

Christopher S Goldenstein

List of Publications by Year in descending order

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Version: 2024-02-01

63
papers

2,342
citations

279798

23
h-index

265206

42
g-index

63
all docs

63
docs citations

63
times ranked

1034
citing authors

#	ARTICLE	IF	CITATIONS
1	Infrared laser-absorption sensing for combustion gases. Progress in Energy and Combustion Science, 2017, 60, 132-176.	31.2	471
2	Spectroscopy and Optical Diagnostics for Gases. , 2016, , .		196
3	Fitting of calibration-free scanned-wavelength-modulation spectroscopy spectra for determination of gas properties and absorption lineshapes. Applied Optics, 2014, 53, 356.	1.8	189
4	Analysis of calibration-free wavelength-scanned wavelength modulation spectroscopy for practical gas sensing using tunable diode lasers. Measurement Science and Technology, 2013, 24, 125203.	2.6	160
5	SpectraPlot.com: Integrated spectroscopic modeling of atomic and molecular gases. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 200, 249-257.	2.3	101
6	Simultaneous sensing of temperature, CO, and CO ₂ in a scramjet combustor using quantum cascade laser absorption spectroscopy. Applied Physics B: Lasers and Optics, 2014, 117, 689-698.	2.2	93
7	Diode-laser measurements of linestrength and temperature-dependent lineshape parameters for H ₂ O transitions near 1.4 μ m using Voigt, Rautian, Galatry, and speed-dependent Voigt profiles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 152, 127-139.	2.3	67
8	High-bandwidth scanned-wavelength-modulation spectroscopy sensors for temperature and H ₂ O in a rotating detonation engine. Measurement Science and Technology, 2014, 25, 105104.	2.6	66
9	Diode laser measurements of linestrength and temperature-dependent lineshape parameters of H ₂ O-, CO ₂ -, and N ₂ -perturbed H ₂ O transitions near 2474 and 2482nm. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 130, 100-111.	2.3	61
10	Constrained reaction volume shock tube study of n -heptane oxidation: Ignition delay times and time-histories of multiple species and temperature. Proceedings of the Combustion Institute, 2015, 35, 231-239.	3.9	60
11	Tomographic laser absorption imaging of combustion species and temperature in the mid-wave infrared. Optics Express, 2018, 26, 20944.	3.4	56
12	Two-color absorption spectroscopy strategy for measuring the column density and path average temperature of the absorbing species in nonuniform gases. Applied Optics, 2013, 52, 7950.	1.8	55
13	Scanned-wavelength-modulation spectroscopy near 2.5 μ m for H ₂ O and temperature in a hydrocarbon-fueled scramjet combustor. Applied Physics B: Lasers and Optics, 2014, 116, 717-727.	2.2	50
14	Single-ended mid-infrared laser-absorption sensor for time-resolved measurements of water concentration and temperature within the annulus of a rotating detonation engine. Proceedings of the Combustion Institute, 2019, 37, 1435-1443.	3.9	44
15	Infrared laser absorption sensors for multiple performance parameters in a detonation combustor. Proceedings of the Combustion Institute, 2015, 35, 3739-3747.	3.9	43
16	Wavelength-modulation spectroscopy near 2.5 μ m for H ₂ O and temperature in high-pressure and -temperature gases. Applied Physics B: Lasers and Optics, 2014, 116, 705-716.	2.2	40
17	Single-ended mid-infrared laser-absorption sensor for simultaneous in situ measurements of H ₂ O, CO ₂ , CO, and temperature in combustion flows. Applied Optics, 2016, 55, 9347.	2.1	37
18	Multispecies Midinfrared Absorption Measurements in a Hydrocarbon-Fueled Scramjet Combustor. Journal of Propulsion and Power, 2014, 30, 1595-1604.	2.2	35

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19	Fiber-coupled diode-laser sensors for calibration-free stand-off measurements of gas temperature, pressure, and composition. <i>Applied Optics</i> , 2016, 55, 479.	2.1	34
20	2D mid-infrared laser-absorption imaging for tomographic reconstruction of temperature and carbon monoxide in laminar flames. <i>Optics Express</i> , 2019, 27, 14184.	3.4	34
21	Shock-tube measurements of excited oxygen atoms using cavity-enhanced absorption spectroscopy. <i>Applied Optics</i> , 2015, 54, 8766.	2.1	32
22	Ultrafast laser-absorption spectroscopy for single-shot, mid-infrared measurements of temperature, CO, and CH ₄ in flames. <i>Optics Letters</i> , 2020, 45, 583.	3.3	30
23	Spatially Resolved Water Measurements in a Scramjet Combustor Using Diode Laser Absorption. <i>Journal of Propulsion and Power</i> , 2014, 30, 1551-1558.	2.2	29
24	High-pressure and high-temperature gas cell for absorption spectroscopy studies at wavelengths up to 8 μ m. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2019, 227, 145-151.	2.3	25
25	A scanned-wavelength-modulation absorption-spectroscopy sensor for temperature and H ₂ O in low-pressure flames. <i>Measurement Science and Technology</i> , 2014, 25, 115501.	2.6	24
26	High-bandwidth absorption-spectroscopy measurements of temperature, pressure, CO, and H ₂ O in the annulus of a rotating detonation rocket engine. <i>Applied Physics B: Lasers and Optics</i> , 2021, 127, 1.	2.2	24
27	Ultrafast-laser-absorption spectroscopy in the mid-infrared for single-shot, calibration-free temperature and species measurements in low- and high-pressure combustion gases. <i>Optics Express</i> , 2021, 29, 30140.	3.4	22
28	Characterization of the influence of aluminum particle size on the temperature of composite-propellant flames using CO absorption and AIO emission spectroscopy. <i>Proceedings of the Combustion Institute</i> , 2021, 38, 4365-4372.	3.9	21
29	Design and application of a high-pressure combustion chamber for studying propellant flames with laser diagnostics. <i>Review of Scientific Instruments</i> , 2019, 90, 045111.	1.3	20
30	Cepstral analysis for baseline-insensitive absorption spectroscopy using light sources with pronounced intensity variations. <i>Applied Optics</i> , 2020, 59, 7865.	1.8	20
31	Diode Laser Absorption Sensor for Combustion Progress in a Model Scramjet. <i>Journal of Propulsion and Power</i> , 2014, 30, 550-557.	2.2	19
32	Near-GHz scanned-wavelength-modulation spectroscopy for MHz thermometry and H ₂ O measurements in aluminized fireballs of energetic materials. <i>Applied Physics B: Lasers and Optics</i> , 2020, 126, 1.	2.2	19
33	Kinetics of Excited Oxygen Formation in Shock-Heated O ₂ -Ar Mixtures. <i>Journal of Physical Chemistry A</i> , 2016, 120, 8234-8243.	2.5	16
34	Hypersonic Scramjet Testing via Diode Laser Absorption in a Reflected Shock Tunnel. <i>Journal of Propulsion and Power</i> , 2014, 30, 1586-1594.	2.2	14
35	Measurement of Water Vapor Levels for Investigating Vitiation Effects on Scramjet Performance. <i>Journal of Propulsion and Power</i> , 2011, 27, 1315-1317.	2.2	13
36	Infrared planar laser-induced fluorescence with a CW quantum-cascade laser for spatially resolved CO ₂ and gas properties. <i>Applied Physics B: Lasers and Optics</i> , 2015, 120, 185-199.	2.2	12

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37	High-speed multi-spectral imaging of the hypergolic ignition of ammonia borane. Proceedings of the Combustion Institute, 2021, 38, 4433-4440.	3.9	12
38	Compact, fiber-coupled, single-ended laser-absorption-spectroscopy sensors for high-temperature environments. Applied Optics, 2018, 57, 7117.	1.8	10
39	Single-shot, mid-infrared ultrafast-laser-absorption-spectroscopy measurements of temperature, CO, NO and H2O in HMX combustion gases. Applied Physics B: Lasers and Optics, 2021, 127, 1.	2.2	9
40	Tunable Diode Laser Absorption Sensor for Measurements of Temperature and Water Concentration in Supersonic Flows. , 2011, , .		8
41	Wavelength-Modulation Spectroscopy for MHz Thermometry and H2O Sensing in Combustion Gases of Energetic Materials. , 2019, , .		8
42	TDL Absorption Sensor for Temperature Measurements in High-Pressure and High-Temperature Gases. , 2012, , .		7
43	Spatially-resolved TDLAS measurements of temperature, H2O column density, and velocity in a direct-connect scramjet combustor. , 2014, , .		6
44	Simulation technique enabling calibration-free frequency-modulation spectroscopy measurements of gas conditions and lineshapes with modulation frequencies spanning kHz to GHz. Applied Optics, 2020, 59, 1491.	1.8	6
45	Wavelength-modulated planar laser-induced fluorescence for imaging gases. Optics Letters, 2017, 42, 5278.	3.3	6
46	Wavelength-modulation spectroscopy in the mid-infrared for temperature and HCl measurements in aluminum-lithium composite-propellant flames. Combustion and Flame, 2022, 242, 112180.	5.2	6
47	Ultrafast Laser Absorption Spectroscopy in the Mid-Infrared for Measuring Temperature and Species in Combustion Gases. , 2020, , .		5
48	Design and implementation of a laser-based absorption spectroscopy sensor for <i>in situ</i> monitoring of biomass gasification. Measurement Science and Technology, 2017, 28, 125501.	2.6	4
49	High-Bandwidth Laser-Absorption Measurements of Temperature, Pressure, CO, and H2O in the Annulus of a Rotating Detonation Rocket Engine. , 2021, , .		4
50	TDL Absorption Sensor for In Situ Determination of Combustion Progress in Scramjet Ground Testing. , 2012, , .		3
51	Characterization of Aluminum-Lithium Composite-Propellant Flames via Laser Absorption Spectroscopy. , 2021, , .		3
52	Laser Absorption Spectroscopy Measurements of Temperature, Pressure, and NO ₂ at 500 kHz in Shock-Heated Air. , 2022, , .		3
53	Wavelength-Modulation-Spectroscopy Diagnostics for Characterizing Metallized and Halogenated Fireballs of Energetic Materials. , 2020, , .		2
54	Scanned-Wavelength-Modulation Spectroscopy in the Mid-Infrared for Measurements of Temperature and CO in Aluminized Composite Propellant Flames. , 2020, , .		2

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55	Broadband, Mid-Infrared Laser-Absorption Measurements of Temperature, CH ₄ , and C ₃ H ₈ in Flames. , 2021, , .		2
56	Diagnostic Techniques for Gaseous Flows. , 2016, , 201-215.		1
57	Ultrafast-laser-absorption-spectroscopy measurements of gas temperature in multi-phase, high-pressure combustion gases. , 2021, , .		1
58	Infrared Laser-Induced Fluorescence with a Continuous-Wave Optical Parametric Oscillator. , 2021, , .		1
59	Laser-Absorption-Spectroscopy Measurements of Temperature, Pressure, and CO at 1 MHz in Post-Detonation Fireballs. , 2022, , .		1
60	Spectrally Resolved, 1D, Mid-Infrared Imaging of Temperature, CO ₂ , and HCl in AP-HTPB Propellant Flames. , 2021, , .		0
61	Single-shot ultrafast-laser-absorption measurements of temperature, CO, NO, and H ₂ O in HMX fireballs. , 2021, , .		0
62	Spectrally Resolved, 1D, Mid-Infrared Imaging of Temperature, CO ₂ , and HCl in Propellant Flames. Applied Optics, 2021, 60, 4524-4534.	1.8	0
63	Single-Ended Infrared-Laser-Absorption Sensing of Gas Properties. , 2017, , .		0