Guillaume Blanquart

List of Publications by Year
in descending order

71 papers	3,381 citations	218381 26 h-index	138251 58 g-index
72 all docs	72 docs citations	72 times ranked	1622 citing authors

#	Article	IF	Citations
1	High order conservative finite difference scheme for variable density low Mach number turbulent flows. Journal of Computational Physics, 2008, 227, 7125-7159.	1.9	505
2	Chemical mechanism for high temperature combustion of engine relevant fuels with emphasis on soot precursors. Combustion and Flame, 2009, 156, 588-607.	2.8	406
3	A consistent chemical mechanism for oxidation of substituted aromatic species. Combustion and Flame, 2010, 157, 1879-1898.	2.8	293
4	Hybrid Method of Moments for modeling soot formation and growth. Combustion and Flame, 2009, 156, 1143-1155.	2.8	206
5	On the formation and early evolution of soot in turbulent nonpremixed flames. Combustion and Flame, 2012, 159, 317-335.	2.8	194
6	Differential diffusion effects, distributed burning, and local extinctions in high Karlovitz premixed flames. Combustion and Flame, 2015, 162, 3341-3355.	2.8	104
7	Flux Corrected Finite Volume Scheme for Preserving Scalar Boundedness in Reacting Large-Eddy Simulations. AIAA Journal, 2006, 44, 2879-2886.	1.5	101
8	A joint volume-surface model of soot aggregation with the method of moments. Proceedings of the Combustion Institute, 2009, 32, 785-792.	2.4	99
9	Analyzing the effects of temperature on soot formation with a joint volume-surface-hydrogen model. Combustion and Flame, 2009, 156, 1614-1626.	2.8	92
10	A proposed modification to Lundgren's physical space velocity forcing method for isotropic turbulence. Physics of Fluids, 2013, 25, .	1.6	91
11	Modeling the oxidation-induced fragmentation of soot aggregates in laminar flames. Proceedings of the Combustion Institute, 2011, 33, 667-674.	2.4	74
12	Structure of a high Karlovitz n-C7H16 premixed turbulent flame. Proceedings of the Combustion Institute, 2015, 35, 1377-1384.	2.4	70
13	Unsteady effects in dense, high speed, particle laden flows. International Journal of Multiphase Flow, 2014, 61, 1-13.	1.6	69
14	Vorticity transformation in high Karlovitz number premixed flames. Physics of Fluids, 2016, 28, .	1.6	69
15	A computationally-efficient, semi-implicit, iterative method for the time-integration of reacting flows with stiff chemistry. Journal of Computational Physics, 2015, 295, 740-769.	1.9	61
16	Broken reaction zone and differential diffusion effects in high Karlovitz n-C7H16 premixed turbulent flames. Combustion and Flame, 2015, 162, 2020-2033.	2.8	60
17	Assessment of the constant non-unity Lewis number assumption in chemically-reacting flows. Combustion Theory and Modelling, 2016, 20, 632-657.	1.0	57
18	Fuel and chemistry effects in high Karlovitz premixed turbulent flames. Combustion and Flame, 2016, 167, 294-307.	2.8	56

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19	Thermochemical Properties of Polycyclic Aromatic Hydrocarbons (PAH) from G3MP2B3 Calculations. Journal of Physical Chemistry A, 2007, 111, 6510-6520.	1.1	49
20	An a priori model for the effective species Lewis numbers in premixed turbulent flames. Combustion and Flame, 2014, 161, 1547-1557.	2.8	49
21	Modeling curvature effects in diffusion flames using a laminar flamelet model. Combustion and Flame, 2014, 161, 1294-1309.	2.8	42
22	Effects of aromatic chemistry-turbulence interactions on soot formation in a turbulent non-premixed flame. Proceedings of the Combustion Institute, 2015, 35, 1911-1919.	2.4	40
23	A two-equation model for non-unity Lewis number differential diffusion in lean premixed laminar flames. Combustion and Flame, 2013, 160, 240-250.	2.8	39
24	Numerical modeling of sooting tendencies in a laminar co-flow diffusion flame. Combustion and Flame, 2013, 160, 1657-1666.	2.8	34
25	Hot surface ignition of n-hexane in air. Combustion and Flame, 2016, 163, 42-53.	2.8	30
26	Modeling autoignition in non-premixed turbulent combustion using a stochastic flamelet approach. Proceedings of the Combustion Institute, 2005, 30, 2745-2753.	2.4	27
27	Ignition and chemical kinetics of acroleinâ€“oxygenâ€“argon mixtures behind reflected shock waves. Fuel, 2014, 135, 498-508.	3.4	24
28	A priori filtered chemical source term modeling for LES of high Karlovitz number premixed flames. Combustion and Flame, 2017, 176, 500-510.	2.8	24
29	A flamelet-based a priori analysis on the chemistry tabulation of polycyclic aromatic hydrocarbons in non-premixed flames. Combustion and Flame, 2014, 161, 1516-1525.	2.8	23
30	Two-dimensional flow effects on soot formation in laminar premixed flames. Combustion and Flame, 2016, 166, 113-124.	2.8	22
31	Effects of dissipation rate and diffusion rate of the progress variable on local fuel burning rate in premixed turbulent flames. Combustion and Flame, 2017, 180, 77-87.	2.8	21
32	An improved bounded semi-Lagrangian scheme for the turbulent transport of passive scalars. Journal of Computational Physics, 2014, 272, 1-22.	1.9	20
33	Level set reinitialization at a contact line. Journal of Computational Physics, 2014, 265, 34-49.	1.9	20
34	Predicting aromatic exciplex fluorescence emission energies. Physical Chemistry Chemical Physics, 2019, 21, 10325-10335.	1.3	20
35	Thermodynamic properties of carbonâ€“phenolic gas mixtures. Aerospace Science and Technology, 2017, 66, 177-192.	2.5	19
36	An updated reaction model for the high-temperature pyrolysis and oxidation of acetaldehyde. Fuel, 2018, 217, 226-239.	3.4	19

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37	The effect of velocity field forcing techniques on the Karmanâ€“HowarthÂequation. Journal of Turbulence, 2014, 15, 429-448.	0.5	18
38	A reduced thermal diffusion model for H and H2. Combustion and Flame, 2018, 191, 1-8.	2.8	18
39	Validation of a mixture-averaged thermal diffusion model for premixed lean hydrogen flames. Combustion Theory and Modelling, 2018, 22, 264-290.	1.0	18
40	Cyclic flame propagation in premixed combustion. Journal of Fluid Mechanics, 2013, 735, 176-202.	1.4	17
41	Vorticity isotropy in high Karlovitz number premixed flames. Physics of Fluids, 2016, 28, 105101.	1.6	17
42	Effects of spin contamination on estimating bond dissociation energies of polycyclic aromatic hydrocarbons. International Journal of Quantum Chemistry, 2015, 115, 796-801.	1.0	15
43	Experimental and numerical studies of fuel and hydrodynamic effects on piloted turbulent premixed jet flames. Proceedings of the Combustion Institute, 2017, 36, 1877-1884.	2.4	13
44	Exciplex Stabilization in Asymmetric Acene Dimers. Journal of Physical Chemistry A, 2019, 123, 1796-1806.	1.1	13
45	Effect of a splitter plate on the dynamics of a vortex pair. Physics of Fluids, 2012, 24, .	1.6	11
46	A novel forcing technique to simulate turbulent mixing in a decaying scalar field. Physics of Fluids, 2013, 25, .	1.6	11
47	Reproducing curvature effects due to differential diffusion in tabulated chemistry for premixed flames. Proceedings of the Combustion Institute, 2019, 37, 2511-2518.	2.4	11
48	Pyrolysis Gas Composition for a Phenolic Impregnated Carbon Ablator Heatshield. , 2014, , .		10
49	Enthalpy based approach to capture heat transfer effects in premixed combustion. Combustion and Flame, 2013, 160, 1242-1253.	2.8	9
50	Impact of chemistry models on flameâ€“vortex interaction. Proceedings of the Combustion Institute, 2015, 35, 1033-1040.	2.4	9
51	Multireference exciplex binding energies: Basis set convergence and error. International Journal of Quantum Chemistry, 2019, 119, e25819.	1.0	8
52	Impact of pressure fluctuations on the dynamics of laminar premixed flames. Proceedings of the Combustion Institute, 2019, 37, 1895-1902.	2.4	6
53	Assessing the impact of multicomponent diffusion in direct numerical simulations of premixed, high-Karlovitz, turbulent flames. Combustion and Flame, 2021, 223, 216-229.	2.8	6
54	On filtering in the viscous-convective subrange for turbulent mixing of high Schmidt number passive scalars. Physics of Fluids, 2013, 25, 055104.	1.6	5

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55	A fast, low-memory, and stable algorithm for implementing multicomponent transport in direct numerical simulations. Journal of Computational Physics, 2020, 406, 109185.	1.9	5
56	A cost-effective semi-implicit method for the time integration of fully compressible reacting flows with stiff chemistry. Journal of Computational Physics, 2020, 414, 109479.	1.9	5
57	Fully compressible simulations of the impact of acoustic waves on the dynamics of laminar premixed flames for engine-relevant conditions. Proceedings of the Combustion Institute, 2021, 38, 1923-1931.	2.4	5
58	Rate-Controlled Constrained Equilibrium for Nozzle and Shock Flows. Journal of Propulsion and Power, 2017, 33, 776-792.	1.3	3
59	Predicting the photoresponse of soot nuclei: Spectroscopic characteristics of aromatic aggregates containing five-membered rings. Combustion and Flame, 2020, 217, 85-92.	2.8	3
60	Derivation of a realistic forcing term to reproduce the turbulent characteristics of round jets on the centerline. Physical Review Fluids, 2018, 3, .	1.0	3
61	Effective forcing for direct numerical simulations of the shear layer of turbulent free shear flows. Physical Review Fluids, 2019, 4, .	1.0	3
62	Proposed Vertical Expansion Tunnel. AIAA Journal, 2013, 51, 2792-2799.	1.5	2
63	Framework for simulating stationary spherical flames. Proceedings of the Combustion Institute, 2021, 38, 2109-2117.	2.4	2
64	Direct numerical simulations of a statistically stationary streamwise periodic boundary layer via the homogenized Navier-Stokes equations. Physical Review Fluids, 2021, 6, .	1.0	2
65	Subfilter scalar-flux vector orientation in homogeneous isotropic turbulence. Physical Review E, 2014, 89, 063015.	0.8	1
66	Combustion Studies of MMA/GOxfor a Hybrid Rocket Motor. , 2020, , .		1
67	Numerical forcing scheme to generate passive scalar mixing on the centerline of turbulent round jets in a triply periodic box. Physical Review Fluids, 2019, 4, .	1.0	1
68	From isotropic turbulence in triply periodic cubic domains to sheared turbulence with inflow/outflow. Physical Review Fluids, 2020, 5, .	1.0	1
69	Effect of a Splitter Plate on the Dynamics of a Vortex Pair. , 2011, , .		0
70	A new framework for simulating forced homogeneous buoyant turbulent flows. Theoretical and Computational Fluid Dynamics, 2015, 29, 225-244.	0.9	0
71	Error estimation of a homogenized streamwise periodic boundary layer. Physical Review Fluids, 2021, 6, .	1.0	0