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	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
2	Framework for simulating stationary spherical flames. Proceedings of the Combustion Institute, 2021, 38, 2109-2117.	2.4	2
3	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
4	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
5	Error estimation of a homogenized streamwise periodic boundary layer. Physical Review Fluids, 2021, 6, .	1.0	0
6	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
7	Combustion Studies of MMA/GOxfor a Hybrid Rocket Motor. , 2020, , .		1
8	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
9	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
10	From isotropic turbulence in triply periodic cubic domains to sheared turbulence with inflow/outflow. Physical Review Fluids, 2020, 5, .	1.0	1
11	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
12	Predicting aromatic exciplex fluorescence emission energies. Physical Chemistry Chemical Physics, 2019, 21, 10325-10335.	1.3	20
13	Exciplex Stabilization in Asymmetric Acene Dimers. Journal of Physical Chemistry A, 2019, 123, 1796-1806.	1.1	13
14	Multireference exciplex binding energies: Basis set convergence and error. International Journal of Quantum Chemistry, 2019, 119, e25819.	1.0	8
15	Impact of pressure fluctuations on the dynamics of laminar premixed flames. Proceedings of the Combustion Institute, 2019, 37, 1895-1902.	2.4	6
16	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
17	Effective forcing for direct numerical simulations of the shear layer of turbulent free shear flows. Physical Review Fluids, 2019, 4, .	1.0	3
18	A reduced thermal diffusion model for H and H2. Combustion and Flame, 2018, 191, 1-8.	2.8	18

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19	An updated reaction model for the high-temperature pyrolysis and oxidation of acetaldehyde. Fuel, 2018, 217, 226-239.	3.4	19
20	Validation of a mixture-averaged thermal diffusion model for premixed lean hydrogen flames. Combustion Theory and Modelling, 2018, 22, 264-290.	1.0	18
21	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
22	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
23	Thermodynamic properties of carbonâ€“phenolic gas mixtures. Aerospace Science and Technology, 2017, 66, 177-192.	2.5	19
24	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
25	Rate-Controlled Constrained Equilibrium for Nozzle and Shock Flows. Journal of Propulsion and Power, 2017, 33, 776-792.	1.3	3
26	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
27	Vorticity isotropy in high Karlovitz number premixed flames. Physics of Fluids, 2016, 28, 105101.	1.6	17
28	Vorticity transformation in high Karlovitz number premixed flames. Physics of Fluids, 2016, 28, .	1.6	69
29	Assessment of the constant non-unity Lewis number assumption in chemically-reacting flows. Combustion Theory and Modelling, 2016, 20, 632-657.	1.0	57
30	Hot surface ignition of n-hexane in air. Combustion and Flame, 2016, 163, 42-53.	2.8	30
31	Fuel and chemistry effects in high Karlovitz premixed turbulent flames. Combustion and Flame, 2016, 167, 294-307.	2.8	56
32	Two-dimensional flow effects on soot formation in laminar premixed flames. Combustion and Flame, 2016, 166, 113-124.	2.8	22
33	Structure of a high Karlovitz n-C7H16 premixed turbulent flame. Proceedings of the Combustion Institute, 2015, 35, 1377-1384.	2.4	70
34	Impact of chemistry models on flameâ€“vortex interaction. Proceedings of the Combustion Institute, 2015, 35, 1033-1040.	2.4	9
35	A new framework for simulating forced homogeneous buoyant turbulent flows. Theoretical and Computational Fluid Dynamics, 2015, 29, 225-244.	0.9	0
36	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

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37	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
38	Differential diffusion effects, distributed burning, and local extinctions in high Karlovitz premixed flames. Combustion and Flame, 2015, 162, 3341-3355.	2.8	104
39	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
40	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
41	The effect of velocity field forcing techniques on the Karmanâ€“HowarthÂequation. Journal of Turbulence, 2014, 15, 429-448.	0.5	18
42	Pyrolysis Gas Composition for a Phenolic Impregnated Carbon Ablator Heatshield. , 2014, , .		10
43	Subfilter scalar-flux vector orientation in homogeneous isotropic turbulence. Physical Review E, 2014, 89, 063015.	0.8	1
44	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
45	An improved bounded semi-Lagrangian scheme for the turbulent transport of passive scalars. Journal of Computational Physics, 2014, 272, 1-22.	1.9	20
46	Level set reinitialization at a contact line. Journal of Computational Physics, 2014, 265, 34-49.	1.9	20
47	Modeling curvature effects in diffusion flames using a laminar flamelet model. Combustion and Flame, 2014, 161, 1294-1309.	2.8	42
48	Unsteady effects in dense, high speed, particle laden flows. International Journal of Multiphase Flow, 2014, 61, 1-13.	1.6	69
49	Ignition and chemical kinetics of acroleinâ€“oxygenâ€“argon mixtures behind reflected shock waves. Fuel, 2014, 135, 498-508.	3.4	24
50	An a priori model for the effective species Lewis numbers in premixed turbulent flames. Combustion and Flame, 2014, 161, 1547-1557.	2.8	49
51	Proposed Vertical Expansion Tunnel. AIAA Journal, 2013, 51, 2792-2799.	1.5	2
52	Cyclic flame propagation in premixed combustion. Journal of Fluid Mechanics, 2013, 735, 176-202.	1.4	17
53	A novel forcing technique to simulate turbulent mixing in a decaying scalar field. Physics of Fluids, 2013, 25, .	1.6	11
54	Numerical modeling of sooting tendencies in a laminar co-flow diffusion flame. Combustion and Flame, 2013, 160, 1657-1666.	2.8	34

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55	Enthalpy based approach to capture heat transfer effects in premixed combustion. Combustion and Flame, 2013, 160, 1242-1253.	2.8	9
56	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
57	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
58	A proposed modification to Lundgren's physical space velocity forcing method for isotropic turbulence. Physics of Fluids, 2013, 25, .	1.6	91
59	Effect of a splitter plate on the dynamics of a vortex pair. Physics of Fluids, 2012, 24, .	1.6	11
60	On the formation and early evolution of soot in turbulent nonpremixed flames. Combustion and Flame, 2012, 159, 317-335.	2.8	194
61	Effect of a Splitter Plate on the Dynamics of a Vortex Pair. , 2011, , .		0
62	Modeling the oxidation-induced fragmentation of soot aggregates in laminar flames. Proceedings of the Combustion Institute, 2011, 33, 667-674.	2.4	74
63	A consistent chemical mechanism for oxidation of substituted aromatic species. Combustion and Flame, 2010, 157, 1879-1898.	2.8	293
64	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
65	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
66	Hybrid Method of Moments for modeling soot formation and growth. Combustion and Flame, 2009, 156, 1143-1155.	2.8	206
67	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
68	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
69	Thermochemical Properties of Polycyclic Aromatic Hydrocarbons (PAH) from G3MP2B3 Calculations. Journal of Physical Chemistry A, 2007, 111, 6510-6520.	1.1	49
70	Flux Corrected Finite Volume Scheme for Preserving Scalar Boundedness in Reacting Large-Eddy Simulations. AIAA Journal, 2006, 44, 2879-2886.	1.5	101
71	Modeling autoignition in non-premixed turbulent combustion using a stochastic flamelet approach. Proceedings of the Combustion Institute, 2005, 30, 2745-2753.	2.4	27