Jennifer L Gottfried

List of Publications by Year
in descending order

67 papers	3,504 citations	126907 33 h-index	138484 58 g-index
71 all docs	71 docs citations	71 times ranked	1972 citing authors

#	Article	IF	Citations
1	Double pulse laser ablation and plasma: Laser induced breakdown spectroscopy signal enhancement. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2006, 61, 999-1014.	2.9	428
2	Laser-induced breakdown spectroscopy for detection of explosives residues: a review of recent advances, challenges, and future prospects. Analytical and Bioanalytical Chemistry, 2009, 395, 283-300.	3.7	278
3	LIBS analysis of geomaterials: Geochemical fingerprinting for the rapid analysis and discrimination of minerals. Applied Geochemistry, 2009, 24, 1125-1141.	3.0	157
4	Multivariate analysis of laser-induced breakdown spectroscopy chemical signatures for geomaterial classification. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2009, 64, 1009-1019.	2.9	154
5	Double-pulse standoff laser-induced breakdown spectroscopy for versatile hazardous materials detection. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2007, 62, 1405-1411.	2.9	150
6	Strategies for residue explosives detection using laser-induced breakdown spectroscopy. Journal of Analytical Atomic Spectrometry, 2008, 23, 205-216.	3.0	149
7	Standoff Detection of Chemical and Biological Threats Using Laser-Induced Breakdown Spectroscopy. Applied Spectroscopy, 2008, 62, 353-363.	2.2	147
8	Synthesis and Investigation of Advanced Energetic Materials Based on Bispyrazolylmethanes. Angewandte Chemie - International Edition, 2016, 55, 16132-16135.	13.8	132
9	Multivariate analysis of standoff laser-induced breakdown spectroscopy spectra for classification of explosive-containing residues. Applied Optics, 2008, 47, G112.	2.1	128
10	Energetic Performance of Optically Activated Aluminum/Graphene Oxide Composites. ACS Nano, 2018, 12, 11366-11375.	14.6	99
11	Double pulse laser-induced breakdown spectroscopy of explosives: Initial study towards improved discrimination. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2007, 62, 1399-1404.	2.9	93
12	Kinetic modeling study of the laser-induced plasma plume of cyclotrimethylenetrinitramine (RDX). Spectrochimica Acta, Part B: Atomic Spectroscopy, 2007, 62, 1321-1328.	2.9	71
13	Evaluation of femtosecond laser-induced breakdown spectroscopy for explosive residue detection. Optics Express, 2009, 17, 419.	3.4	71
14	Discrimination of explosive residues on organic and inorganic substrates using laser-induced breakdown spectroscopy. Journal of Analytical Atomic Spectrometry, 2009, 24, 288.	3.0	71
15	Laser-induced breakdown spectroscopy-based geochemical fingerprinting for the rapid analysis and discrimination of minerals: the example of garnet. Applied Optics, 2010, 49, C168.	2.1	64
16	Influence of variable selection on partial least squares discriminant analysis models for explosive residue classification. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2011, 66, 122-128.	2.9	62
17	Influence of exothermic chemical reactions on laser-induced shock waves. Physical Chemistry Chemical Physics, 2014, 16, 21452-21466.	2.8	62
18	Estimated Detonation Velocities for TKXâ€50, MADâ€X1, BDNAPM, BTNPM, TKXâ€55, and DAAF using the Laserâ€“induced Air Shock from Energetic Materials Technique. Propellants, Explosives, Pyrotechnics, 2017, 42, 353-359.	1.6	62

#	Article	IF	Citations
19	Laboratoryâ€Scale Method for Estimating Explosive Performance from Laserâ€Induced Shock Waves. Propellants, Explosives, Pyrotechnics, 2015, 40, 674-681.	1.6	58
20	Discrimination of biological and chemical threat simulants in residue mixtures on multiple substrates. Analytical and Bioanalytical Chemistry, 2011, 400, 3289-3301.	3.7	53
21	Classification of explosive residues on organic substrates using laser induced breakdown spectroscopy. Applied Optics, 2012, 51, B83.	1.8	52
22	Laser-induced plasma chemistry of the explosive RDX with various metallic nanoparticles. Applied Optics, 2012, 51, B13.	1.8	49
23	Archaeological applications of laser-induced breakdown spectroscopy: an example from the Coso Volcanic Field, California, using advanced statistical signal processing analysis. Applied Optics, 2010, 49, C120.	2.1	48
24	Laser-shocked energetic materials with metal additives: evaluation of chemistry and detonation performance. Applied Optics, 2017, 56, B47.	2.1	46
25	Characterization of a Series of Nitrogenâ€Rich Molecules using Laser Induced Breakdown Spectroscopy. Propellants, Explosives, Pyrotechnics, 2010, 35, 268-277.	1.6	45
26	Influence of Molecular Structure on the Laser-Induced Plasma Emission of the Explosive RDX and Organic Polymers. Journal of Physical Chemistry A, 2013, 117, 9555-9563.	2.5	45
27	as the benchmark for rigorous ab initio theory. Journal of Molecular Spectroscopy, 2009, 255, 13-23.	1.2	44
28	Graphitic coated Al nanoparticles manufactured as superior energetic materials via laser ablation synthesis in organic solvents. Applied Surface Science, 2019, 473, 156-163.	6.1	44
29	Improving the Explosive Performance of Aluminum Nanoparticles with Aluminum Iodate Hexahydrate (AIH). Scientific Reports, 2018, 8, 8036.	3.3	42
30	Near-infrared spectroscopy of H3+ above the barrier to linearity. Journal of Chemical Physics, 2003, 118, 10890-10899.	3.0	41
31	Plasma surface treatment of aluminum nanoparticles for energetic material applications. Combustion and Flame, 2019, 206, 211-213.	5.2	40
32	Discriminating volcanic centers with handheld laser-induced breakdown spectroscopy (LIBS). Journal of Archaeological Science, 2018, 98, 112-127.	2.4	38
33	Synthesis and Investigation of Advanced Energetic Materials Based on Bispyrazolylmethanes. Angewandte Chemie, 2016, 128, 16366-16369.	2.0	37
34	Rapid analysis of energetic and geo-materials using LIBS. Materials Today, 2011, 14, 274-281.	14.2	35
35	Laser-induced breakdown spectroscopy for the classification of unknown powders. Applied Optics, 2008, 47, G80.	2.1	30
36	Detection of indoor biological hazards using the man-portable laser induced breakdown spectrometer. Applied Optics, 2008, 47, G48.	2.1	29

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37	Evaluating compositional effects on the laser-induced combustion and shock velocities of Al/Zr-based composite fuels. Combustion and Flame, 2020, 213, 357-368.	5.2	28
38	Laserâ€induced Deflagration for the Characterization of Energetic Materials. Propellants, Explosives, Pyrotechnics, 2017, 42, 592-602.	1.6	27
39	Laser-based Detection Methods of Explosives. , 2007, , 279-321.		24
40	Influence of metal substrates on the detection of explosive residues with laser-induced breakdown spectroscopy. Applied Optics, 2013, 52, B10.	1.8	23
41	Indirect ignition of energetic materials with laser-driven flyer plates. Applied Optics, 2017, 56, B134.	2.1	21
42	Effect of sample morphology on the spectral and spatiotemporal characteristics of laser-induced plasmas from aluminum. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	2.3	21
43	Near-infrared spectroscopy of above the barrier to linearity. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 2917-2929.	3.4	20
44	Probing boron thermite energy release at rapid heating rates. Combustion and Flame, 2021, 231, 111491.	5.2	20
45	Estimating the Relative Energy Content of Reactive Materials Using Nanosecond-Pulsed Laser Ablation. MRS Advances, 2018, 3, 875-886.	0.9	19
46	Ignition and combustion of Perfluoroalkyl-functionalized aluminum nanoparticles and nanothermite. Combustion and Flame, 2022, 242, 112170.	5.2	18
47	Laboratoryâ€scale Investigation of the Influence of Ageing on the Performance and Sensitivity of an Explosive Containing Ïµâ€CLâ€20. Propellants, Explosives, Pyrotechnics, 2018, 43, 616-625.	1.6	16
48	Laser-induced air shock from energetic materials (LASEM) method for estimating detonation performance: Challenges, successes and limitations. AIP Conference Proceedings, 2018, , .	0.4	14
49	Spatiotemporal and emission characteristics of laser-induced plasmas from aluminum-zirconium composite powders. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2021, 183, 106270.	2.9	13
50	Near-infrared electronic spectrum of CH2+. Journal of Chemical Physics, 2004, 121, 11527-11529.	3.0	10
51	New potential energy surfaces for the and states of CH. Molecular Physics, 2007, 105, 1369-1376.	1.7	9
52	Interaction second virial coefficients from a recent H2â€"CO potential energy surface. Journal of Chemical Physics, 2000, 112, 4417-4418.	3.0	7
53	Energetic material response to ultrafast indirect laser heating. Applied Optics, 2017, 56, B85.	2.1	7
54	Chemically driven energetic molecular ferroelectrics. Nature Communications, 2021, 12, 5696.	12.8	6

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55	On the structure and impurities of a nominally homologous set of detonation nanodiamonds. Diamond and Related Materials, 2017, 76, 157-170.	3.9	5
56	Measuring fast and slow energy release from aluminum powders. AIP Conference Proceedings, 2020, , .	0.4	5
57	Acoustic response from metal powders reacting in a laser-induced plasma. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	5
58	The influence of particle size on the fluid dynamics of a laser-induced plasma. Physics of Fluids, 2022, 34, .	4.0	5
59	Optimizing the Performance of Aluminized Explosives: Laser-Based Measurements of Energy Release and Spectroscopic Diagnostics. , 2019, , .		3
60	Defense applications. , 2020, , 275-310.		2
61	Laser-induced breakdown spectroscopy for the detection and characterization of explosives. , 2022, , 269-313.		2
62	Commercial aluminum powders, part II: Energy release rates induced by rapid heating via pulsed laser excitation. Powder Technology, 2022, 399, 117161.	4.2	2
63	Progress in LIBS for landmine detection. Proceedings of SPIE, 2009, , .	0.8	1
64	Progress in Standoff LIBS Detection and Identification of Residue Materials. , 2010, , .		0
65	A New Approach to Elemental Inference in LIBS: A Statistical Model for Spectral Analysis. , 2013, , .		0
66	Higher time-resolution LASEM with upgraded diagnostics for lab-scale characterization of energy release rates. , 2021, , .		0
67	Laser-Induced Breakdown Spectroscopy for the Standoff Detection of Explosive Residues. , 2012, , .		0