Gaetano Magnotti

List of Publications by Year
in descending order

79 papers	1,370 citations	361413 20 h-index	434195 31 g-index
79 all docs	79 docs citations	79 times ranked	703 citing authors

#	Article	IF	Citations
1	Local extinction and near-field structure in piloted turbulent CH4/air jet flames with inhomogeneous inlets. Combustion and Flame, 2015, 162, 3516-3540.	5.2	94
2	Stabilization of piloted turbulent flames with inhomogeneous inlets. Proceedings of the Combustion Institute, 2015, 35, 1477-1484.	3.9	69
3	Raman spectra of methane, ethylene, ethane, dimethyl ether, formaldehyde and propane for combustion applications. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 163, 80-101.	2.3	54
4	Optical diagnostics on the pre-chamber jet and main chamber ignition in the active pre-chamber combustion (PCC). Combustion and Flame, 2021, 228, 218-235.	5.2	50
5	Dual-Pump Coherent Anti-Stokes Raman Spectroscopy Measurements in a Dual-Mode Scramjet. Journal of Propulsion and Power, 2014, 30, 539-549.	2.2	47
6	Intensity-ratio and color-ratio thin-filament pyrometry: Uncertainties and accuracy. Combustion and Flame, 2014, 161, 908-916.	5.2	46
7	Regime identification from Raman/Rayleigh line measurements in partially premixed flames. Combustion and Flame, 2018, 189, 126-141.	5.2	41
8	Combustion stability study of partially premixed combustion with low-octane fuel at low engine load conditions. Applied Energy, 2019, 235, 56-67.	10.1	39
9	Effects of high shear on the structure and thickness of turbulent premixed methane/air flames stabilized on a bluff-body burner. Combustion and Flame, 2015, 162, 100-114.	5.2	35
10	Interference free spontaneous Raman spectroscopy for measurements in rich hydrocarbon flames. Proceedings of the Combustion Institute, 2015, 35, 3765-3772.	3.9	32
11	Preferential transport effects in premixed bluff-body stabilized CH4/H2 flames. Combustion and Flame, 2015, 162, 727-735.	5.2	31
12	OH PLIF visualization of the LUVa supersonic combustion experiment: configuration A. Journal of Visualization, 2014, 17, 131-141.	1.8	30
13	Scalar structure of turbulent partially-premixed dimethyl ether/air jet flames. Proceedings of the Combustion Institute, 2015, 35, 1235-1242.	3.9	30
14	Combustion stability study of partially premixed combustion by high-pressure multiple injections with low-octane fuel. Applied Energy, 2019, 248, 626-639.	10.1	29
15	Impact of spray-wall interaction on the in-cylinder spatial unburned hydrocarbon distribution of a gasoline partially premixed combustion engine. Combustion and Flame, 2020, 215, 157-168.	5.2	28
16	Raman spectroscopy for quantitative measurements of temperature and major species in high-pressure non-premixed NH3/H2/N2 counterflow flames. Combustion and Flame, 2022, 237, 111840.	5.2	28
17	CARS spectral fitting with multiple resonant species using sparse libraries. Journal of Raman Spectroscopy, 2011, 42, 1949-1957.	2.5	27
18	On defining progress variable for Raman/Rayleigh experiments in partially-premixed methane flames. Combustion and Flame, 2017, 179, 117-129.	5.2	25

#	Article	IF	Citations
19	Experimental Study on the Effects of Sprayâ€“Wall Interaction on Partially Premixed Combustion and Engine Emissions. Energy & Fuels, 2019, 33, 5673-5681.	5.1	23
20	Single-shot imaging of major species and OH mole fractions and temperature in non-premixed H2/N2 flames at elevated pressure. Proceedings of the Combustion Institute, 2021, 38, 1647-1655.	3.9	23
21	Dual-Pump CARS Measurements in the University of Virginia's Dual-Mode Scramjet: Configuration "A". , 2012, , .		22
22	Turbulent flames with compositionally inhomogeneous inlets: Resolved measurements of scalar dissipation rates. Proceedings of the Combustion Institute, 2017, 36, 1737-1745.	3.9	22
23	Study on the effects of narrow-throat pre-chamber geometry on the pre-chamber jet velocity using dual formaldehyde PLIF imaging. Combustion and Flame, 2022, 240, 111987.	5.2	21
24	Dual-resolution Raman spectroscopy for measurements of temperature and twelve species in hydrocarbonâ€“air flames. Proceedings of the Combustion Institute, 2017, 36, 4477-4485.	3.9	20
25	Saturation and Stark broadening effects in dualâ€pump CARS of N₂, O₂, and H₂. Journal of Raman Spectroscopy, 2012, 43, 611-620.	2.5	19
26	Dual-Pump CARS Measurements in the University of Virginia's Dual-Mode Scramjet: Configuration "C". , 2013, , .		19
27	Radiation intensity imaging measurements of methane and dimethyl ether turbulent nonpremixed and partially premixed jet flames. Combustion and Flame, 2014, 161, 2849-2859.	5.2	19
28	Assessing the relative importance of flame regimes in Raman/Rayleigh line measurements of turbulent lifted flames. Proceedings of the Combustion Institute, 2019, 37, 2297-2305.	3.9	19
29	Structure of turbulent nonpremixed syngas flames at high pressure. Proceedings of the Combustion Institute, 2019, 37, 2207-2214.	3.9	19
30	Development of a dual-pump coherent anti-Stokes Raman spectroscopy system for measurements in supersonic combustion. Applied Optics, 2013, 52, 4779.	1.8	18
31	Temperature and water measurements in flames using 1064Ânm Laser-Induced Grating Spectroscopy (LIGS). Combustion and Flame, 2019, 205, 336-344.	5.2	18
32	OH PLIF Visualization of the UVa Supersonic Combustion Experiment: Configuration C. , 2013, , .		17
33	Assessment of the stabilization mechanisms of turbulent lifted jet flames at elevated pressure using combined 2-D diagnostics. Combustion and Flame, 2020, 214, 323-335.	5.2	17
34	Statistics of scalar dissipation and reaction progress in turbulent flames with compositional inhomogeneities. Combustion and Flame, 2018, 194, 439-451.	5.2	16
35	A comparative study of isobaric combustion and conventional diesel combustion in both metal and optical engines. Fuel, 2021, 295, 120638.	6.4	15
36	Beam shaping for CARS measurements in turbulent environments. Applied Optics, 2012, 51, 4730.	1.8	14

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37	Quantitative acetylene measurements in laminar and turbulent flames using 1D Raman/Rayleigh scattering. Combustion and Flame, 2015, 162, 2248-2255.	5.2	14
38	Scalar dissipation rates in a turbulent partially-premixed dimethyl ether/air jet flame. Combustion and Flame, 2018, 188, 41-65.	5.2	14
39	Study of spray/wall interaction in transition zones from HCCI via PPC to CI combustion modes. Fuel, 2020, 268, 117341.	6.4	14
40	High-speed Rayleighâ€“Raman measurements with subframe burst gating. Optics Letters, 2019, 44, 4091.	3.3	13
41	Optical diagnostics and multi-point pressure sensing on the knocking combustion with multiple spark ignition. Combustion and Flame, 2022, 236, 111802.	5.2	13
42	Simultaneous Negative PLIF and OH* Chemiluminescence Imaging of the Gas Exchange and Flame Jet from a Narrow Throat Pre-Chamber. , 0, , .		12
43	Study on the Pre-Chamber Fueling Ratio Effect on the Main Chamber Combustion Using Simultaneous PLIF and OH* Chemiluminescence Imaging. SAE International Journal of Advances and Current Practices in Mobility, 0, 3, 137-149.	2.0	12
44	Multiple conditioned analysis of the turbulent stratified flame A. Proceedings of the Combustion Institute, 2017, 36, 1947-1955.	3.9	11
45	Structure of a stratified CH4 flame with H2 addition. Proceedings of the Combustion Institute, 2019, 37, 2307-2315.	3.9	11
46	High-speed filtered Rayleigh scattering thermometry in premixed flames through narrow channels. Combustion and Flame, 2021, 225, 329-339.	5.2	11
47	Numerical Investigation of High Pressure CO₂-Diluted Combustion Using a Flamelet-based Approach. Combustion Science and Technology, 2020, 192, 2028-2049.	2.3	10
48	High-speed 1D Raman analyzer for temperature and major species measurements in a combustion environment. Optics Letters, 2020, 45, 2817.	3.3	10
49	High-Speed Imaging of Main-Chamber Combustion of a Narrow Throat Pre-Chamber under Lean Conditions. , 0, , .		10
50	Optical Study on the Fuel Spray Characteristics of the Four-Consecutive-Injections Strategy Used in High-Pressure Isobaric Combustion. , 0, , .		10
51	Effects of multiple spark ignition on engine knock under different compression ratio and fuel octane number conditions. Fuel, 2022, 310, 122471.	6.4	10
52	Optical Diagnostics of Pre-Chamber Combustion with Flat and Bowl-In Piston Combustion Chamber. , 0, , .		9
53	Hermanâ€“Wallis corrections in dualâ€pump CARS intensities for combustion temperature and species. Journal of Raman Spectroscopy, 2012, 43, 595-598.	2.5	8
54	Development of Supersonic Combustion Experiments for CFD Modeling. , 2007, , .		7

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55	Measurement of Vibrational Nonequilibrium in a Supersonic Freestream Using Dual-Pump CARS. , 2012, , .		7
56	Performance Analysis and In-Cylinder Visualization of Conventional Diesel and Isobaric Combustion in an Optical Diesel Engine. , 0, , .		7
57	Flow-Field Analysis of Isobaric Combustion Using Multiple Injectors in an Optical Accessible Diesel Engine. , 0, , .		7
58	Picosecond Kerr-gated Raman spectroscopy for measurements in sooty and PAH rich hydrocarbon flames. Proceedings of the Combustion Institute, 2021, 38, 1797-1804.	3.9	6
59	Temperature dependent Raman spectra of ammonia ranging from 3150 cm^{â^'1} to 3810 cm^{â^'1} for combustion applications. Optics Express, 2021, 29, 33234.	3.4	6
60	Time-resolved thermometric investigation of flame quenching between parallel flat plates. Fuel, 2021, 305, 121511.	6.4	6
61	Tracer-free laser-induced grating spectroscopy using a pulse burst laser at 100 kHz. Optics Express, 2019, 27, 31217.	3.4	6
62	The effects of compression ratio and combustion initiation location on knock emergence by using multiple pressure sensing devices. International Journal of Engine Research, 2023, 24, 1121-1139.	2.3	6
63	Optical Diagnostics of Isobaric and Conventional Diesel Combustion in a Heavy-Duty Diesel Engine. , 0, , .		6
64	CARS Temperature Measurements in a Combustion-Heated Supersonic Jet. , 2009, , .		5
65	Development of a Dual-Pump CARS System for Measurements in a Supersonic Combusting Free Jet. , 2012, , .		5
66	Mole fraction measurement through a transparent quarl burner using filtered Rayleigh scattering. Applied Optics, 2019, 58, 5575.	1.8	5
67	Mobile CARS - IRS Instrument for Simultaneous Spectroscopic Measurement of Multiple Properties in Gaseous Flows. , 2007, , .		4
68	Beam Shaping for CARS Measurements in Turbulent Environments. , 2010, , .		4
69	A Pathway to Ultra-Lean IC Engine Combustion: The Narrow Throat Pre-chamber. Energy, Environment, and Sustainability, 2022, , 175-203.	1.0	4
70	One-dimensional interferometric Rayleigh scattering velocimetry using a virtually imaged phased array. Optics Letters, 2021, 46, 5252.	3.3	3
71	CARS Spectral Fitting of Multiple Resonant Species Using Sparse Libraries. , 2010, , .		2
72	A method to convert stand-alone OH fluorescence images into OH mole fraction. Proceedings of the Combustion Institute, 2021, 38, 1771-1778.	3.9	2

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73	Fiber-bundle-based 2D Raman and Rayleigh imaging for major species and temperature measurement in laminar flames. Optics Letters, 2022, 47, 3764.	3.3	2
74	50-kHz-rate Rayleigh and filtered Rayleigh scattering thermometry using a pulse-burst laser. , 2021, , .		1
75	Quasi-1D High-Speed Raman/Filtered Rayleigh Scattering for Combustion Dynamics Applications. , 2018, , .		1
76	An Experimental and Numerical Study of a Supersonic Burner for CFD Model Development. , 2008, , .		0
77	Coherent Anti-Stokes Raman Spectroscopy of a Hydrogen Diffusion Flame in a Ramjet. AIAA Journal, 2019, 57, 313-326.	2.6	0
78	A new OH fluorescence signal-to-OH mole fraction conversion model formulation and calibration. , 2020, , .		0
79	CCD based high-speed 1D Raman scattering for combustion application. , 2020, , .		0