

Jeffrey A Sutton

List of Publications by Year in descending order

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73
papers

1,541
citations

257101

24
h-index

329751

37
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74
all docs

74
docs citations

74
times ranked

849
citing authors

#	ARTICLE	IF	CITATIONS
1	Rayleigh scattering cross sections of combustion species at 266, 355, and 532 nm for thermometry applications. <i>Optics Letters</i> , 2004, 29, 2620.	1.7	123
2	Numerical and experimental investigation of turbulent DME jet flames. <i>Proceedings of the Combustion Institute</i> , 2015, 35, 1157-1166.	2.4	89
3	A laser-induced fluorescence measurement for aqueous fluid flows with improved temperature sensitivity. <i>Experiments in Fluids</i> , 2008, 45, 869-881.	1.1	64
4	Development of high-repetition rate CH PLIF imaging in turbulent nonpremixed flames. <i>Proceedings of the Combustion Institute</i> , 2011, 33, 767-774.	2.4	62
5	Recent advances in high-speed planar Rayleigh scattering in turbulent jets and flames: increased record lengths, acquisition rates, and image quality. <i>Applied Physics B: Lasers and Optics</i> , 2014, 115, 197-213.	1.1	59
6	High-speed CH ₂ O PLIF imaging in turbulent flames using a pulse-burst laser system. <i>Applied Physics B: Lasers and Optics</i> , 2012, 106, 569-575.	1.1	56
7	The role of temperature, mixture fraction, and scalar dissipation rate on transient methane injection and auto-ignition in a jet in hot coflow burner. <i>Combustion and Flame</i> , 2016, 167, 60-71.	2.8	56
8	Multi-kHz mixture fraction imaging in turbulent jets using planar Rayleigh scattering. <i>Applied Physics B: Lasers and Optics</i> , 2012, 106, 457-471.	1.1	53
9	Laser-induced fluorescence measurements of NCN in low-pressure CH ₄ /O ₂ /N ₂ flames and its role in prompt NO formation. <i>Combustion and Flame</i> , 2008, 153, 465-478.	2.8	49
10	Multi-kHz temperature imaging in turbulent non-premixed flames using planar Rayleigh scattering. <i>Applied Physics B: Lasers and Optics</i> , 2012, 108, 377-392.	1.1	48
11	High-speed mixture fraction and temperature imaging of pulsed, turbulent fuel jets auto-igniting in high-temperature, vitiated co-flows. <i>Experiments in Fluids</i> , 2014, 55, 1.	1.1	48
12	Ultrahigh laser pulse energy and power generation at 10 ¹⁴ Hz. <i>Optics Letters</i> , 2012, 37, 3231.	1.7	44
13	Investigation of supersonic combustion dynamics via 50 kHz CH* chemiluminescence imaging. <i>Proceedings of the Combustion Institute</i> , 2017, 36, 2849-2856.	2.4	42
14	Imaging of local flame extinction due to the interaction of scalar dissipation layers and the stoichiometric contour in turbulent non-premixed flames. <i>Proceedings of the Combustion Institute</i> , 2007, 31, 1487-1495.	2.4	38
15	Nanosecond plasma enhanced H ₂ /O ₂ /N ₂ premixed flat flames. <i>Proceedings of the Combustion Institute</i> , 2015, 35, 3471-3478.	2.4	38
16	Towards accurate kinetic modeling of prompt NO formation in hydrocarbon flames via the NCN pathway. <i>Combustion and Flame</i> , 2008, 154, 630-636.	2.8	37
17	Demonstration of high-speed 1D Raman scattering line imaging. <i>Applied Physics B: Lasers and Optics</i> , 2010, 101, 1-5.	1.1	37
18	Investigation of NCN and prompt-NO formation in low-pressure C ₁ -C ₄ alkane flames. <i>Combustion and Flame</i> , 2012, 159, 562-576.	2.8	34

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19	Scalar structure of turbulent partially-premixed dimethyl ether/air jet flames. Proceedings of the Combustion Institute, 2015, 35, 1235-1242.	2.4	30
20	Improvements in the accuracy of wavelet-based optical flow velocimetry (wOFV) using an efficient and physically based implementation of velocity regularization. Experiments in Fluids, 2020, 61, 1.	1.1	30
21	A comparison of turbulent dimethyl ether and methane non-premixed flame structure. Proceedings of the Combustion Institute, 2013, 34, 1447-1454.	2.4	29
22	A method to simultaneously image two-dimensional mixture fraction, scalar dissipation rate, temperature and fuel consumption rate fields in a turbulent non-premixed jet flame. Experiments in Fluids, 2006, 41, 603-627.	1.1	27
23	High-resolution velocimetry from tracer particle fields using a wavelet-based optical flow method. Experiments in Fluids, 2019, 60, 1.	1.1	27
24	Quantitative fuel vapor/air mixing imaging in droplet/gas regions of an evaporating spray flow using filtered Rayleigh scattering. Optics Letters, 2016, 41, 1074.	1.7	26
25	Experimental assessment of the Tenti S6 model for combustion-relevant gases and filtered Rayleigh scattering applications. Applied Physics B: Lasers and Optics, 2019, 125, 1.	1.1	26
26	Improvements in filtered Rayleigh scattering measurements using Fabry-Perot etalons for spectral filtering of pulsed, 532-nm Nd:YAG output. Applied Physics B: Lasers and Optics, 2014, 116, 681-698.	1.1	25
27	Optimization of CH fluorescence diagnostics in flames: range of applicability and improvements with hydrogen addition. Applied Optics, 2003, 42, 2819.	2.1	21
28	Seed laser power effects on the spectral purity of Q-switched Nd:YAG lasers and the implications for filtered rayleigh scattering measurements. Applied Physics B: Lasers and Optics, 2013, 111, 457-468.	1.1	20
29	Measurements and statistics of mixture fraction and scalar dissipation rates in turbulent non-premixed jet flames. Combustion and Flame, 2013, 160, 1767-1778.	2.8	19
30	Spatio-temporal characteristics of temperature fluctuations in turbulent non-premixed jet flames. Proceedings of the Combustion Institute, 2015, 35, 1191-1198.	2.4	19
31	Sparse-Lagrangian MMC modelling of the Sandia DME flame series. Combustion and Flame, 2019, 208, 110-121.	2.8	18
32	Simultaneous 2D filtered Rayleigh scattering thermometry and stereoscopic particle image velocimetry measurements in turbulent non-premixed flames. Experiments in Fluids, 2020, 61, 1.	1.1	18
33	Scalar dissipation rate measurements in flames: A method to improve spatial resolution by using nitric oxide PLIF. Proceedings of the Combustion Institute, 2002, 29, 2727-2734.	2.4	15
34	The role of methylene in prompt NO formation. Proceedings of the Combustion Institute, 2009, 32, 343-350.	2.4	15
35	Quantitative acetylene measurements in laminar and turbulent flames using 1D Raman/Rayleigh scattering. Combustion and Flame, 2015, 162, 2248-2255.	2.8	14
36	Statistical processing and convergence of finite-record-length time-series measurements from turbulent flows. Experiments in Fluids, 2016, 57, 1.	1.1	14

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37	Effects of non-equilibrium plasmas on low-pressure, premixed flames. Part 1: CH* chemiluminescence, temperature, and OH. Combustion and Flame, 2016, 165, 50-67.	2.8	14
38	Scalar dissipation rates in a turbulent partially-premixed dimethyl ether/air jet flame. Combustion and Flame, 2018, 188, 41-65.	2.8	14
39	Experimental investigation of the auto-ignition of a transient propane Jet-in-Hot-Coflow. Proceedings of the Combustion Institute, 2019, 37, 2117-2124.	2.4	14
40	High-resolution velocity measurements in turbulent premixed flames using wavelet-based optical flow velocimetry (wOFV). Proceedings of the Combustion Institute, 2021, 38, 1607-1615.	2.4	13
41	Quantitative planar temperature imaging in turbulent non-premixed flames using filtered Rayleigh scattering. Applied Optics, 2019, 58, 2936.	0.9	13
42	A physical interpretation of regularization for optical flow methods in fluids. Experiments in Fluids, 2021, 62, 1.	1.1	12
43	A Burner Platform for Examining the Effects of Non-Equilibrium Plasmas on Oxidation and Combustion Chemistry. Combustion Science and Technology, 2013, 185, 990-998.	1.2	11
44	Evaluation of gas- and particle-phase separation methods for velocity measurements in turbulent multiphase flows. Experiments in Fluids, 2020, 61, 1.	1.1	8
45	Narrowband versus broadband excitation for CH ₂ O PLIF imaging in flames using a frequency-tripled Nd:YAG laser. Experiments in Fluids, 2014, 55, 1.	1.1	7
46	Simultaneous Multi-Property Laser Diagnostics using Filtered Rayleigh Scattering. , 2016, , .		7
47	Intrusive effects of repetitive laser pulsing in high-speed tracer-LIF measurements. Experiments in Fluids, 2017, 58, 1.	1.1	7
48	Flame Structure and Dynamics in a Premixed Dual-Mode Scramjet Combustor from Fluorescence Imaging. Journal of Propulsion and Power, 2019, 35, 552-564.	1.3	7
49	Evaluation of Wavelet-Based Optical Flow Velocimetry from OH Scalar Fields in Reacting Turbulent Flows. , 2019, , .		6
50	Quantitative 2D thermometry in turbulent sooting non-premixed flames using filtered Rayleigh scattering. Applied Optics, 2021, 60, 5742.	0.9	6
51	Investigation of Flame Structure and Combustion Dynamics using CH ₂ O PLIF and High-Speed CH* Chemiluminescence in a Premixed Dual-Mode Scramjet Combustor. , 2016, , .		5
52	Quantitative 2D Temperature Imaging in Turbulent Nonpremixed Jet Flames using Filtered Rayleigh Scattering. , 2017, , .		5
53	Large Scale Dynamics and Statistics of the Time-Varying Temperature Field in Turbulent Non-Premixed Jet Flames. , 2015, , .		3
54	Filtered Rayleigh Scattering Thermometry in Premixed Flames. , 2018, , .		3

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55	On the Application of the Abel Transformation in Statistically Axisymmetric Turbulent Flows. AIAA Journal, 2022, 60, 2169-2177.	1.5	3
56	Evaluation of a wavelet-based optical flow method for planar velocimetry using scalar fields. Experiments in Fluids, 2022, 63, 1.	1.1	3
57	Spatial resolution-preserving retroreflection for gas-phase laser scattering measurements in turbulent flames using a phase-conjugate mirror. Optics Letters, 2016, 41, 468.	1.7	2
58	Investigation of the Effects of Non-Equilibrium Plasma Discharges on Temperature and OH Concentrations in Low-Pressure Premixed Flames. , 2014, , .		1
59	High-Speed 1D Raman/Rayleigh Scattering Imaging in Turbulent H2/N2 Flames. , 2015, , .		1
60	High-Resolution Velocimetry from Tracer Particle Fields Using Wavelet-based Optical Flow. , 2018, , .		1
61	Transient and steady-state behavior of auto-igniting propane and dimethyl ether fuel jets in high-temperature vitiated coflows. Proceedings of the Combustion Institute, 2019, 37, 2133-2141.	2.4	1
62	Evaluation of the Tenti S6 model for hydrocarbon fuels at elevated temperatures using filtered Rayleigh scattering measurements. Optics Letters, 2020, 45, 5579.	1.7	1
63	Characterization of the Temperature Field Structure in Turbulent Premixed Jet Flames. , 2015, , .		0
64	Simultaneous High-Resolution kHz-Rate 2-D Conserved Scalar and 3-Component Velocity Field Measurements in Gas-Phase Turbulent Jets. , 2015, , .		0
65	Quantitative Temperature Imaging in Turbulent Non-Premixed Flames Using Filtered Rayleigh Scattering. , 2015, , .		0
66	Challenges in Understanding and Predictive Modeling of Plasma Assisted Combustion. , 2015, , .		0
67	Auto-ignition Dynamics of Turbulent Fuel Jets Issuing into High-Temperature Vitiated Coflows. , 2018, , .		0
68	Effects of Jet Velocity on Auto-Ignition of Turbulent Fuel Jets Issuing into High-Temperature Coflows. , 2019, , .		0
69	Benchmark Direct Numerical Simulations with Lagrangian Tracers for Evaluating Combustion Diagnostics Algorithms. , 2019, , .		0
70	Thermal dissipation rate measurements in turbulent non-premixed jet flames: dissipation length scales, layer structure, and the impact of flow turbulence. , 2020, , .		0
71	Multi-Point and Multi-Time Statistics of Temperature within Turbulent Non-Premixed Jet Flames Using High-Speed Planar Rayleigh Scattering. , 2014, , .		0
72	Temperature Measurements in Turbulent Sooting Jet Flames Using Filtered Rayleigh Scattering. , 2020, , .		0

#	ARTICLE	IF	CITATIONS
73	High-Speed Imaging and Laser Diagnostic Techniques in Auto-Igniting Environments at Atmospheric Pressure. , 2022, , .		0