

David W Hahn

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3644529/publications.pdf>

Version: 2024-02-01

113
papers

6,629
citations

101543

36
h-index

66911

78
g-index

116
all docs

116
docs citations

116
times ranked

4752
citing authors

#	ARTICLE	IF	CITATIONS
1	Chemical Characterization Using Laser-Induced Breakdown Spectroscopy of Products Released from Lithium-Ion Battery Cells at Thermal Runaway Conditions. <i>Applied Spectroscopy</i> , 2022, 76, 967-977.	2.2	4
2	Aerosol measurements with laser-induced breakdown spectroscopy and conditional analysis. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2021, 179, 106107.	2.9	11
3	Laser-Induced Breakdown Spectroscopy and Principal Component Analysis for the Classification of Spectra from Gold-Bearing Ores. <i>Applied Spectroscopy</i> , 2020, 74, 42-54.	2.2	25
4	Raman spectroscopy for detection of ammonium nitrate as an explosive precursor used in improvised explosive devices. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2020, 233, 118204.	3.9	26
5	LIBS for aerosol analysis. , 2020, , 499-535.		4
6	Plasma chemistry produced during laser ablation of graphite in air, argon, helium and nitrogen. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2020, 166, 105800.	2.9	23
7	Laser ablation at high repetition rate coupled to laser-induced breakdown spectroscopy for analysis of non-matrix matched standards. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2020, 166, 105795.	2.9	6
8	A simple finite element model to study the effect of plasma plume expansion on the nanosecond pulsed laser ablation of aluminum. <i>Applied Physics A: Materials Science and Processing</i> , 2019, 125, 1.	2.3	12
9	Magnesium-manganese oxides for high temperature thermochemical energy storage. <i>Journal of Energy Storage</i> , 2019, 21, 599-610.	8.1	50
10	Effect of laser irradiance and wavelength on the analysis of gold- and silver-bearing minerals with laser-induced breakdown spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2018, 145, 86-95.	2.9	21
11	Magnesioferrites for solar thermochemical fuel production. <i>Solar Energy</i> , 2018, 163, 1-15.	6.1	16
12	Uncertainty quantification for modeling pulsed laser ablation of aluminum considering uncertainty in the temperature-dependent absorption coefficient. <i>International Journal of Heat and Mass Transfer</i> , 2018, 120, 515-522.	4.8	8
13	Ablation Characteristics of Nanosecond Laser Pulsed Ablation of Aluminum. , 2018, , .		1
14	Analysis of Air Cargo Temperature Variations During Transport Operations. <i>Transactions of the ASABE</i> , 2018, 61, 723-732.	1.1	6
15	On the utilization of principal component analysis in laser-induced breakdown spectroscopy data analysis, a review. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2018, 148, 65-82.	2.9	160
16	Theoretical and Experimental Investigation of Solar Methane Reforming through the Nonstoichiometric Ceria Redox Cycle. <i>Energy Technology</i> , 2017, 5, 2138-2149.	3.8	41
17	Response to Rebuttal to "Theoretical and Experimental Investigation of Solar Methane Reforming through the Nonstoichiometric Ceria Redox Cycle". <i>Energy Technology</i> , 2017, 5, 2153-2155.	3.8	1
18	Quantification of gold and silver in minerals by laser-induced breakdown spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2017, 136, 106-115.	2.9	34

#	ARTICLE	IF	CITATIONS
19	Differential Laser-Induced Perturbation Spectroscopy Method for Biological Material Classification. , 2016, , .		0
20	Detection of Explosives Using Differential Laser-Induced Perturbation Spectroscopy with a Raman-based Probe. Applied Spectroscopy, 2016, 70, 676-687.	2.2	3
21	Differential Laser-Induced Perturbation Spectroscopy for Analysis of Mixtures of the Fluorophores Phenylalanine, Tyrosine and Tryptophan Using a Fluorescence Probe. Photochemistry and Photobiology, 2016, 92, 658-666.	2.5	4
22	Interaction between iron based compound and soot particles in diffusion flame. Energy, 2016, 116, 933-941.	8.8	25
23	A transient heat transfer model for high temperature solar thermochemical reactors. International Journal of Hydrogen Energy, 2016, 41, 2307-2325.	7.1	25
24	Solar Thermochemical Energy Storage Through Carbonation Cycles of SrCO ₃ /SrO Supported on SrZrO ₃ . ChemSusChem, 2015, 8, 3793-3798.	6.8	58
25	Differential laser-induced perturbation Raman spectroscopy: a comparison with Raman spectroscopy for analysis and classification of amino acids and dipeptides. Journal of Biomedical Optics, 2015, 20, 047006.	2.6	3
26	Iron oxidation kinetics for H ₂ and CO production via chemical looping. International Journal of Hydrogen Energy, 2015, 40, 1675-1689.	7.1	15
27	The use of multi-element aerosol particles for determining temporal variations in temperature and electron density in laser-induced plasmas in support of quantitative laser-induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2015, 109, 1-7.	2.9	10
28	Investigation of long term reactive stability of ceria for use in solar thermochemical cycles. Energy, 2015, 89, 924-931.	8.8	29
29	Fiber-coupled laser-induced breakdown and Raman spectroscopy for flexible sample characterization with depth profiling capabilities. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2014, 100, 116-122.	2.9	11
30	Double-pulse laser ablation coupled to laser-induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2014, 98, 48-53.	2.9	9
31	Plasmonic Diagnostics for Tribology: In Situ Observations Using Surface Plasmon Resonance in Combination with Surface-Enhanced Raman Spectroscopy. Tribology Letters, 2013, 49, 95-102.	2.6	18
32	Laser ablation methods for analysis of urinary calculi: Comparison study based on calibration pellets. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2013, 81, 43-49.	2.9	29
33	Laser ablation-laser induced breakdown spectroscopy for the measurement of total elemental concentration in soils. Applied Optics, 2013, 52, 2470.	1.8	25
34	Comparative evaluation of differential laser-induced perturbation spectroscopy as a technique to discriminate emerging skin pathology. Journal of Biomedical Optics, 2012, 17, 067002.	2.6	5
35	Evaluation of Laser-Induced Breakdown Spectroscopy (LIBS) as a Measurement Technique for Evaluation of Total Elemental Concentration in Soils. Applied Spectroscopy, 2012, 66, 99-106.	2.2	60
36	Laser-Induced Breakdown Spectroscopy (LIBS), Part II: Review of Instrumental and Methodological Approaches to Material Analysis and Applications to Different Fields. Applied Spectroscopy, 2012, 66, 347-419.	2.2	1,160

#	ARTICLE	IF	CITATIONS
37	Heat Treatments Modify the Tribological Properties of Nickel Boron Coatings. ACS Applied Materials & Interfaces, 2012, 4, 3069-3076.	8.0	31
38	A Kinetic Model for Ammonia Adsorption on a Titanium Nitride Surface. IEEE Sensors Journal, 2012, 12, 843-848.	4.7	2
39	Investigation of Iron Oxide Morphology in a Cyclic Redox Water Splitting Process for Hydrogen Generation. Materials, 2012, 5, 2003-2014.	2.9	5
40	Heat Transfer Between Colliding Surfaces and Particles. Journal of Heat Transfer, 2012, 134, .	2.1	6
41	Laser-induced breakdown spectroscopy for analysis of micro and nanoparticles. Journal of Analytical Atomic Spectrometry, 2012, 27, 1110.	3.0	63
42	Real-time measurement of ArF excimer laser corneal tissue ablation rates using cross-correlation of laser waveforms. Optics Express, 2011, 19, 4231.	3.4	6
43	Differential laser-induced perturbation spectroscopy using a deep-ultraviolet excimer laser. Optics Letters, 2011, 36, 2116.	3.3	6
44	Heat Transfer Between Colliding Surfaces and Particles. , 2011, , .		0
45	Oxidation reaction kinetics for the steam-iron process in support of hydrogen production. International Journal of Hydrogen Energy, 2011, 36, 15125-15135.	7.1	21
46	A Raman Spectroscopic Study of MoS2 and MoO3: Applications to Tribological Systems. Tribology Letters, 2011, 42, 301-310.	2.6	575
47	The influence of laser-particle interaction in laser induced breakdown spectroscopy and laser ablation inductively coupled plasma spectrometry. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2011, 66, 179-185.	2.9	16
48	High-Temperature Vapor Phase Lubrication Using Carbonaceous Gases. Tribology Letters, 2010, 40, 3-9.	2.6	13
49	Investigation of polarization effects for nanosecond laser-induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2010, 65, 1033-1040.	2.9	19
50	Double-pulse and single-pulse laser-induced breakdown spectroscopy for distinguishing between gaseous and particulate phase analytes. Applied Optics, 2010, 49, C110.	2.1	31
51	Laser-Induced Breakdown Spectroscopy (LIBS), Part I: Review of Basic Diagnostics and Plasma-Particle Interactions: Still-Challenging Issues within the Analytical Plasma Community. Applied Spectroscopy, 2010, 64, 335A-336A.	2.2	834
52	100% Efficient Sub-Nanoliter Sample Introduction in Laser-Induced Breakdown Spectroscopy and Inductively Coupled Plasma Spectrometry: Implications for Ultralow Sample Volumes. Analytical Chemistry, 2010, 82, 2568-2573.	6.5	55
53	Study of analyte dissociation and diffusion in laser-induced plasmas: implications for laser-induced breakdown spectroscopy. Journal of Analytical Atomic Spectrometry, 2010, 25, 1921.	3.0	21
54	Laser-induced breakdown spectroscopy (LIBS) for detection of ammonium nitrate in soils. Proceedings of SPIE, 2009, , .	0.8	6

#	ARTICLE	IF	CITATIONS
55	Particle size limits for quantitative aerosol analysis using laser-induced breakdown spectroscopy: Temporal considerations. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2009, 64, 1153-1158.	2.9	34
56	Laser ablation—laser induced breakdown spectroscopy (LA-LIBS): A means for overcoming matrix effects leading to improved analyte response. <i>Journal of Analytical Atomic Spectrometry</i> , 2009, 24, 1665.	3.0	81
57	Study of early laser-induced plasma dynamics: Transient electron density gradients via Thomson scattering and Stark Broadening, and the implications on laser-induced breakdown spectroscopy measurements. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2008, 63, 1038-1046.	2.9	46
58	Effects of laser repetition rate on corneal tissue ablation for 193-nm excimer laser light. <i>Lasers in Surgery and Medicine</i> , 2008, 40, 483-493.	2.1	29
59	Numerical simulation of laser-induced breakdown spectroscopy: Modeling of aerosol analysis with finite diffusion and vaporization effects. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2008, 63, 293-304.	2.9	23
60	Reduction of soot emissions by iron pentacarbonyl in isooctane diffusion flames. <i>Combustion and Flame</i> , 2008, 154, 164-180.	5.2	46
61	Excimer Laser Photofragmentation/Fragment Detection for Analysis of the Oxygenated Hydrocarbon Ethyl-3-Ethoxypropionate: Implications for Atmospheric Monitoring. <i>Applied Spectroscopy</i> , 2008, 62, 1028-1037.	2.2	0
62	Alternative Statistical Methods for Spectral Data Processing: Applications to Laser-Induced Breakdown Spectroscopy of Gaseous and Aerosol Systems. <i>Applied Spectroscopy</i> , 2008, 62, 1144-1152.	2.2	24
63	Laser-induced breakdown spectroscopy (LIBS) for aerosol analysis. , 2008, , .		0
64	Development and numerical solution of a mechanistic model for corneal tissue ablation with the 193 nm argon fluoride excimer laser. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2007, 24, 265.	1.5	23
65	The effect of multi-component aerosol particles on quantitative laser-induced breakdown spectroscopy: Consideration of localized matrix effects. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2007, 62, 1466-1474.	2.9	54
66	Investigation of helium addition for laser-induced plasma spectroscopy of pure gas phase systems: Analyte interactions and signal enhancement. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2007, 62, 1390-1398.	2.9	47
67	Plasma-Particle Interactions in a Laser-Induced Plasma: Implications for Laser-Induced Breakdown Spectroscopy. <i>Analytical Chemistry</i> , 2006, 78, 1509-1514.	6.5	68
68	Laser-Induced Breakdown Spectroscopy for Ambient Air Particulate Monitoring: Correlation of Total and Speciated Aerosol Particle Counts. <i>Applied Spectroscopy</i> , 2006, 60, 237-245.	2.2	29
69	Dual-pulse Laser Induced Breakdown Spectroscopy for analysis of gaseous and aerosol systems: Plasma-analyte interactions. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2006, 61, 788-796.	2.9	59
70	Dual-pulse laser induced breakdown spectroscopy: Time-resolved transmission and spectral measurements. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2005, 60, 968-974.	2.9	37
71	Frictional anisotropy of oriented carbon nanotube surfaces. <i>Tribology Letters</i> , 2005, 18, 59-62.	2.6	136
72	Calibration Effects for Laser-Induced Breakdown Spectroscopy of Gaseous Sample Streams: Analyte Response of Gas-Phase Species versus Solid-Phase Species. <i>Analytical Chemistry</i> , 2005, 77, 1118-1124.	6.5	72

#	ARTICLE	IF	CITATIONS
73	Assessment of soot particle vaporization effects during laser-induced incandescence with time-resolved light scattering. <i>Applied Optics</i> , 2005, 44, 4211.	2.1	44
74	Hydrogen Leak Detection Using Laser-Induced Breakdown Spectroscopy. <i>Applied Spectroscopy</i> , 2005, 59, 348-353.	2.2	38
75	Feasibility of Detection and Identification of Individual Bioaerosols Using Laser-Induced Breakdown Spectroscopy. <i>Analytical Chemistry</i> , 2005, 77, 631-638.	6.5	95
76	Temporal analysis of laser-induced plasma properties as related to laser-induced breakdown spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2004, 59, 327-333.	2.9	72
77	Evaluation of XRF and LIBS technologies for on-line sorting of CCA-treated wood waste. <i>Waste Management</i> , 2004, 24, 413-424.	7.4	80
78	Effects of aerosols and laser cavity seeding on spectral and temporal stability of laser-induced plasmas: applications to LIBS. <i>Journal of Analytical Atomic Spectrometry</i> , 2004, 19, 1289.	3.0	23
79	Measurement of small-signal absorption coefficient and absorption cross section of collagen for 193-nm excimer laser light and the role of collagen in tissue ablation. <i>Applied Optics</i> , 2004, 43, 5443.	2.1	21
80	Determination of Excimer Laser Ablation Rates of Corneal Tissue Using Wax Impressions of Ablation Craters and White-Light Interferometry. <i>Ophthalmic Surgery Lasers and Imaging Retina</i> , 2004, 35, 41-51.	0.7	12
81	Laser-induced breakdown spectroscopy: an introduction to the feature issue. <i>Applied Optics</i> , 2003, 42, 5937.	2.1	18
82	Comparison of nonintensified and intensified CCD detectors for laser-induced breakdown spectroscopy. <i>Applied Optics</i> , 2003, 42, 6016.	2.1	44
83	Conditional data processing for single-shot spectral analysis by use of laser-induced breakdown spectroscopy. <i>Applied Optics</i> , 2003, 42, 6022.	2.1	26
84	Geiger photodiode array for compact, lightweight laser-induced breakdown spectroscopy instrumentation. <i>Applied Optics</i> , 2003, 42, 6072.	2.1	7
85	Assessment of Transient Changes in Corneal Hydration Using Confocal Raman Spectroscopy. <i>Cornea</i> , 2003, 22, 363-370.	1.7	21
86	Laser-Induced Breakdown Spectroscopy for the Analysis of Cobalt- ⁶⁰ Chromium Orthopaedic Wear Debris Particles. <i>Applied Spectroscopy</i> , 2002, 56, 984-993.	2.2	7
87	On-Line Sorting of Wood Treated with Chromated Copper Arsenate Using Laser-Induced Breakdown Spectroscopy. <i>Applied Spectroscopy</i> , 2002, 56, 1337-1344.	2.2	54
88	Assessment of the Upper Particle Size Limit for Quantitative Analysis of Aerosols Using Laser-Induced Breakdown Spectroscopy. <i>Analytical Chemistry</i> , 2002, 74, 5450-5454.	6.5	90
89	Plasma volume considerations for analysis of gaseous and aerosol samples using laser-induced breakdown spectroscopy. <i>Journal of Analytical Atomic Spectrometry</i> , 2002, 17, 1534-1539.	3.0	35
90	Sampling statistics and considerations for single-shot analysis using laser-induced breakdown spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2002, 57, 779-790.	2.9	100

#	ARTICLE	IF	CITATIONS
91	Temporal Gating for the Optimization of Laser-Induced Breakdown Spectroscopy Detection and Analysis of Toxic Metals. Applied Spectroscopy, 2001, 55, 1312-1319.	2.2	93
92	Detection of Gaseous and Particulate Fluorides by Laser-Induced Breakdown Spectroscopy. Applied Spectroscopy, 2001, 55, 1455-1461.	2.2	54
93	The effects of oxygen on the detection of mercury using laser-induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2001, 56, 419-430.	2.9	36
94	On-line analysis of ambient air aerosols using laser-induced breakdown spectroscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2001, 56, 851-864.	2.9	170
95	Aerosol generation system for development and calibration of laser-induced breakdown spectroscopy instrumentation. Review of Scientific Instruments, 2001, 72, 3706-3713.	1.3	33
96	Laser Induced Plasma Spectroscopy for the Characterization of Aerosols and Particulates. KONA Powder and Particle Journal, 2001, 19, 25-33.	1.7	10
97	Implementation of laser-induced breakdown spectroscopy as a continuous emissions monitor for toxic metals. Waste Management, 2000, 20, 455-462.	7.4	123
98	Detection and Analysis of Aerosol Particles by Laser-Induced Breakdown Spectroscopy. Aerosol Science and Technology, 2000, 33, 30-48.	3.1	202
99	Laser-induced breakdown spectroscopy for sizing and elemental analysis of discrete aerosol particles. Applied Physics Letters, 1998, 72, 2960-2962.	3.3	83
100	Systematic study of diamond film deposition in an atmospheric-pressure stagnation-flow flame reactor. Diamond and Related Materials, 1998, 7, 1320-1327.	3.9	1
101	Modeling Analysis for the Optimization of Diamond Deposition in a Stagnation-Flow Flame Reactor. Combustion Science and Technology, 1997, 126, 175-199.	2.3	2
102	Discrete Particle Detection and Metal Emissions Monitoring Using Laser-Induced Breakdown Spectroscopy. Applied Spectroscopy, 1997, 51, 1836-1844.	2.2	136
103	Analysis of polyethylene wear debris using micro-Raman spectroscopy: A report on the presence of beta-carotene. , 1997, 35, 31-37.		15
104	Large-area diamond deposition in an atmospheric pressure stagnation-flow reactor. Applied Physics Letters, 1996, 68, 2158-2160.	3.3	16
105	Induction of Lambda Prophage by 213 nm Laser Radiation: A Quantitative Comparison with 193 nm Excimer Radiation Using Image Analysis. Photochemistry and Photobiology, 1996, 63, 281-285.	2.5	2
106	Characterization of submicron polyethylene wear debris from synovial-fluid samples of revised knee replacements using a light-scattering technique. , 1996, 31, 355-363.		21
107	Dynamics of ablation plume particles generated during excimer laser corneal ablation. Lasers in Surgery and Medicine, 1995, 16, 384-389.	2.1	36
108	Ablation plume particle dynamics during excimer laser ablation of polyimide. Journal of Applied Physics, 1995, 77, 2759-2766.	2.5	12

#	ARTICLE	IF	CITATIONS
109	Optical properties of polyimide during ArF excimer laser ablation. Journal of Applied Physics, 1994, 76, 1830-1832.	2.5	4
110	Enhanced ArF laser absorption in a collagen target under ablative conditions. Lasers in Surgery and Medicine, 1994, 15, 107-111.	2.1	14
111	On the optical properties of submicrometre inhomogeneous flame particulates. Journal Physics D: Applied Physics, 1993, 26, 1851-1858.	2.8	5
112	The role of iron additives in sooting premixed flames. Proceedings of the Combustion Institute, 1992, 24, 1007-1014.	0.3	20
113	Extinction efficiencies of elongated soot particles. Journal of Quantitative Spectroscopy and Radiative Transfer, 1989, 42, 219-224.	2.3	9