonlinear Airy beams. <i>Physical Review A</i> , 2011, 84, .	2.5	123
96	Four-dimensional visualization of single and multiple laser filaments using in-line holographic microscopy. <i>Physical Review A</i> , 2011, 84, .	2.5	20
97	Optically Implemented Broadband Blueshift Switch in the Terahertz Regime. <i>Physical Review Letters</i> , 2011, 106, 037403.	7.8	237
98	Development of cavity ring-down ellipsometry with spectral and submicrosecond time resolution. <i>Proceedings of SPIE</i> , 2011, , .	0.8	3
99	Direct acoustic phonon excitation by intense and ultrashort terahertz pulses. <i>Applied Physics Letters</i> , 2010, 97, 251904.	3.3	14
100	Dynamic response of metamaterials in the terahertz regime: Blueshift tunability and broadband phase modulation. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	67
101	Tunable intense Airy beams and tailored femtosecond laser filaments. <i>Physical Review A</i> , 2010, 81, .	2.5	70
102	Tailoring the filamentation of intense femtosecond laser pulses with periodic lattices. <i>Physical Review A</i> , 2010, 82, .	2.5	25
103	Filamentation-induced third-harmonic generation in air via plasma-enhanced third-order susceptibility. <i>Physical Review A</i> , 2010, 81, .	2.5	56
104	Coherent control of THz pulses polarization from femtosecond laser filaments in gases. <i>Optics Express</i> , 2010, 18, 18894.	3.4	25
105	Strong terahertz emission enhancement via femtosecond laser filament concatenation in air. <i>Optics Letters</i> , 2010, 35, 2424.	3.3	32
106	Spatiotemporal Airy Light Bullets in the Linear and Nonlinear Regimes. <i>Physical Review Letters</i> , 2010, 105, 253901.	7.8	383
107	Terahertz pulse emission optimization from tailored femtosecond laser pulse filamentation in air. <i>Optics Letters</i> , 2009, 34, 2165.	3.3	52
108	Efficient third-harmonic generation through tailored IR femtosecond laser pulse filamentation in air. <i>Optics Express</i> , 2009, 17, 3190.	3.4	51

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109	Long spatio-temporally stationary filaments in air using short pulse UV laser Bessel beams. Optics Express, 2009, 17, 5052.	3.4	31
110	Femtosecond laser induced plasma diffraction gratings in air as photonic devices for high intensity laser applications. Applied Physics Letters, 2009, 94, .	3.3	45
111	Direct Phonon Excitation in Semiconductors by Ultrashort Intense THz Radiation. , 2009, , .		0
112	Terahertz time domain spectroscopy for the analysis of cultural heritage related materials. Applied Physics B: Lasers and Optics, 2008, 90, 365-368.	2.2	52
113	Linear X-wave generation by means of cross-phase modulation in Kerr media. Optics Letters, 2008, 33, 3028.	3.3	2
114	Ultrashort laser pulse filamentation from spontaneous X Wave formation in air. Optics Express, 2008, 16, 1565.	3.4	70
115	Kerr-induced spontaneous Bessel beam formation in the regime of strong two-photon absorption. Optics Express, 2008, 16, 8213.	3.4	25
116	Spontaneous emergence of pulses with constant carrier-envelope phase in femtosecond filamentation. Optics Express, 2008, 16, 11103.	3.4	12
117	In-line holography for the characterization of ultrafast laser filamentation in transparent media. Applied Physics Letters, 2008, 93, .	3.3	60
118	Few-cycle laser-pulse collapse in Kerr media: The role of group-velocity dispersion and X -wave formation. Physical Review A, 2008, 78, .	2.5	16
119	Material dynamics from laser pulse filamentation to permanent structural modifications in fused silica. , 2008, , .		0
120	In-line holography for the 3D reconstruction of laser pulse filamentation in transparent media. , 2008, , .		0
121	Plasma strings from ultraviolet laser filaments drive permanent structural modifications in fused silica. Optics Letters, 2007, 32, 2055.	3.3	34
122	Structural modifications in fused silica induced by ultraviolet fs laser filaments. Applied Surface Science, 2007, 253, 7865-7868.	6.1	11
123	Analysis of the X-ray and time-resolved XUV emission of laser produced Xe and Kr plasmas. High Energy Density Physics, 2007, 3, 20-27.	1.5	9
124	Long-range filamentary propagation of subpicosecond ultraviolet laser pulses in fused silica. Optics Letters, 2006, 31, 796.	3.3	27
125	Ultraviolet laser filaments for remote laser-induced breakdown spectroscopy (LIBS) analysis: applications in cultural heritage monitoring. Optics Letters, 2006, 31, 1139.	3.3	98
126	Optical characteristics of desert dust over the East Mediterranean during summer: a case study. Annales Geophysicae, 2006, 24, 807-821.	1.6	51

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127	Time- and space-resolved X-ray absorption spectroscopy of aluminum irradiated by a subpicosecond high-power laser. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2006, 99, 614-626.	2.3	13
128	Influence of negative leader propagation on the triggering and guiding of high voltage discharges by laser filaments. <i>Applied Physics B: Lasers and Optics</i> , 2006, 82, 561-566.	2.2	53
129	X and time-resolved XUV emission of laser produced Xe and Kr plasmas. <i>European Physical Journal Special Topics</i> , 2006, 133, 957-962.	0.2	0
130	Range of plasma filaments created in air by a multi-terawatt femtosecond laser. <i>Optics Communications</i> , 2005, 247, 171-180.	2.1	184
131	Sub-picosecond ultraviolet laser filamentation-induced bulk modifications in fused silica. <i>Applied Physics A: Materials Science and Processing</i> , 2005, 81, 241-244.	2.3	18
132	Enhanced harmonic conversion efficiency in the self-guided propagation of femtosecond ultraviolet laser pulses in argon. <i>Applied Physics B: Lasers and Optics</i> , 2005, 80, 211-214.	2.2	34
133	Picosecond Time-Resolved X-Ray Absorption Spectroscopy of Ultrafast Aluminum Plasmas. <i>Physical Review Letters</i> , 2005, 94, 025004.	7.8	77
134	Investigation of the spatial profile of stimulated Raman scattering beams in D2 and H2 gases using a pulsed Nd:YAG laser at 266Ånm. <i>Applied Physics B: Lasers and Optics</i> , 2004, 79, 71-75.	2.2	23
135	Long-range self-channeling of infrared laser pulses in air: a new propagation regime without ionization. <i>Applied Physics B: Lasers and Optics</i> , 2004, 79, 379-382.	2.2	187
136	Self-guided propagation of fs UV laser pulses and efficient harmonic generation in low pressure Argon. , 2004, , .		0
137	Long range horizontal propagation of femtosecond self-channelled laser pulses in air. , 2004, , .		0
138	Concatenation of plasma filaments created in air by femtosecond infrared laser pulses. <i>Applied Physics B: Lasers and Optics</i> , 2003, 76, 609-612.	2.2	43
139	Calorimetric detection of THz radiation from femtosecond filaments in air. <i>Applied Physics B: Lasers and Optics</i> , 2003, 77, 707-709.	2.2	26
140	Propagation of twin laser pulses in air and concatenation of plasma strings produced by femtosecond infrared filaments. <i>Optics Communications</i> , 2003, 225, 177-192.	2.1	51
141	How to connect femtosecond laser filaments in air. , 2003, 4829, 470.		0
142	Coherent subterahertz radiation from femtosecond infrared filaments in air. <i>Optics Letters</i> , 2002, 27, 1944.	3.3	176
143	Infrared femtosecond light filaments in air: simulations and experiments. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2002, 19, 1117.	2.1	129
144	Femtosecond Laser-Induced Damage and Filamentary Propagation in Fused Silica. <i>Physical Review Letters</i> , 2002, 89, 186601.	7.8	399

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145	Femtosecond laser-guided electric discharge in air. <i>Physical Review E</i> , 2001, 64, 057401.	2.1	119
146	Self-Guided Propagation of Ultrashort IR Laser Pulses in Fused Silica. <i>Physical Review Letters</i> , 2001, 87, 213902.	7.8	238
147	Breakup and Fusion of Self-Guided Femtosecond Light Pulses in Air. <i>Physical Review Letters</i> , 2001, 86, 5470-5473.	7.8	197
148	Femtosecond and picosecond ultraviolet laser filaments in air: experiments and simulations. <i>Optics Communications</i> , 2001, 197, 131-143.	2.1	58
149	Time-evolution of the plasma channel at the trail of a self-guided IR femtosecond laser pulse in air. <i>Optics Communications</i> , 2000, 181, 123-127.	2.1	224
150	Nonlinear propagation of subpicosecond ultraviolet laser pulses in air. <i>Optics Letters</i> , 2000, 25, 1270.	3.3	66
151	Infrared extension of the supercontinuum generated by femtosecond terawatt laser pulses propagating in the atmosphere. <i>Optics Letters</i> , 2000, 25, 1397.	3.3	222
152	Nonequilibrium electron dynamics in noble metals. <i>Physical Review B</i> , 2000, 61, 16956-16966.	3.2	406
153	Time resolved investigation of coherent acoustic mode oscillations in silver nanoparticles. <i>Physica B: Condensed Matter</i> , 1999, 263-264, 54-56.	2.7	22
154	Formation of a conducting channel in air by self-guided femtosecond laser pulses. <i>Physical Review E</i> , 1999, 60, R3505-R3507.	2.1	140
155	Self-guided propagation of ultrashort IR laser pulses in fused silica. , 0, , .		0