

GÃ¼nther Paltauf

List of Publications by Year in descending order

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124
papers

4,576
citations

136950

32
h-index

102487

66
g-index

124
all docs

124
docs citations

124
times ranked

2925
citing authors

#	ARTICLE	IF	CITATIONS
1	Mechanisms of femtosecond laser nanosurgery of cells and tissues. Applied Physics B: Lasers and Optics, 2005, 81, 1015-1047.	2.2	1,279
2	Photomechanical Processes and Effects in Ablation. Chemical Reviews, 2003, 103, 487-518.	47.7	352
3	Femtosecond-Laser-Induced Nanocavitation in Water: Implications for Optical Breakdown Threshold and Cell Surgery. Physical Review Letters, 2008, 100, 038102.	7.8	262
4	Iterative reconstruction algorithm for optoacoustic imaging. Journal of the Acoustical Society of America, 2002, 112, 1536-1544.	1.1	247
5	Exact and approximative imaging methods for photoacoustic tomography using an arbitrary detection surface. Physical Review E, 2007, 75, 046706.	2.1	166
6	Photoacoustic tomography using a Mach-Zehnder interferometer as an acoustic line detector. Applied Optics, 2007, 46, 3352.	2.1	156
7	Clinical testing of a photoacoustic probe for port wine stain depth determination. Lasers in Surgery and Medicine, 2002, 30, 141-148.	2.1	122
8	Thermoacoustic tomography with integrating area and line detectors. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2005, 52, 1577-1583.	3.0	100
9	Laser-Generated Cavitation in Absorbing Liquid Induced by Acoustic Diffraction. Physical Review Letters, 1996, 76, 3546-3549.	7.8	92
10	Optoacoustic imaging using a three-dimensional reconstruction algorithm. IEEE Journal of Selected Topics in Quantum Electronics, 2001, 7, 918-923.	2.9	92
11	THERMOACOUSTIC TOMOGRAPHY AND THE CIRCULAR RADON TRANSFORM: EXACT INVERSION FORMULA. Mathematical Models and Methods in Applied Sciences, 2007, 17, 635-655.	3.3	78
12	Optical method for two-dimensional ultrasonic detection. Applied Physics Letters, 1999, 75, 1048-1050.	3.3	75
13	Measurement of laser-induced acoustic waves with a calibrated optical transducer. Journal of Applied Physics, 1997, 82, 1525-1531.	2.5	74
14	Microcavity dynamics during laser-induced spallation of liquids and gels. Applied Physics A: Materials Science and Processing, 1996, 62, 303-311.	2.3	73
15	Light distribution measurements in absorbing materials by optical detection of laser-induced stress waves. Applied Physics Letters, 1996, 69, 1526-1528.	3.3	67
16	Photoacoustic waves excited in liquids by fiber-transmitted laser pulses. Journal of the Acoustical Society of America, 1998, 104, 890-897.	1.1	65
17	High resolution three-dimensional photoacoustic tomography with CCD-camera based ultrasound detection. Biomedical Optics Express, 2014, 5, 2635.	2.9	59
18	Three-dimensional photoacoustic imaging using fiber-based line detectors. Journal of Biomedical Optics, 2010, 15, 021306.	2.6	56

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19	Weight factors for limited angle photoacoustic tomography. <i>Physics in Medicine and Biology</i> , 2009, 54, 3303-3314.	3.0	53
20	Photoacoustic cavitation in spherical and cylindrical absorbers. <i>Applied Physics A: Materials Science and Processing</i> , 1999, 68, 525-531.	2.3	52
21	Optoacoustic tomography: time-gated measurement of pressure distributions and image reconstruction. <i>Applied Optics</i> , 2001, 40, 3800.	2.1	52
22	Pulsed optoacoustic characterization of layered media. <i>Journal of Applied Physics</i> , 2000, 88, 1624-1631.	2.5	51
23	Comparison of surface plasmon resonance devices for acoustic wave detection in liquid. <i>Optics Express</i> , 2007, 15, 6087.	3.4	44
24	Photoacoustic microtomography using optical interferometric detection. <i>Journal of Biomedical Optics</i> , 2010, 15, 021307.	2.6	43
25	Stealth ryanodine-sensitive Ca ²⁺ -release contributes to activity of capacitative Ca ²⁺ -entry and nitric oxide synthase in bovine endothelial cells. <i>Journal of Physiology</i> , 1998, 513, 369-379.	2.9	42
26	Comprehensive analysis of spherical bubble oscillations and shock wave emission in laser-induced cavitation. <i>Journal of Fluid Mechanics</i> , 2022, 940, .	3.4	42
27	Optoacoustic infrared spectroscopy of soft tissue. <i>Journal of Applied Physics</i> , 2000, 88, 1632-1637.	2.5	38
28	Model study to investigate the contribution of spallation to pulsed laser ablation of tissue. <i>Lasers in Surgery and Medicine</i> , 1995, 16, 277-287.	2.1	37
29	Femtosecond-laser-produced low-density plasmas in transparent biological media: a tool for the creation of chemical, thermal, and thermomechanical effects below the optical breakdown threshold. , 2002, , .		34
30	Compensation of acoustic attenuation for high-resolution photoacoustic imaging with line detectors. , 2007, , .		34
31	Characterization of integrating ultrasound detectors for photoacoustic tomography. <i>Journal of Applied Physics</i> , 2009, 105, 102026.	2.5	34
32	Photoacoustic section imaging with an integrating cylindrical detector. <i>Biomedical Optics Express</i> , 2011, 2, 2973.	2.9	34
33	Simultaneous three-dimensional photoacoustic and laser-ultrasound tomography. <i>Biomedical Optics Express</i> , 2013, 4, 1380.	2.9	34
34	Piezoelectric line detector array for photoacoustic tomography. <i>Photoacoustics</i> , 2017, 8, 28-36.	7.8	33
35	Full field detection in photoacoustic tomography. <i>Optics Express</i> , 2010, 18, 6288.	3.4	31
36	Hybrid photoacoustic and ultrasound section imaging with optical ultrasound detection. <i>Journal of Biophotonics</i> , 2013, 6, 549-559.	2.3	28

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37	Downstream Fabry-Perot interferometer for acoustic wave monitoring in photoacoustic tomography. Optics Letters, 2011, 36, 981.	3.3	27
38	Study of different ablation models by use of high-speed-sampling photography. , 1992, 1646, 343.		24
39	Deblurring algorithms accounting for the finite detector size in photoacoustic tomography. Journal of Biomedical Optics, 2014, 19, 056011.	2.6	23
40	Piezoelectric annular array for large depth of field photoacoustic imaging. Biomedical Optics Express, 2011, 2, 2655.	2.9	20
41	Progress in biomedical photoacoustic imaging instrumentation toward clinical application. Journal of Applied Physics, 2020, 128, .	2.5	20
42	On the use of frequency-domain reconstruction algorithms for photoacoustic imaging. Journal of Biomedical Optics, 2011, 16, 086002.	2.6	19
43	Design and testing of an endoscopic photoacoustic probe for determination of treatment depth after photodynamic therapy. , 2001, , .		18
44	Young's Modulus and Poisson's Ratio Characterization of Tungsten Thin Films Via Laser Ultrasound. Materials Today: Proceedings, 2015, 2, 4289-4294.	1.8	18
45	Modeling photoacoustic imaging with a scanning focused detector using Monte Carlo simulation of energy deposition. Journal of Biomedical Optics, 2018, 23, 1.	2.6	16
46	<title>Spectral optoacoustic imaging using a scanning transducer</title>. , 2001, , .		14
47	Investigation of the probabilistic behavior of laser-induced breakdown in pure water and in aqueous solutions of different concentrations. Journal of Applied Physics, 1989, 66, 4149-4153.	2.5	13
48	Mechanisms of femtosecond laser nanoprocessing of biological cells and tissues. Journal of Physics: Conference Series, 2007, 59, 249-254.	0.4	13
49	Combined photoacoustic, pulse-echo laser ultrasound, and speed-of-sound imaging using integrating optical detection. Journal of Biomedical Optics, 2016, 21, 086010.	2.6	13
50	Photoacoustic tomography of heterogeneous media using a model-based time reversal method. , 2008, , .		12
51	Photoacoustic section imaging using an elliptical acoustic mirror and optical detection. Journal of Biomedical Optics, 2012, 17, 030503.	2.6	12
52	Artifact removal in photoacoustic section imaging by combining an integrating cylindrical detector with model-based reconstruction. Journal of Biomedical Optics, 2014, 19, 026014.	2.6	11
53	Comparison of Piezoelectric and Optical Projection Imaging for Three-Dimensional In Vivo Photoacoustic Tomography. Journal of Imaging, 2019, 5, 15.	3.0	11
54	Photoacoustic tomography of ex vivo mouse hearts with myocardial infarction. Journal of Biomedical Optics, 2011, 16, 036007.	2.6	10

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55	<title>Low-density plasmas below the optical breakdown threshold: potential hazard for multiphoton microscopy, and a tool for the manipulation of intracellular events</title>. , 2002, , .		9
56	Broadband optoacoustic measurements of ultrasound attenuation in severely plastically deformed nickel. Journal of Applied Physics, 2010, 107, 094905.	2.5	9
57	Fiber-based detectors for photoacoustic imaging. Proceedings of SPIE, 2009, , .	0.8	8
58	Deep Learning of truncated singular values for limited view photoacoustic tomography. , 2019, , .		8
59	A special irrigation liquid to increase the reliability of laser-induced shockwave lithotripsy. Lasers in Surgery and Medicine, 1992, 12, 204-209.	2.1	7
60	Iterative reconstruction method for three-dimensional optoacoustic imaging. , 2001, , .		7
61	Detection of nanosecond optoacoustic pulses in steel. Acoustical Physics, 2013, 59, 250-252.	1.0	7
62	Low-cost parallelization of optical fiber based detectors for photoacoustic imaging. Proceedings of SPIE, 2013, , .	0.8	7
63	Two-dimensional recording of optoacoustic waves. , 1999, , .		6
64	Polymer fiber detectors for photoacoustic imaging. Proceedings of SPIE, 2010, , .	0.8	6
65	Photoacoustic imaging with integrating line detectors. Proceedings of SPIE, 2009, , .	0.8	5
66	Modeling and experimental observation of photomechanical effects in tissue-like media. , 1995, , .		4
67	Internal photomechanical fracture of spatially limited absorbers irradiated by short laser pulses. , 1998, 3254, 112.		4
68	Dual-wavelength optoacoustic imaging. , 2003, , .		4
69	Attenuation of ultrasound in severely plastically deformed nickel. NDT and E International, 2011, 44, 261-266.	3.7	4
70	Combined photoacoustic and speed-of-sound imaging using integrating optical detection. , 2014, , .		4
71	Photoacoustic computational ghost imaging. Optics Letters, 2022, 47, 1462.	3.3	4
72	<title>Photoacoustic determination of tissue optical properties and structure by use of an optical parametric oscillator</title>. , 1998, , .		3

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73	Spectral optoacoustic imaging using a wavelength-multiplexing technique. , 2004, , .		3
74	Free beam Fabry-Perot-interferometer as detector for photoacoustic tomography. Proceedings of SPIE, 2013, , .	0.8	3
75	64-line-sensor array: fast imaging system for photoacoustic tomography. Proceedings of SPIE, 2014, , .	0.8	3
76	Light-sheet photoacoustic microscopy (LIS-PAM) with optical ultrasound detection. Proceedings of SPIE, 2016, , .	0.8	3
77	Femtosecond Plasma-Mediated Nanosurgery of Cells and Tissues. , 2007, , 231-280.		3
78	Femtosecond and nanosecond laser-induced nanoeffects for cell surgery and modification of glass. , 2008, , .		3
79	<title>Time-resolved observation of thermal and mechanical effects in tissue models induced by short laser pulses from an optical parametric oscillator</title>. , 1994, 2077, 171.		2
80	Influence of acoustic diffraction on laser-induced stress wave effects in absorbing media. , 1996, , .		2
81	Dual mode photoacoustic/acoustic microscopy with optical generation and detection. , 2012, , .		2
82	Conical ring array detector for large depth of field photoacoustic macroscopy. Biomedical Optics Express, 2020, 11, 2461.	2.9	2
83	Photoacoustic tomography with a line detector array. Proceedings of SPIE, 2017, , .	0.8	2
84	Optimization of image quality in photoacoustic tomography using spatial projection data. , 2019, , .		2
85	<title>Optoacoustic tomography using a two-dimensional optical pressure transducer and two different reconstruction algorithms</title>. , 2001, 4434, 74.		1
86	Reconstruction techniques for optoacoustic imaging. , 2001, , .		1
87	Photomechanical Processes and Effects in Ablation. ChemInform, 2003, 34, no.	0.0	1
88	Photoacoustic imaging with limited diffraction beam transducers. , 2009, , .		1
89	Photoacoustic section imaging with an integrating cylindrical detector. , 2011, , .		1
90	Ultrasonic Evaluation of Severely Plastically Deformed Metals. Key Engineering Materials, 0, 465, 374-377.	0.4	1

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91	Single mode polymer fiber line detector for photoacoustic tomography. Proceedings of SPIE, 2012, , .	0.8	1
92	Dual-modality section imaging system with optical ultrasound detection for photoacoustic and ultrasound imaging. Proceedings of SPIE, 2013, , .	0.8	1
93	Imaging of blood vessels with CCD-camera based three-dimensional photoacoustic tomography. Proceedings of SPIE, 2014, , .	0.8	1
94	Speed-of-sound correction for photoacoustic and laser-ultrasound imaging with an integrating cylindrical detector. Proceedings of SPIE, 2015, , .	0.8	1
95	Photoacoustic imaging with a large, cylindrical detector. , 2010, , .		1
96	Speed-of-sound correction for photoacoustic and laser-ultrasound imaging with an integrating cylindrical detector. , 2015, , .		1
97	Ring detector arrays for large depth of field scanning photoacoustic microscopy. , 2018, , .		1
98	Combined confocal and photoacoustic microscopy based on probe beam deflection technique. , 2019, , .		1
99	Generation and monitoring of cavitation with an optical resolution photoacoustic microscope. , 2019, , .		1
100	Untersuchung laserinduzierter Gewebefeffekte als Grundlage bei der Entwicklung minimal invasiver chirurgischer Eingriffe. Biomedizinische Technik, 1993, 38, 273-276.	0.8	0
101	Laserspallation- eine neue MÄglichkeit zur nicht thermischen Gewebeabtragung. Biomedizinische Technik, 1993, 38, 427-430.	0.8	0
102	Modeling pressure waves generated by pulsed laser irradiation of irregularly shaped absorbing objects within media. , 2001, , .		0
103	Photoacoustic microtomography: system characterization and first results on biological specimens. Proceedings of SPIE, 2010, , .	0.8	0
104	Photoacoustic tomography of pathological tissue in ex-vivo mouse hearts. Proceedings of SPIE, 2010, , .	0.8	0
105	Fiber-based broadband ultrasound detector for photoacoustic imaging. , 2011, , .		0
106	Spatial resolution and sensitivity in photoacoustic tomography taking noise into account: from point-like detectors to large integrating detectors. , 2012, , .		0
107	Acoustic reflector combined with optical detection for photoacoustic section imaging. Proceedings of SPIE, 2012, , .	0.8	0
108	Simultaneous three-dimensional laser-ultrasound and photoacoustic imaging. , 2013, , .		0

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109	Ultraschall aus Licht. Physik in Unserer Zeit, 2013, 44, 244-250.	0.0	0
110	Fast photoacoustic imaging with a line scanning optical-acoustical resolution photoacoustic microscope (LS-OAR-PAM). , 2015, , .		0
111	Fast photoacoustic imaging with a line scanning optical-acoustical resolution photoacoustic microscope (LS-OAR-PAM). Proceedings of SPIE, 2015, , .	0.8	0
112	First steps towards dual-modality 3D photoacoustic and speed of sound imaging with optical ultrasound detection. , 2017, , .		0
113	Laser Ultrasonic Thin Film Characterization of Si-Cu-Al-Cu Multi-Layered Stacks. Materials Today: Proceedings, 2017, 4, 7122-7127.	1.8	0
114	Photoacoustic imaging. , 0, , .		0
115	Nanoeffects in Cells and Tissues by Femtosecond and Nanosecond Laser Pulses. , 2008, , .		0
116	Investigation of ablation dynamics as a function of wavelength. , 1994, , .		0
117	Annular array detector for large depth of field photoacoustic macroscopy. Proceedings of SPIE, 2017, , .	0.8	0
118	Speed of sound and photoacoustic imaging with an optical camera based ultrasound detection system. Proceedings of SPIE, 2017, , .	0.8	0
119	Photoacoustic scanning macroscopy with interferometric ultrasound detection based on a fiber-optic ring array. , 2018, , .		0
120	Combination of an annular array with a conical acoustic lens for large depth of field photoacoustic macroscopy. , 2019, , .		0
121	Acoustic resolution photoacoustic microscopy with large area optical ultrasound detection. , 2019, , .		0
122	Compact photoacoustic add-on for a reflectance confocal microscope. , 2020, , .		0
123	Benchtop photoacoustic tomograph with camera-based ultrasound detection. , 2021, , .		0
124	Photoacoustic imaging using structured illumination and a single-pixel ultrasound detector. , 2021, , .		0