Heinz Pitsch

List of Publications by Year
in descending order

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404 papers	19,327 citations	12330 69 h-index	18647 119 g-index
414 all docs	414 docs citations	414 times ranked	7680 citing authors

#	Article	IF	Citations
1	LARGE-EDDY SIMULATION OF TURBULENT COMBUSTION. Annual Review of Fluid Mechanics, 2006, 38, 453-482.	25.0	872
2	An efficient error-propagation-based reduction method for large chemical kinetic mechanisms. Combustion and Flame, 2008, 154, 67-81.	5.2	608
3	High order conservative finite difference scheme for variable density low Mach number turbulent flows. Journal of Computational Physics, 2008, 227, 7125-7159.	3.8	505
4	Chemical mechanism for high temperature combustion of engine relevant fuels with emphasis on soot precursors. Combustion and Flame, 2009, 156, 588-607.	5.2	406
5	Large-eddy simulation of a turbulent piloted methane/air diffusion flame (Sandia flame D). Physics of Fluids, 2000, 12, 2541.	4.0	389
6	An accurate conservative level set/ghost fluid method for simulating turbulent atomization. Journal of Computational Physics, 2008, 227, 8395-8416.	3.8	327
7	A Consistent Flamelet Formulation for Non-Premixed Combustion Considering Differential Diffusion Effects. Combustion and Flame, 1998, 114, 26-40.	5.2	324
8	A consistent chemical mechanism for oxidation of substituted aromatic species. Combustion and Flame, 2010, 157, 1879-1898.	5.2	293
9	Laminar burning velocities at high pressure for primary reference fuels and gasoline: Experimental and numerical investigation. Combustion and Flame, 2009, 156, 292-301.	5.2	288
10	Structural group analysis for soot reduction tendency of oxygenated fuels. Combustion and Flame, 2008, 154, 191-205.	5.2	277
11	Optimized chemical mechanism for combustion of gasoline surrogate fuels. Combustion and Flame, 2015, 162, 1623-1637.	5.2	276
12	Extinction and autoignition of n-heptane in counterflow configuration. Proceedings of the Combustion Institute, 2000, 28, 2029-2037.	3.9	274
13	Development of an Experimental Database and Kinetic Models for Surrogate Diesel Fuels. , 0, , .		255
14	Effects of strain rate on high-pressure nonpremixed n-heptane autoignition in counterflow. Combustion and Flame, 2004, 137, 320-339.	5.2	254
15	Large-eddy simulation of premixed turbulent combustion using a level-set approach. Proceedings of the Combustion Institute, 2002, 29, 2001-2008.	3.9	243
16	Development of an Experimental Database and Chemical Kinetic Models for Surrogate Gasoline Fuels. , 0, , .		236
17	Modeling of radiation and nitric oxide formation in turbulent nonpremixed flames using a flamelet/progress variable formulation. Physics of Fluids, 2008, 20, .	4.0	232
18	Unsteady flamelet modeling of turbulent hydrogen-air diffusion flames. Proceedings of the Combustion Institute, 1998, 27, 1057-1064.	0.3	225

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19	Advanced Biofuels and Beyond: Chemistry Solutions for Propulsion and Production. Angewandte Chemie - International Edition, 2017, 56, 5412-5452.	13.8	224
20	Prediction of extinction and reignition in nonpremixed turbulent flames using a flamelet/progress variable model. Combustion and Flame, 2008, 155, 90-107.	5.2	217
21	Prediction of local extinction and re-ignition effects in non-premixed turbulent combustion using a flamelet/progress variable approach. Proceedings of the Combustion Institute, 2005, 30, 793-800.	3.9	213
22	Hybrid Method of Moments for modeling soot formation and growth. Combustion and Flame, 2009, 156, 1143-1155.	5.2	206
23	On the formation and early evolution of soot in turbulent nonpremixed flames. Combustion and Flame, 2012, 159, 317-335.	5.2	194
24	A consistent LES/filtered-density function formulation for the simulation of turbulent flames with detailed chemistry. Proceedings of the Combustion Institute, 2007, 31, 1711-1719.	3.9	189
25	Three-Dimensional Modeling of NOx and Soot Formation in DI-Diesel Engines Using Detailed Chemistry Based on the Interactive Flamelet Approach. , 0, , .		176
26	Hybrid large-eddy simulation/Lagrangian filtered-density-function approach for simulating turbulent combustion. Combustion and Flame, 2005, 143, 56-78.	5.2	163
27	A chemical mechanism for low to high temperature oxidation of n-dodecane as a component of transportation fuel surrogates. Combustion and Flame, 2014, 161, 866-884.	5.2	153
28	Unsteady flamelet modeling of differential diffusion in turbulent jet diffusion flames. Combustion and Flame, 2000, 123, 358-374.	5.2	149
29	Large-Eddy Simulation Inflow Conditions for Coupling with Reynolds-Averaged Flow Solvers. AIAA Journal, 2004, 42, 478-484.	2.6	148
30	Direct numerical simulations and analysis of three-dimensional n-heptane spray flames in a model swirl combustor. Proceedings of the Combustion Institute, 2011, 33, 2143-2152.	3.9	147
31	LES model for sooting turbulent nonpremixed flames. Combustion and Flame, 2012, 159, 2166-2180.	5.2	142
32	Prediction of extinction and reignition in nonpremixed turbulent flames using a flamelet/progress variable model. Combustion and Flame, 2008, 155, 70-89.	5.2	140
33	Experimental and Theoretical Understanding of Nitrogen-Doping-Induced Strong Metalâ€“Support Interactions in Pd/TiO₂ Catalysts for Nitrobenzene Hydrogenation. ACS Catalysis, 2017, 7, 1197-1206.	11.2	138
34	A consistent level set formulation for large-eddy simulation of premixed turbulent combustion. Combustion and Flame, 2005, 143, 587-598.	5.2	134
35	Experimental investigation of the laminar burning velocities of methanol, ethanol, n-propanol, and n-butanol at high pressure. Fuel, 2014, 117, 340-350.	6.4	133
36	Understanding the antagonistic effect of methanol as a component in surrogate fuel models: A case study of methanol/n-heptane mixtures. Combustion and Flame, 2021, 226, 229-242.	5.2	129

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37	Reconstruction and Effective Transport Properties of the Catalyst Layer in PEM Fuel Cells. Journal of the Electrochemical Society, 2009, 156, B673.	2.9	128
38	Scalar mixing and dissipation rate in large-eddy simulations of non-premixed turbulent combustion. Proceedings of the Combustion Institute, 2000, 28, 41-49.	3.9	127
39	Formation, growth, and transport of soot in a three-dimensional turbulent non-premixed jet flame. Combustion and Flame, 2014, 161, 1849-1865.	5.2	124
40	Development of an Experimental Database and Kinetic Models for Surrogate Jet Fuels. , 2007, , .		122
41	A Review of Terminology Used to Describe Soot Formation and Evolution under Combustion and Pyrolytic Conditions. ACS Nano, 2020, 14, 12470-12490.	14.6	122
42	Optimized reaction mechanism rate rules for ignition of normal alkanes. Combustion and Flame, 2016, 173, 468-482.	5.2	121
43	Accuracy of higher-order lattice Boltzmann methods for microscale flows with finite Knudsen numbers. Journal of Computational Physics, 2008, 227, 8655-8671.	3.8	117
44	A general flamelet transformation useful for distinguishing between premixed and non-premixed modes of combustion. Combustion and Flame, 2009, 156, 678-696.	5.2	117
45	Optimal artificial neural networks and tabulation methods for chemistry representation in LES of a bluff-body swirl-stabilized flame. Proceedings of the Combustion Institute, 2009, 32, 1527-1535.	3.9	115
46	Large-eddy simulation of a bluff-body-stabilized non-premixed flame using a recursive filter-refinement procedure. Combustion and Flame, 2005, 142, 329-347.	5.2	113
47	Reynolds-Averaged Navier-Stokes Simulations of the HyShot II Scramjet. AIAA Journal, 2012, 50, 1717-1732.	2.6	110
48	A component library framework for deriving kinetic mechanisms for multi-component fuel surrogates: Application for jet fuel surrogates. Combustion and Flame, 2016, 165, 288-309.	5.2	104
49	A joint volume-surface model of soot aggregation with the method of moments. Proceedings of the Combustion Institute, 2009, 32, 785-792.	3.9	99
50	Unsteady Flamelet Modeling of Soot Formation in Turbulent Diffusion Flames. Combustion Science and Technology, 2000, 158, 389-406.	2.3	98
51	An automatic chemical lumping method for the reduction of large chemical kinetic mechanisms. Combustion Theory and Modelling, 2008, 12, 1089-1108.	1.9	97
52	Mechanism optimization based on reaction rate rules. Combustion and Flame, 2014, 161, 405-415.	5.2	97
53	An experimental and modeling study of n -octanol combustion. Proceedings of the Combustion Institute, 2015, 35, 419-427.	3.9	94
54	Improved pollutant predictions in large-eddy simulations of turbulent non-premixed combustion by considering scalar dissipation rate fluctuations. Proceedings of the Combustion Institute, 2002, 29, 1971-1978.	3.9	93

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55	Analyzing the effects of temperature on soot formation with a joint volume-surface-hydrogen model. Combustion and Flame, 2009, 156, 1614-1626.	5.2	92
56	An experimental study on MILD combustion of prevaporised liquid fuels. Applied Energy, 2015, 151, 93-101.	10.1	92
57	Scalar gradient and small-scale structure in turbulent premixed combustion. Physics of Fluids, 2007, 19, .	4.0	88
58	Experimental and numerical study of MILD combustion for gas turbine applications. Applied Energy, 2015, 148, 456-465.	10.1	88
59	Chemical kinetic study of a novel lignocellulosic biofuel: Di-n-butyl ether oxidation in a laminar flow reactor and flames. Combustion and Flame, 2014, 161, 798-809.	5.2	85
60	An efficient flamelet-based combustion model for compressible flows. Combustion and Flame, 2015, 162, 652-667.	5.2	83
61	Extinction and reignition in a diffusion flame: a direct numerical simulation study. Journal of Fluid Mechanics, 2004, 518, 231-259.	3.4	81
62	A level set formulation for premixed combustion LES considering the turbulent flame structure. Combustion and Flame, 2009, 156, 801-812.	5.2	80
63	Challenging modeling strategies for LES of non-adiabatic turbulent stratified combustion. Combustion and Flame, 2015, 162, 4264-4282.	5.2	79
64	Di-n-buthylether, n-octanol, and n-octane as fuel candidates for diesel engine combustion. Combustion and Flame, 2016, 163, 66-78.	5.2	79
65	Capabilities and limitations of multi-regime flamelet combustion models. Combustion and Flame, 2012, 159, 242-264.	5.2	77
66	Solvent Degradation in Nonaqueous Li-O₂ Batteries: Oxidative Stability versus H-Abstraction. Journal of Physical Chemistry Letters, 2014, 5, 2419-2424.	4.6	77
67	Ignition characteristics of a bio-derived class of saturated and unsaturated furans for engine applications. Proceedings of the Combustion Institute, 2015, 35, 2957-2965.	3.9	77
68	Experimental and numerical low-temperature oxidation study of ethanol and dimethyl ether. Combustion and Flame, 2014, 161, 384-397.	5.2	76
69	Detailed kinetic modeling of dimethoxymethane. Part II: Experimental and theoretical study of the kinetics and reaction mechanism. Combustion and Flame, 2019, 205, 522-533.	5.2	76
70	Auto-ignition of oxymethylene ethers (OMEn, nÂ=Â2â€“4) as promising synthetic e-fuels from renewable electricity: shock tube experiments and automatic mechanism generation. Fuel, 2020, 264, 116711.	6.4	75
71	Effects of radiation on spray flame characteristics and soot formation. Combustion and Flame, 2008, 152, 2-13.	5.2	74
72	Modeling the oxidation-induced fragmentation of soot aggregates in laminar flames. Proceedings of the Combustion Institute, 2011, 33, 667-674.	3.9	74

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73	Modeling partially premixed combustion behavior in multiphase LES. Combustion and Flame, 2015, 162, 159-180.	5.2	73
74	Numerical Investigation of Soot Formation and Oxidation Under Diesel Engine Conditions. , 0, , .		72
75	Simulating Linear Sweep Voltammetry from First-Principles: Application to Electrochemical Oxidation of Water on Pt(111) and Pt₃Ni(111). Journal of Physical Chemistry C, 2012, 116, 4698-4704.	3.1	71
76	A chemical mechanism for low to high temperature oxidation of methylcyclohexane as a component of transportation fuel surrogates. Combustion and Flame, 2015, 162, 1193-1213.	5.2	71
77	Impact of exhaust gas recirculation on ignition delay times of gasoline fuel: An experimental and modeling study. Proceedings of the Combustion Institute, 2019, 37, 639-647.	3.9	69
78	DETAILED NUMERICAL INVESTIGATION OF TURBULENT ATOMIZATION OF LIQUID JETS. Atomization and Sprays, 2010, 20, 311-336.	0.8	68
79	3d Simulation of Di Diesel Combustion and Pollutant Formation Using a Two-Component Reference Fuel. Oil and Gas Science and Technology, 1999, 54, 233-244.	1.4	66
80	Development and application of a comprehensive soot model for 3D CFD reacting flow studies in a diesel engine. Combustion and Flame, 2005, 143, 11-26.	5.2	65
81	Eulerian transported probability density function sub-filter model for large-eddy simulations of turbulent combustion. Combustion Theory and Modelling, 2006, 10, 439-458.	1.9	65
82	An efficient semi-implicit compressible solver for large-eddy simulations. Journal of Computational Physics, 2007, 226, 1256-1270.	3.8	65
83	Development of a dynamic model for the subfilter scalar variance using the concept of optimal estimators. Physics of Fluids, 2008, 20, .	4.0	65
84	Consistent mass and momentum transport for simulating incompressible interfacial flows with large density ratios using the level set method. Computers and Fluids, 2012, 63, 70-81.	2.5	64
85	Large eddy simulation of soot evolution in an aircraft combustor. Physics of Fluids, 2013, 25, .	4.0	64
86	Propagation speed and stability of spherically expanding hydrogen/air flames: Experimental study and asymptotics. Proceedings of the Combustion Institute, 2017, 36, 1531-1538.	3.9	64
87	A 3D Unsplit Forward/Backward Volume-of-Fluid Approach and Coupling to the Level Set Method. Journal of Computational Physics, 2013, 233, 10-33.	3.8	60
88	Characteristic patterns of thermodiffusively unstable premixed lean hydrogen flames. Proceedings of the Combustion Institute, 2019, 37, 1879-1886.	3.9	60
89	Radiation of noise in turbulent non-premixed flames. Proceedings of the Combustion Institute, 2009, 32, 1545-1553.	3.9	59
90	LES/PDF based modeling of sootâ€“turbulence interactions in turbulent flames. Proceedings of the Combustion Institute, 2013, 34, 1183-1192.	3.9	59

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91	Using physics-informed enhanced super-resolution generative adversarial networks for subfilter modeling in turbulent reactive flows. Proceedings of the Combustion Institute, 2021, 38, 2617-2625.	3.9	59
92	Determination of burning velocities from spherically expanding H 2 /air flames. Proceedings of the Combustion Institute, 2015, 35, 711-719.	3.9	57
93	Modeling extinction and reignition in turbulent nonpremixed combustion using a doubly-conditional moment closure approach. Physics of Fluids, 2001, 13, 3824-3834.	4.0	56
94	Large-eddy simulation of turbulent reacting flows. Progress in Aerospace Sciences, 2008, 44, 466-478.	12.1	55
95	Experimental and computational study of soot evolution in a turbulent nonpremixed bluff body ethylene flame. Combustion and Flame, 2013, 160, 1298-1309.	5.2	55
96	A Framework for Coupling Reynolds-Averaged With Large-Eddy Simulations for Gas Turbine Applications. Journal of Fluids Engineering, Transactions of the ASME, 2005, 127, 806-815.	1.5	54
97	Some effects of gasoline and diesel mixtures on partially premixed combustion and comparison with the practical fuels gasoline and diesel in a compression ignition engine. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2012, 226, 1259-1270.	1.9	54
98	LES of a premixed jet flame DNS using a strained flamelet model. Combustion and Flame, 2013, 160, 2911-2927.	5.2	54
99	A dynamic model for the turbulent burning velocity for large eddy simulation of premixed combustion. Combustion and Flame, 2008, 154, 740-760.	5.2	53
100	Modeling Ignition of a Heptane Isomer: Improved Thermodynamics, Reaction Pathways, Kinetics, and Rate Rule Optimizations for 2-Methylhexane. Journal of Physical Chemistry A, 2016, 120, 2201-2217.	2.5	53
101	Slip velocity and Knudsen layer in the lattice Boltzmann method for microscale flows. Physical Review E, 2008, 77, 026704.	2.1	52
102	A comprehensive experimental and kinetic modeling study of butanone. Combustion and Flame, 2016, 168, 296-309.	5.2	52
103	Effects of non-unity Lewis number of gas-phase species in turbulent nonpremixed sooting flames. Combustion and Flame, 2016, 166, 192-202.	5.2	51
104	Thermochemical Properties of Polycyclic Aromatic Hydrocarbons (PAH) from G3MP2B3 Calculations. Journal of Physical Chemistry A, 2007, 111, 6510-6520.	2.5	49
105	A spectrally refined interface approach for simulating multiphase flows. Journal of Computational Physics, 2009, 228, 1658-1677.	3.8	49
106	Mechanism of Molecular Oxygen Reduction at the Cathode of a PEM Fuel Cell: Non-Electrochemical Reactions on Catalytic Pt Particles. Journal of Physical Chemistry C, 2008, 112, 8464-8475.	3.1	48
107	Large eddy simulation subfilter modeling of soot-turbulence interactions. Physics of Fluids, 2011, 23, .	4.0	48
108	First-Principles Based Analysis of the Electrocatalytic Activity of the Unreconstructed Pt(100) Surface for Oxygen Reduction Reaction. Journal of Physical Chemistry C, 2012, 116, 6174-6183.	3.1	48

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109	A monotonicity preserving conservative sharp interface flow solver for high density ratio two-phase flows. Journal of Computational Physics, 2013, 249, 185-203.	3.8	48
110	A generalized periodic boundary condition for lattice Boltzmann method simulation of a pressure driven flow in a periodic geometry. Physics of Fluids, 2007, 19, .	4.0	47
111	DamkÃ¶hler number effects on soot formation and growth in turbulent nonpremixed flames. Proceedings of the Combustion Institute, 2015, 35, 1215-1223.	3.9	47
112	Flamelet modelling of non-premixed turbulent combustion with local extinction and re-ignition. Combustion Theory and Modelling, 2003, 7, 317-332.	1.9	46
113	Flamelet-based modeling of auto-ignition with thermal inhomogeneities for application to HCCI engines. Proceedings of the Combustion Institute, 2007, 31, 2903-2911.	3.9	46
114	First-Principles Analysis of Oxygen-Containing Adsorbates Formed from the Electrochemical Discharge of Water on Pt(111). Journal of Physical Chemistry C, 2008, 112, 9760-9768.	3.1	45
115	Identifying Descriptors for Solvent Stability in Nonaqueous Liâ€“O₂ Batteries. Journal of Physical Chemistry Letters, 2014, 5, 1318-1323.	4.6	44
116	Synthese, motorische Verbrennung, Emissionen: Chemische Aspekte des Kraftstoffdesigns. Angewandte Chemie, 2017, 129, 5500-5544.	2.0	43
117	Resolved simulations of single char particle combustion in a laminar flow field. Fuel, 2017, 201, 15-28.	6.4	43
118	Synergistic interactions of thermodiffusive instabilities and turbulence in lean hydrogen flames. Combustion and Flame, 2022, 244, 112254.	5.2	43
119	Numerical and asymptotic studies of the structure of premixed iso-octane flames. Proceedings of the Combustion Institute, 1996, 26, 763-771.	0.3	42
120	A ghost-fluid method for large-eddy simulations of premixed combustion in complex geometries. Journal of Computational Physics, 2007, 221, 600-614.	3.8	42
121	Higher Alcohol and Ether Biofuels for Compression-Ignition Engine Application: A Review with Emphasis on Combustion Kinetics. Energy & Fuels, 2021, 35, 1890-1917.	5.1	42
122	Investigation of scalar dissipation rate fluctuations in non-premixed turbulent combustion using a stochastic approach. Combustion Theory and Modelling, 2001, 5, 41-57.	1.9	41
123	Sensitivity analysis, uncertainty quantification, and optimization for thermochemical properties in chemical kinetic combustion models. Proceedings of the Combustion Institute, 2019, 37, 771-779.	3.9	41
124	An extended multi-regime flamelet model for IC engines. Combustion and Flame, 2012, 159, 2767-2776.	5.2	40
125	First Principles Study of Morphology, Doping Level, and Water Solvation Effects on the Catalytic Mechanism of Nitrogenâ€Doped Graphene in the Oxygen Reduction Reaction. ChemCatChem, 2014, 6, 2662-2670.	3.7	40
126	Predicting kinetic parameters for coal devolatilization by means of Artificial Neural Networks. Proceedings of the Combustion Institute, 2019, 37, 2943-2950.	3.9	40

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127	Experimental and numerical study of soot formation in counterflow diffusion flames of gasoline surrogate components. Combustion and Flame, 2019, 210, 159-171.	5.2	40
128	Activity Descriptor for Catalytic Reactions on Doped Cerium Oxide. ACS Catalysis, 2013, 3, 1253-1262.	11.2	39
129	A two-equation model for non-unity Lewis number differential diffusion in lean premixed laminar flames. Combustion and Flame, 2013, 160, 240-250.	5.2	39
130	An Unsteady/Flamelet Progress Variable Method for LES of Nonpremixed Turbulent Combustion. , 2005, , .		38
131	Generation of Optimal Artificial Neural Networks Using a Pattern Search Algorithm: Application to Approximation of Chemical Systems. Neural Computation, 2008, 20, 573-601.	2.2	38
132	Numerical errors in the computation of subfilter scalar variance in large eddy simulations. Physics of Fluids, 2009, 21, .	4.0	38
133	Systematic Analysis Strategies for the Development of Combustion Models from DNS: A Review. Flow, Turbulence and Combustion, 2015, 95, 231-259.	2.6	38
134	Laminar burning velocities, CO, and NOx emissions of premixed polyoxymethylene dimethyl ether flames. Fuel, 2021, 293, 120321.	6.4	38
135	An analysis of premixed flamelet models for large eddy simulation of turbulent combustion. Physics of Fluids, 2010, 22, .	4.0	37
136	Large Eddy Simulation of Stratified and Sheared Flames of a Premixed Turbulent Stratified Flame Burner Using a Flamelet Model with Heat Loss. Flow, Turbulence and Combustion, 2014, 92, 201-235.	2.6	36
137	Computational study on the internal layer in a diffuser. Journal of Fluid Mechanics, 2006, 550, 391.	3.4	35
138	Local dynamics of copper active sites in zeolite catalysts for selective catalytic reduction of NOx with NH3. Applied Catalysis B: Environmental, 2018, 237, 263-272.	20.2	35
139	A computational study on the kinetics of unimolecular reactions of ethoxyethylperoxy radicals employing CTST and VTST. Proceedings of the Combustion Institute, 2015, 35, 161-169.	3.9	34
140	Numerical study of coal particle ignition in air and oxy-atmosphere. Proceedings of the Combustion Institute, 2019, 37, 2867-2874.	3.9	34
141	Computational study of flame characteristics of a turbulent piloted jet burner with inhomogeneous inlets. Proceedings of the Combustion Institute, 2017, 36, 1747-1757.	3.9	33
142	Intrinsic instabilities in premixed hydrogen flames: parametric variation of pressure, equivalence ratio, and temperature. Part 2 â€“ Nonâ€linear regime and flame speed enhancement. Combustion and Flame, 2022, 240, 111936.	5.2	33
143	Modeling scalar dissipation and scalar variance in large eddy simulation: Algebraic and transport equation closures. Physics of Fluids, 2012, 24, .	4.0	32
144	Chemical kinetic uncertainty quantification for Large Eddy Simulation of turbulent nonpremixed combustion. Proceedings of the Combustion Institute, 2013, 34, 1299-1306.	3.9	32

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145	Ignition characteristics of 2-methyltetrahydrofuran: An experimental and kinetic study. Proceedings of the Combustion Institute, 2017, 36, 587-595.	3.9	32
146	Oxidation of 2-methylfuran and 2-methylfuran/n-heptane blends: An experimental and modeling study. Combustion and Flame, 2018, 196, 54-70.	5.2	32
147	Impact of thermochemistry on optimized kinetic model predictions: Auto-ignition of diethyl ether. Combustion and Flame, 2019, 210, 454-466.	5.2	32
148	Experimental and Numerical Study of the Scalar Turbulent/Non-Turbulent Interface Layer in a Jet Flow. Flow, Turbulence and Combustion, 2014, 92, 429-449.	2.6	31
149	Using machine learning with target-specific feature sets for structure-property relationship modeling of octane numbers and octane sensitivity. Fuel, 2020, 281, 118772.	6.4	31
150	Detailed kinetic reaction mechanism for ignition and oxidation of Î±-methylnaphthalene. Proceedings of the Combustion Institute, 1996, 26, 721-728.	0.3	30
151	Tailor-Made Fuels from Biomass: Influence of Molecular Structures on the Exhaust Gas Emissions of Compression Ignition Engines. , 0, , .		30
152	Mechanistic Understanding of Cu-CHA Catalyst as Sensor for Direct NH₃-SCR Monitoring: The Role of Cu Mobility. ACS Applied Materials & Interfaces, 2019, 11, 8097-8105.	8.0	30
153	On the Generation of Direct Combustion Noise in Turbulent Non-Premixed Flames. International Journal of Aeroacoustics, 2012, 11, 25-78.	1.3	29
154	A priori testing of a two-dimensional unsteady flamelet model for three-feed combustion systems. Proceedings of the Combustion Institute, 2013, 34, 1317-1324.	3.9	29
155	Ignition characteristics of saturated and unsaturated furans. Combustion and Flame, 2016, 171, 133-136.	5.2	29
156	LES of n-Dodecane Spray Combustion Using a Multiple Representative Interactive Flamelets Model. Oil and Gas Science and Technology, 2017, 72, 29.	1.4	29
157	Role of ring-enlargement reactions in the formation of aromatic hydrocarbons. Physical Chemistry Chemical Physics, 2020, 22, 4699-4714.	2.8	29
158	Eulerian and Lagrangian Large-Eddy Simulations of an evaporating two-phase flow. Comptes Rendus - Mecanique, 2009, 337, 458-468.	2.1	28
159	Modeling soot oxidation with the Extended Quadrature Method of Moments. Proceedings of the Combustion Institute, 2017, 36, 789-797.	3.9	28
160	Numerical and experimental investigation of pollutant formation and emissions in a full-scale cylindrical heating unit of a condensing gas boiler. Applied Energy, 2018, 229, 977-989.	10.1	28
161	Laminar premixed and non-premixed flame investigation on the influence of dimethyl ether addition on n-heptane combustion. Combustion and Flame, 2020, 212, 323-336.	5.2	28
162	Collaborative investigation of the internal flow and near-nozzle flow of an eight-hole gasoline injector (Engine Combustion Network Spray G). International Journal of Engine Research, 2023, 24, 2297-2314.	2.3	28

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163	The effect of pressure on the hydrodynamic stability limit of premixed flames. Proceedings of the Combustion Institute, 2021, 38, 1973-1981.	3.9	28
164	Exploring the fuel structure dependence of laminar burning velocity: A machine learning based group contribution approach. Combustion and Flame, 2021, 232, 111525.	5.2	28
165	Modeling autoignition in non-premixed turbulent combustion using a stochastic flamelet approach. Proceedings of the Combustion Institute, 2005, 30, 2745-2753.	3.9	27
166	A flamelet model for premixed combustion under variable pressure conditions. Proceedings of the Combustion Institute, 2013, 34, 2995-3003.	3.9	27
167	Advancing predictive models for particulate formation in turbulent flames via massively parallel direct numerical simulations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130324.	3.4	27
168	Adjoint-based sensitivity analysis of quantities of interest of complex combustion models. Combustion Theory and Modelling, 2019, 23, 180-196.	1.9	27
169	Investigation of the Ignition Process of Sprays Under Diesel Engine Conditions Using Reduced n-Heptane Chemistry. , 0, , .		26
170	Experimental and numerical study of a novel biofuel: 2-Butyltetrahydrofuran. Combustion and Flame, 2017, 178, 257-267.	5.2	26
171	2-Methylfuran: A bio-derived octane booster for spark-ignition engines. Fuel, 2018, 225, 349-357.	6.4	26
172	Analytic solution for a higher-order lattice Boltzmann method: Slip velocity and Knudsen layer. Physical Review E, 2008, 78, 016702.	2.1	25
173	Assessment of counterflow to measure laminar burning velocities using direct numerical simulations. Combustion Theory and Modelling, 2012, 16, 419-433.	1.9	25
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