

Gerald Diebold

List of Publications by Year in descending order

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75
papers

859
citations

687363

13
h-index

526287

27
g-index

241
all docs

241
docs citations

241
times ranked

942
citing authors

#	ARTICLE	IF	CITATIONS
1	Generation of high amplitude compressions and rarefactions in a photoacoustically excited droplet. <i>Photoacoustics</i> , 2021, 23, 100289.	7.8	3
2	Abel inversion of optical beam deflection signals from photoacoustic waves with symmetry in one, two, and three dimensions. <i>Journal of Applied Physics</i> , 2021, 130, 214902.	2.5	0
3	Differential Infrared Pyrometry for Determination of Microkelvin Temperature Variations. <i>Analytical Chemistry</i> , 2020, 92, 2058-2064.	6.5	1
4	Heterodyned photoacoustic effect generated by irradiation of single particles by two laser beams modulated at different frequencies. <i>Ultrasonics</i> , 2020, 106, 106157.	3.9	3
5	Advances in photothermal and photoacoustic metrology. <i>Journal of Applied Physics</i> , 2020, 128, 240402.	2.5	3
6	Moving photoacoustic sources: Acoustic waveforms in one, two, and three dimensions and application to trace gas detection. <i>Journal of Applied Physics</i> , 2019, 125, 060902.	2.5	2
7	Photoacoustic Effect Generated from an Expanding Spherical Source. <i>International Journal of Thermophysics</i> , 2018, 39, 1.	2.1	1
8	Mathematics of thermal diffusion in an exponential temperature field. <i>Chemical Physics</i> , 2018, 505, 1-5.	1.9	1
9	Photoacoustic effect in a stratified atmosphere. <i>Physical Review E</i> , 2018, 98, .	2.1	4
10	Emissivity determination using the photoacoustic effect. <i>Applied Optics</i> , 2018, 57, 2790.	1.8	3
11	Photoacoustic trace detection of gases at the parts-per-quadrillion level with a moving optical grating. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 7246-7249.	7.1	36
12	Photoacoustic effect generated by moving optical sources: Motion in three dimensions. <i>Journal of the Acoustical Society of America</i> , 2017, 142, 3796-3803.	1.1	4
13	Photoacoustic effect generated by moving optical sources: Motion in one dimension. <i>Journal of Applied Physics</i> , 2016, 119, .	2.5	7
14	A numerical study of shock waves generated through laser ablation of explosives. <i>Journal of Applied Physics</i> , 2016, 120, .	2.5	5
15	Optical pyrometer based on the gas phase photoacoustic effect. <i>Optics Letters</i> , 2016, 41, 2221.	3.3	4
16	The Effects of Initial Conditions on Photoacoustic Waveforms Generated by a Gaussian Heating Source Moving in One Dimension. <i>International Journal of Thermophysics</i> , 2016, 37, 1.	2.1	6
17	Photoacoustic transients generated by laser irradiation of thin films. <i>Photoacoustics</i> , 2015, 3, 60-63.	7.8	3
18	Generation of the sedimentation potential by rapid deceleration of a fluid jet. <i>Journal of Applied Physics</i> , 2014, 116, .	2.5	2

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19	Theory of self-oscillation and mode locking in a longitudinal photoacoustic resonator. <i>Physical Review E</i> , 2014, 90, 043204.	2.1	0
20	Thermally Induced Photoacoustic Transients Produced by Laser-Irradiated Fluid Spheres. <i>International Journal of Thermophysics</i> , 2014, 35, 2171-2177.	2.1	0
21	Vibration potential imaging of spherical objects. <i>Applied Physics Letters</i> , 2013, 102, 254105.	3.3	1
22	Photoacoustic transients produced by laser generated, ultrahigh thermal gradients. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	7
23	Mathieu function solutions for photoacoustic waves in sinusoidal one-dimensional structures. <i>Physical Review E</i> , 2012, 86, 016602.	2.1	2
24	Photoacoustic effect in a sinusoidally modulated structure. <i>Applied Physics Letters</i> , 2012, 100, .	3.3	7
25	Mathieu Function Solutions for the Photoacoustic Effect in Two- and Three-Dimensional Structures and Optical Traps. <i>International Journal of Thermophysics</i> , 2012, 33, 2185-2193.	2.1	0
26	Dynamics of thermal diffusion in a linear temperature field. <i>Journal of Applied Physics</i> , 2011, 110, 044908.	2.5	7
27	X-ray spatial harmonic imaging of phase objects. <i>Optics Letters</i> , 2011, 36, 2209.	3.3	13
28	Ludwig's Soret effect in a linear temperature field: Theory and experiments for steady state distributions. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2011, 375, 1917-1920.	2.1	8
29	Effects of exothermic chemical reaction on the photoacoustic effect from particulate suspensions. <i>Journal of Chemical Physics</i> , 2011, 134, 124513.	3.0	2
30	Comparison of Ultrasonic Distillation to Sparging of Liquid Mixtures. <i>Analytical Chemistry</i> , 2010, 82, 10090-10094.	6.5	6
31	X-ray elastography: Modification of x-ray phase contrast images using ultrasonic radiation pressure. <i>Journal of Applied Physics</i> , 2009, 105, 102001.	2.5	6
32	X-ray phase contrast imaging: Transmission functions separable in cylindrical coordinates. <i>Journal of Applied Physics</i> , 2009, 105, 102002.	2.5	7
33	Preface to Special Topic: Applied Biophysics. <i>Journal of Applied Physics</i> , 2009, 105, 101901.	2.5	0
34	Mechanism of voltage production and frequency dependence of the ultrasonic vibration potential. <i>Journal of Applied Physics</i> , 2009, 105, 102003.	2.5	2
35	Potential distributions from electroacoustic polarization sources. <i>Applied Physics Letters</i> , 2008, 93, .	3.3	3
36	Laser generation of gas bubbles: Photoacoustic and photothermal effects recorded in transient grating experiments. <i>Journal of Chemical Physics</i> , 2008, 129, 184506.	3.0	9

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37	Propagation based differential phase contrast imaging and tomography of murine tissue with a laser plasma x-ray source. Applied Physics Letters, 2007, 91, .	3.3	28
38	Frequency domain vibration potential imaging: Objects with symmetry in one dimension. Applied Physics Letters, 2006, 89, 243902.	3.3	7
39	Determination of Thermal Diffusivities, Thermal Conductivities, and Sound Speeds of Room-Temperature Ionic Liquids by the Transient Grating Technique. Journal of Chemical & Engineering Data, 2006, 51, 1250-1255.	1.9	111
40	Transient gratings generated by particulate suspensions: The uniformly irradiated sphere and the point source. Journal of Chemical Physics, 2006, 124, 034905.	3.0	4
41	Imaging with the ultrasonic vibration potential: A theory for current generation. Ultrasound in Medicine and Biology, 2005, 31, 273-278.	1.5	7
42	Mathematical analysis of thermal diffusion shock waves. Physical Review E, 2005, 72, 041205.	2.1	3
43	Thermal Diffusion Shock Waves. Physical Review Letters, 2005, 94, 095901.	7.8	14
44	Thermal Diffusion in a Sinusoidal Temperature Field. Physical Review Letters, 2004, 92, 125901.	7.8	9
45	Resonant microphone based on laser beam deflection. Journal of Applied Physics, 2004, 96, 864-866.	2.5	1
46	Acoustic radiation pressure: A phase contrast agent for x-ray phase contrast imaging. Applied Physics Letters, 2004, 85, 4517.	3.3	10
47	Imaging based on the ultrasonic vibration potential. Applied Physics Letters, 2004, 85, 5466-5468.	3.3	14
48	Evaluation of Photodynamic Therapy Agents through Transient Grating Measurements. Journal of Physical Chemistry A, 2003, 107, 5138-5143.	2.5	36
49	Photoacoustic waves at reflecting interfaces. Review of Scientific Instruments, 2003, 74, 801-804.	1.3	7
50	The photoacoustic effect generated by an incompressible sphere. Journal of the Acoustical Society of America, 2002, 112, 1780-1786.	1.1	37
51	Laser-Initiated Chemical Reactions in Carbon Suspensions. Journal of Physical Chemistry A, 2002, 106, 10072-10078.	2.5	17
52	Introduction of Bulky Perfluoroalkyl Groups at the Periphery of Zinc Perfluorophthalocyanine: Chemical, Structural, Electronic, and Preliminary Photophysical and Biological Effects The financial assistance of Brown University start-up funds, Salomon Foundation, the US Department of Energy (ER) Tj ETQq0 0 0,rgBT /Overlock 10 T	13.8	46
53	purchased with assistance from NSF (CHE-8206423) and NIH (RR-06462). M. Beggs, I. Colosso, H. E. Ensley, T.-L. Shen. Angewandte Chemie - International Edition, 2002, 41, 747.		
53	Photoacoustic Point Source. Physical Review Letters, 2001, 86, 3550-3553.	7.8	140
54	Laser-Induced "Regeneration" of Colloidal Particles: The Effects of Thermal Inertia on the Chemical Reactivity of Laser-Heated Particles. Angewandte Chemie - International Edition, 1999, 38, 3353-3356.	13.8	23

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55	Photoacoustic shock generation in carbon suspensions. Applied Physics Letters, 1999, 75, 4204-4206.	3.3	14
56	Diffraction of light from phase gratings at large modulation depths: transient-grating experiments in liquids at high laser powers. Optics Letters, 1999, 24, 211.	3.3	1
57	Laser-Induced "Regeneration" of Colloidal Particles: The Effects of Thermal Inertia on the Chemical Reactivity of Laser-Heated Particles. , 1999, 38, 3353.		1
58	Theory of Thin Layer Photoacoustic Cells for Determination of Volume Changes in Solution. Journal of Physical Chemistry B, 1998, 102, 5404-5408.	2.6	6
59	Sonoluminescence initiated by laser irradiation of carbon suspensions. Applied Physics Letters, 1998, 73, 1029-1031.	3.3	11
60	Production of the photoacoustic effect and transient gratings by molecular volume changes. Journal of Chemical Physics, 1996, 104, 6730-6741.	3.0	27
61	Numerical calculation of the photoacoustic signal generated by a droplet. AIP Conference Proceedings, 1988, , .	0.4	0
62	Quantum beats in atomic fluorescence excited by molecular photodissociation. Journal of Chemical Physics, 1986, 85, 25-33.	3.0	0
63	Interference in atomic fluorescence excited by molecular photodissociation. Physical Review A, 1985, 32, 1458-1467.	2.5	4
64	Quantum-mechanical interference in two-photon absorption: A nonlinear analog of the Hanle effect. Physical Review A, 1985, 32, 2739-2746.	2.5	6
65	Trace detection based on chemical amplification of the optoacoustic effect. Analytical Chemistry, 1985, 57, 2989-2991.	6.5	11
66	Interference in Atomic Fluorescence Following Photodissociation of Homonuclear Diatomic Molecules. Physical Review Letters, 1983, 51, 1344-1347.	7.8	10
67	Paramagnetic resonance spectrum of metastable P ₂ atomic nitrogen. Physical Review A, 1982, 25, 1504-1512.	2.5	8
68	Opto-acoustic detection of chain reactions. Chemical Physics, 1980, 49, 429-437.	1.9	15
69	Density gradient measurements of vibrational relaxation in Ar "ClF mixtures behind shock waves. Journal of Chemical Physics, 1978, 69, 1787-1788.	3.0	2
70	Effects of A/D converter resolution in signal averaging. Review of Scientific Instruments, 1977, 48, 1689-1694.	1.3	4
71	Density gradient measurements of Cl ₂ dissociation in shock waves. Journal of Chemical Physics, 1977, 67, 881.	3.0	4
72	Observation of the optoacoustic effect in the microwave region. Applied Physics Letters, 1976, 29, 447-449.	3.3	13

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73	Density gradient measurements of vibrational relaxation in He-F ₂ mixtures behind shock waves. Journal of Chemical Physics, 1975, 62, 296.	3.0	6
74	Vibrational relaxation of fluorine by a shock tube schlieren method. Journal of Chemical Physics, 1974, 60, 4170-4174.	3.0	13
75	Differential photodiode detector for a shock tube laser schlieren system. Review of Scientific Instruments, 1974, 45, 773-775.	1.3	8