

Robert S Barlow

List of Publications by Year in descending order

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53
papers

3,309
citations

201674
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175258
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53
all docs

53
docs citations

53
times ranked

1240
citing authors

#	ARTICLE	IF	CITATIONS
1	Effects of turbulence on species mass fractions in methane/air jet flames. Proceedings of the Combustion Institute, 1998, 27, 1087-1095.	0.3	466
2	Scalar profiles and NO formation in laminar opposed-flow partially premixed methane/air flames. Combustion and Flame, 2001, 127, 2102-2118.	5.2	441
3	The structure of turbulent nonpremixed flames revealed by Raman-Rayleigh-LIF measurements. Progress in Energy and Combustion Science, 1996, 22, 307-362.	31.2	236
4	Laser diagnostics and their interplay with computations to understand turbulent combustion. Proceedings of the Combustion Institute, 2007, 31, 49-75.	3.9	211
5	The structure of turbulent stratified and premixed methane/air flames II: Swirling flows. Combustion and Flame, 2012, 159, 2912-2929.	5.2	136
6	The structure of turbulent stratified and premixed methane/air flames I: Non-swirling flows. Combustion and Flame, 2012, 159, 2896-2911.	5.2	136
7	Effects of preferential transport in turbulent bluff-body-stabilized lean premixed CH ₄ /air flames. Combustion and Flame, 2012, 159, 2563-2575.	5.2	129
8	Measurements of scalar dissipation in a turbulent piloted methane/air jet flame. Proceedings of the Combustion Institute, 2002, 29, 1929-1936.	3.9	126
9	Measurements of flame orientation and scalar dissipation in turbulent partially premixed methane flames. Proceedings of the Combustion Institute, 2005, 30, 665-672.	3.9	103
10	Application of Raman/Rayleigh/LIF diagnostics in turbulent stratified flames. Proceedings of the Combustion Institute, 2009, 32, 945-953.	3.9	97
11	Local extinction and near-field structure in piloted turbulent CH ₄ /air jet flames with inhomogeneous inlets. Combustion and Flame, 2015, 162, 3516-3540.	5.2	94
12	Dissipation length scales in turbulent nonpremixed jet flames. Combustion and Flame, 2007, 148, 62-75.	5.2	70
13	Raman/Rayleigh scattering and CO-LIF measurements in laminar and turbulent jet flames of dimethyl ether. Combustion and Flame, 2012, 159, 2533-2562.	5.2	69
14	Stabilization of piloted turbulent flames with inhomogeneous inlets. Proceedings of the Combustion Institute, 2015, 35, 1477-1484.	3.9	69
15	The structure of premixed and stratified low turbulence flames. Combustion and Flame, 2011, 158, 935-948.	5.2	64
16	A hybrid method for data evaluation in 1-D Raman spectroscopy. Proceedings of the Combustion Institute, 2011, 33, 815-822.	3.9	59
17	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
18	Measurements of Scalar Variance, Scalar Dissipation, and Length Scales in Turbulent Piloted Methane/Air Jet Flames. Flow, Turbulence and Combustion, 2004, 72, 427-448.	2.6	53

#	ARTICLE	IF	CITATIONS
19	Multiply conditioned analyses of stratification in highly swirling methane/air flames. Combustion and Flame, 2013, 160, 322-334.	5.2	46
20	Local flame structure analysis in turbulent CH ₄ /air flames with multi-regime characteristics. Combustion and Flame, 2019, 210, 426-438.	5.2	43
21	Spatial resolution effects on the measurement of scalar variance and scalar gradient in turbulent nonpremixed jet flames. Experiments in Fluids, 2008, 44, 633-645.	2.4	42
22	Regime identification from Raman/Rayleigh line measurements in partially premixed flames. Combustion and Flame, 2018, 189, 126-141.	5.2	41
23	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
24	Effects of preferential transport and strain in bluff body stabilized lean and rich premixed CH ₄ /air flames. Proceedings of the Combustion Institute, 2013, 34, 1411-1419.	3.9	34
25	Conditional analysis of turbulent premixed and stratified flames on local equivalence ratio and progress of reaction. Combustion and Flame, 2015, 162, 3896-3913.	5.2	33
26	Interference free spontaneous Raman spectroscopy for measurements in rich hydrocarbon flames. Proceedings of the Combustion Institute, 2015, 35, 3765-3772.	3.9	32
27	On the structure of the near field of oxy-fuel jet flames using Raman/Rayleigh laser diagnostics. Combustion and Flame, 2012, 159, 3342-3352.	5.2	29
28	Laser imaging system for determination of three-dimensional scalar gradients in turbulent flames. Optics Letters, 2004, 29, 355.	3.3	28
29	Measurements of τ in turbulent non-premixed flames stabilized on a bluff body. Proceedings of the Combustion Institute, 1996, 26, 2191-2197.	0.3	27
30	Prediction of local extinctions in piloted jet flames with inhomogeneous inlets using unstrained flamelets. Combustion and Flame, 2020, 212, 415-432.	5.2	26
31	Combustion regime identification from machine learning trained by Raman/Rayleigh line measurements. Combustion and Flame, 2020, 219, 268-274.	5.2	26
32	On defining progress variable for Raman/Rayleigh experiments in partially-premixed methane flames. Combustion and Flame, 2017, 179, 117-129.	5.2	25
33	Turbulent flames with compositionally inhomogeneous inlets: Resolved measurements of scalar dissipation rates. Proceedings of the Combustion Institute, 2017, 36, 1737-1745.	3.9	22
34	Dual-resolution Raman spectroscopy for measurements of temperature and twelve species in hydrocarbon-air flames. Proceedings of the Combustion Institute, 2017, 36, 4477-4485.	3.9	20
35	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
36	Raman-rayleigh measurements in bluff-body stabilised flames of hydrocarbon fuels. Proceedings of the Combustion Institute, 1992, 24, 317-324.	0.3	16

#	ARTICLE	IF	CITATIONS
37	Statistics of scalar dissipation and reaction progress in turbulent flames with compositional inhomogeneities. Combustion and Flame, 2018, 194, 439-451.	5.2	16
38	Classification of flame prehistory and quenching topology in a side-wall quenching burner at low-intensity turbulence by correlating transport effects with CO CO_2 and temperature. Combustion and Flame, 2022, 239, 111681.	5.2	15
39	Quantitative acetylene measurements in laminar and turbulent flames using 1D Raman/Rayleigh scattering. Combustion and Flame, 2015, 162, 2248-2255.	5.2	14
40	Detailed assessment of the thermochemistry in a side-wall quenching burner by simultaneous quantitative measurement of CO CO_2 and temperature using laser diagnostics. Combustion and Flame, 2022, 235, 111707.	5.2	14
41	Multiple conditioned analysis of the turbulent stratified flame A. Proceedings of the Combustion Institute, 2017, 36, 1947-1955.	3.9	11
42	Assessing an experimental approach for chemical explosive mode and heat release rate using DNS data. Combustion and Flame, 2019, 209, 214-224.	5.2	11
43	Structure of a stratified CH ₄ flame with H ₂ addition. Proceedings of the Combustion Institute, 2019, 37, 2307-2315.	3.9	11
44	Modeling stratified flames with and without shear using multiple mapping conditioning. Proceedings of the Combustion Institute, 2019, 37, 2317-2324.	3.9	9
45	Some raman/rayleigh/lif measurements in turbulent propane flames. Proceedings of the Combustion Institute, 1991, 23, 645-651.	0.3	8
46	Multiple mapping conditioning coupled with an artificially thickened flame model for turbulent premixed combustion. Combustion and Flame, 2018, 196, 325-336.	5.2	8
47	Turbulent multi-regime methane-air flames analysed by Raman/Rayleigh spectroscopy and conditional velocity field measurements. Combustion and Flame, 2022, 243, 111941.	5.2	8
48	Reaction zone stratification in piloted highly-turbulent fuel-lean premixed jets. Combustion and Flame, 2019, 208, 327-329.	5.2	7
49	Scalar structure of turbulent stratified swirl flames conditioned on local equivalence ratio. Combustion and Flame, 2016, 166, 76-79.	5.2	6
50	Characterization of multi-regime reaction zones in a piloted inhomogeneous jet flame with local extinction. Proceedings of the Combustion Institute, 2021, 38, 2571-2579.	3.9	5
51	Spontaneous Raman LIF CO OH measurements of species concentration in turbulent spray flames. Proceedings of the Combustion Institute, 2021, 38, 1779-1786.	3.9	4
52	Fast shutter line-imaging system for dual-dispersion Raman spectroscopy in ethanol and OME flames. Combustion and Flame, 2022, 243, 111864.	5.2	4
53	Multi-Scalar Measurements of Premixed Flames in Extreme Turbulence Using Raman/Rayleigh Diagnostics. , 2019, , .		1