

Alexander Horn

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9241357/publications.pdf>

Version: 2024-02-01

66
papers

1,007
citations

516710

16
h-index

477307

29
g-index

67
all docs

67
docs citations

67
times ranked

704
citing authors

#	ARTICLE	IF	CITATIONS
1	Subwavelength ripple formation induced by tightly focused femtosecond laser radiation. Applied Surface Science, 2006, 252, 8576-8579.	6.1	113
2	Fusion Welding of Glass Using Femtosecond Laser Pulses with High-repetition Rates. Journal of Laser Micro Nanoengineering, 2007, 2, 57-63.	0.1	105
3	Local Melting of Glass Material and Its Application to Direct Fusion Welding by Ps-laser Pulses. Journal of Laser Micro Nanoengineering, 2007, 2, 7-14.	0.1	89
4	Fundamental investigations of micromachining by nano- and picosecond laser radiation. Applied Surface Science, 1998, 127-129, 885-891.	6.1	74
5	Investigations on ultrafast welding of glass-glass and glass-silicon. Applied Physics A: Materials Science and Processing, 2008, 93, 171-175.	2.3	48
6	Investigation of increased drilling speed by online high-speed photography. Optics and Lasers in Engineering, 2008, 46, 705-710.	3.8	32
7	Ultrafast time-resolved photography of femtosecond laser induced modifications in BK7 glass and fused silica. Applied Physics A: Materials Science and Processing, 2004, 79, 923-925.	2.3	29
8	Use of femtosecond laser-induced breakdown spectroscopy (fs-LIBS) for micro-crack analysis on the surface. Engineering Fracture Mechanics, 2010, 77, 1874-1883.	4.3	25
9	Time-resolved investigations of plasma and melt ejections in metals by pump-probe shadowgraphy. Applied Physics A: Materials Science and Processing, 2008, 92, 917-920.	2.3	24
10	Local Optical Properties in CVD-Grown Monolayer WS ₂ Flakes. Journal of Physical Chemistry C, 2021, 125, 16059-16065.	3.1	21
11	Three dimensional microfabrication in ceramics by solid state lasers. Applied Physics A: Materials Science and Processing, 1999, 69, S855-S858.	2.3	20
12	Investigation on the Ablation of thin Metal Films with Femtosecond to Picosecond-pulsed Laser Radiation. Physics Procedia, 2016, 83, 93-103.	1.2	19
13	Melt dynamics of aluminum irradiated with ultrafast laser radiation at large intensities. Journal of Applied Physics, 2009, 106, 013513.	2.5	18
14	Control of Ionization Processes in High Band Gap Materials. Journal of Laser Micro Nanoengineering, 2009, 4, 144-151.	0.1	18
15	<i>In situ</i> measurement of plasma and shock wave properties inside laser-drilled metal holes. Measurement Science and Technology, 2008, 19, 105703.	2.6	16
16	X-ray generation by laser ablation using MHz to GHz pulse bursts. Journal of Laser Applications, 2021, 33, .	1.7	16
17	Study on X-ray Emission Using Ultrashort Pulsed Lasers in Materials Processing. Materials, 2021, 14, 4537.	2.9	16
18	Investigations on Melting and Welding of Glass by Ultra-short Laser Radiation. Journal of Laser Micro Nanoengineering, 2008, 3, 114-118.	0.1	16

#	ARTICLE	IF	CITATIONS
19	Dynamical detection of optical phase changes during micro-welding of glass with ultra-short laser radiation. Measurement Science and Technology, 2008, 19, 015302.	2.6	15
20	Case study on the ultrafast laser ablation of thin aluminum films: dependence on laser parameters and film thickness. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	15
21	Ultra-fast Diagnostics of Laser-induced Melting of Matter in ns to $\hat{1}/4$ s Time-scales. Journal of Laser Micro Nanoengineering, 2006, 1, 264-268.	0.1	15
22	Hydrodynamic modeling and time-resolved imaging reflectometry of the ultrafast laser-induced ablation of a thin gold film. Optics and Lasers in Engineering, 2020, 129, 106067.	3.8	14
23	Case study on the dynamics of ultrafast laser heating and ablation of gold thin films by ultrafast pump-probe reflectometry and ellipsometry. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	2.3	13
24	<title>Formation of subwavelength-laser-induced periodic surface structures by tightly focused femtosecond laser radiation</title>. , 2004, , .		12
25	Temporal femtosecond pulse tailoring for nanoscale laser processing of wide-bandgap materials. Proceedings of SPIE, 2010, , .	0.8	12
26	Experimental and Theoretical Determination of the Effective Penetration Depth of Ultrafast Laser Radiation in Stainless Steel. Lasers in Manufacturing and Materials Processing, 2020, 7, 478-495.	2.2	12
27	High-throughput process parallelization for laser surface modification on Si-solar cells: determination of the process window. Proceedings of SPIE, 2012, , .	0.8	11
28	Coherent Control of Colloidal Semiconductor Nanocrystals. Journal of Physical Chemistry C, 2013, 117, 11780-11790.	3.1	11
29	Femtosecond-time-resolved imaging of the dielectric function of ZnO in the visible to near-IR spectral range. Applied Physics Letters, 2019, 115, .	3.3	10
30	Improved Hole Extraction Selectivity of Polymer Solar Cells by Combining PEDOT:PSS with WO₃. Energy Technology, 2021, 9, 2100474.	3.8	10
31	Ultrafast pump and probe investigations on the interaction of femtosecond laser pulses with glass. , 2003, 4948, 393.		9
32	Electron excitation in glasses followed by time- and space-measuring tools. Applied Surface Science, 2005, 248, 66-70.	6.1	9
33	Exchange bias and diffusion processes in laser annealed CoFeB/IrMn thin films. Journal of Magnetism and Magnetic Materials, 2019, 489, 165390.	2.3	9
34	Topological transition from deeply sub- to near-wavelength ripples during multi-shot mid-IR femtosecond laser exposure of a silicon surface. Optical Materials Express, 2021, 11, 1.	3.0	9
35	Electron beam-physical vapor deposition - thermal barrier coatings on laser drilled surfaces for transpiration cooling. Surface and Coatings Technology, 2000, 133-134, 49-53.	4.8	8
36	UV laser radiation-induced modifications and microstructuring of glass. , 2002, 4637, 258.		8

#	ARTICLE	IF	CITATIONS
37	Surface Modifications of Poly(methyl methacrylate) Induced by Controlled Electronic and Molecular Vibrational Excitation Applying Ultrafast Mid-IR Laser Radiation. Journal of Physical Chemistry C, 2019, 123, 20210-20220.	3.1	8
38	Fluence-Dependent Transient Reflectance of Stainless Steel Investigated by Ultrafast Imaging Pump-Probe Reflectometry. Journal of Physical Chemistry C, 2021, 125, 17363-17371.	3.1	8
39	<title>Nd:YAG laser micromachining of SiC precision structures for MEMS</title>. , 2001, 4407, 109.		7
40	Laser-Surface-Treatment for Photovoltaic Applications. Physics Procedia, 2012, 39, 709-716.	1.2	7
41	<title>Micromachining of metals and ceramics by nano- and picosecond laser radiation</title>. , 1997, , .		6
42	Generation of nano-voids inside polylactide using femtosecond laser radiation. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	6
43	Investigations on the modification of PMMA by ultrafast laser radiation from the UV to the mid-IR spectral range. Optics and Lasers in Engineering, 2018, 111, 130-134.	3.8	6
44	Spatial Conductivity Distribution in Thin PEDOT:PSS Films after Laser Microannealing. ACS Applied Electronic Materials, 2021, 3, 2825-2831.	4.3	6
45	Observation of melt ejection in metals up to 1 μ s after femtosecond laser irradiation by a novel pump-probe photography setup. , 2006, 6261, 101.		5
46	Thermodynamic Investigations on the Laser Ablation Rate of Silicon over Five Fluence Decades. Physics Procedia, 2013, 41, 640-649.	1.2	5
47	Manufacturing of Precise SiC Components by Nd:YAG Laser Radiation. Solid State Phenomena, 2001, 80-81, 441-446.	0.3	4
48	Approximate model for laser trepanning with microsecond Nd:YAG laser radiation. Applied Physics A: Materials Science and Processing, 2004, 79, 1157-1159.	2.3	4
49	Non-interferometric transient quantitative phase microscopy for ultrafast engineering. Applied Physics A: Materials Science and Processing, 2008, 93, 165-169.	2.3	4
50	Development of a time-resolved white-light interference microscope for optical phase measurements during fs-laser material processing. Applied Physics A: Materials Science and Processing, 2010, 101, 231-235.	2.3	4
51	Si-K α radiation generated by the interaction of femtosecond laser radiation with silicon. Journal of Physics: Conference Series, 2007, 59, 159-163.	0.4	3
52	Laser induced quasi-periodical microstructures with external field modulation for efficiency gain in photovoltaics. CIRP Annals - Manufacturing Technology, 2013, 62, 207-210.	3.6	3
53	Simulation of the spherical aberration of focused laser radiation in transparent materials: comparison of different simulation approaches. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	3
54	Theoretical analysis of second harmonic characteristics generated by KTiOPO 4 crystal. , 2003, , .		2

#	ARTICLE	IF	CITATIONS
55	Electron excitation in glasses and sapphire followed by time- and space-measuring tools. , 2004, , .		2
56	Joining of thin glass with semiconductors by ultra-fast high-repetition laser welding. , 2008, , .		2
57	Linear and Nonlinear Excitation of P3HT Induced by Spectral-Shaped Ultrafast Mid-IR Laser Radiation. Journal of Physical Chemistry C, 2020, 124, 13618-13626.	3.1	2
58	Laser induced crystallization of Coâ€“Feâ€“B films. Scientific Reports, 2021, 11, 14104.	3.3	2
59	Electron dynamics in fused silica after strong field laser excitation detected by spectroscopic imaging pump-probe ellipsometry. Physical Review B, 2022, 106, .	3.2	2
60	Micromachining of hard materials by nano- and picosecond laser radiation: Fundamentals and applications. , 1997, , .		1
61	Femtosecond Pulse Tailoring For Nanoscale Laser Processing Of Wide-Bandgap Materials: Temporal Asymmetric Pulses Versus Frequency Sweeps. , 2010, , .		1
62	Drilling of ceramics and polymers by diode pumped solid state lasers. , 1997, , .		1
63	Processing ceramics by laser radiation. , 1998, 3274, 36.		0
64	Investigations of the ultrafast laser induced melt dynamics by means of transient quantitative phase microscopy (TQPm). , 2008, , .		0
65	Time-resolved White-light Interferometry for Ultrafast Metrology. , 2010, , .		0
66	Solving the logarithmic Monge-AmpÃˆre equation with a RK4-algorithm for beam shaping purposes of femtosecond laser beams with spatial light modulators. , 2018, , .		0