

Jyh-Yuan Chen

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Scalar profiles and NO formation in laminar opposed-flow partially premixed methane/air flames. <i>Combustion and Flame</i> , 2001, 127, 2102-2118.	2.8	441
2	Lifted methane-air jet flames in a vitiated coflow. <i>Combustion and Flame</i> , 2005, 143, 491-506.	2.8	269
3	A numerical investigation into the anomalous slight NO _x increase when burning biodiesel; A new (old) theory. <i>Fuel Processing Technology</i> , 2007, 88, 659-667.	3.7	265
4	An Approach for Formulating Surrogates for Gasoline with Application toward a Reduced Surrogate Mechanism for CFD Engine Modeling. <i>Energy & Fuels</i> , 2011, 25, 5215-5223.	2.5	252
5	Raman/Rayleigh/LIF measurements in a turbulent CH ₄ /H ₂ /N ₂ jet diffusion flame: experimental techniques and turbulence-chemistry interaction. <i>Combustion and Flame</i> , 2000, 123, 326-343.	2.8	196
6	Piloted methane/air jet flames: Transport effects and aspects of scalar structure. <i>Combustion and Flame</i> , 2005, 143, 433-449.	2.8	162
7	Effect of Damköhler number on superequilibrium OH concentration in turbulent nonpremixed jet flames. <i>Combustion and Flame</i> , 1990, 82, 235-251.	2.8	147
8	Experiments on the scalar structure of turbulent CO/H ₂ /N ₂ jet flames. <i>Combustion and Flame</i> , 2000, 120, 549-569.	2.8	145
9	Augmented reduced mechanisms for NO emission in methane oxidation. <i>Combustion and Flame</i> , 2001, 125, 906-919.	2.8	144
10	Enhancement of flame development by microwave-assisted spark ignition in constant volume combustion chamber. <i>Combustion and Flame</i> , 2013, 160, 1225-1234.	2.8	129
11	Nitric oxide formation in dilute hydrogen jet flames: isolation of the effects of radiation and turbulence-chemistry submodels. <i>Combustion and Flame</i> , 1999, 117, 4-31.	2.8	120
12	One-dimensional turbulence simulation of turbulent jet diffusion flames: model formulation and illustrative applications. <i>Combustion and Flame</i> , 2001, 125, 1083-1105.	2.8	110
13	Intermediate temperature heat release in an HCCI engine fueled by ethanol/n-heptane mixtures: An experimental and modeling study. <i>Combustion and Flame</i> , 2014, 161, 680-695.	2.8	83
14	A model for soot formation in a laminar diffusion flame. <i>Combustion and Flame</i> , 1990, 81, 73-85.	2.8	81
15	PDF modeling and analysis of thermal NO formation in turbulent nonpremixed hydrogen-air jet flames. <i>Combustion and Flame</i> , 1992, 88, 397-412.	2.8	71
16	Raman/Rayleigh scattering and CO-LIF measurements in laminar and turbulent jet flames of dimethyl ether. <i>Combustion and Flame</i> , 2012, 159, 2533-2562.	2.8	69
17	A self-organizing-map approach to chemistry representation in combustion applications. <i>Combustion Theory and Modelling</i> , 2000, 4, 61-76.	1.0	67
18	Stochastic Modeling of Partially Stirred Reactors. <i>Combustion Science and Technology</i> , 1997, 122, 63-94.	1.2	63

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19	Effects of water content on evaporation and combustion characteristics of water emulsified diesel spray. <i>Applied Energy</i> , 2018, 226, 397-407.	5.1	62
20	Numerical and Experimental Investigation of <i>n</i> -Heptane Autoignition in the Ignition Quality Tester (IQT). <i>Energy & Fuels</i> , 2011, 25, 5562-5572.	2.5	61
21	Chemical response of methane/air diffusion flames to unsteady strain rate. <i>Combustion and Flame</i> , 1999, 118, 204-212.	2.8	57
22	A 5-step reduced mechanism for combustion of CO/H ₂ /H ₂ O/CH ₄ /CO ₂ mixtures with low hydrogen/methane and high H ₂ O content. <i>Combustion and Flame</i> , 2013, 160, 56-75.	2.8	56
23	Chemical models for pdf modeling of hydrogen-air nonpremixed turbulent flames. <i>Combustion and Flame</i> , 1990, 79, 75-99.	2.8	52
24	Reduced Chemical Kinetic Mechanisms for Hydrocarbon Fuels. <i>Journal of Propulsion and Power</i> , 2002, 18, 192-198.	1.3	52
25	A Comparison of CMC and PDF Modelling Predictions with Experimental Nitric Oxide LIF/Raman Measurements in a Turbulent H ₂ jet Flame. <i>Combustion Science and Technology</i> , 1995, 105, 357-375.	1.2	51
26	A NUMERICAL INVESTIGATION OF A LIFTED H ₂ /N ₂ TURBULENT JET FLAME IN A VITIATED COFLOW. <i>Combustion Science and Technology</i> , 2006, 178, 1001-1030.	1.2	45
27	The effects of intake pressure, fuel concentration, and bias voltage on the detection of ions in a Homogeneous Charge Compression Ignition (HCCI) engine. <i>Proceedings of the Combustion Institute</i> , 2009, 32, 2877-2884.	2.4	44
28	Selecting the optimum quasi-steady-state species for reduced chemical kinetic mechanisms using a genetic algorithm. <i>Combustion and Flame</i> , 2006, 144, 37-52.	2.8	43
29	Development of a reduced chemical mechanism targeted for a 5-component gasoline surrogate: A case study on the heat release nature in a GCI engine. <i>Combustion and Flame</i> , 2017, 178, 268-276.	2.8	41
30	Numerical Studies of Methane Catalytic Combustion Inside a Monolith Honeycomb Reactor Using Multi-Step Surface Reactions. <i>Combustion Science and Technology</i> , 2000, 150, 27-57.	1.2	39
31	Application of Jacobian defined direct interaction coefficient in DRGEP-based chemical mechanism reduction methods using different graph search algorithms. <i>Combustion and Flame</i> , 2016, 174, 77-84.	2.8	37
32	Numerical study of laminar flame speed of fuel-stratified hydrogen/air flames. <i>Combustion and Flame</i> , 2016, 163, 394-405.	2.8	37
33	Flamelet-based modeling of NO formation in turbulent hydrogen jet diffusion flames. <i>Combustion and Flame</i> , 1997, 111, 1-15.	2.8	36
34	Extending the Lean Stability Limits of Gasoline Using a Microwave-Assisted Spark Plug. , 0, , .		35
35	Experiments and Computational Fluid Dynamics Modeling Analysis of Large <i>n</i> -Alkane Ignition Kinetics in the Ignition Quality Tester. <i>Energy & Fuels</i> , 2014, 28, 4781-4794.	2.5	35
36	Application of Corona Discharge Ignition in a Boosted Direct-Injection Single Cylinder Gasoline Engine: Effects on Combustion Phasing, Fuel Consumption, and Emissions. <i>SAE International Journal of Engines</i> , 0, 9, 1970-1988.	0.4	35

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37	Ab initio calculation and kinetic modeling study of diethyl ether ignition with application toward a skeletal mechanism for CI engine modeling. <i>Fuel</i> , 2017, 209, 509-520.	3.4	35
38	Laminar flame speeds of stratified methane, propane, and n-heptane flames. <i>Combustion and Flame</i> , 2017, 176, 38-47.	2.8	35
39	Towards improved automatic chemical kinetic model reduction regarding ignition delays and flame speeds. <i>Combustion and Flame</i> , 2018, 190, 293-301.	2.8	35
40	Modeling plasma-assisted methane-air ignition using pre-calculated electron impact reaction rates. <i>Combustion and Flame</i> , 2016, 172, 38-48.	2.8	34
41	Cyclic variations and prior-cycle effects of ion current sensing in an HCCI engine: A time-series analysis. <i>Applied Energy</i> , 2016, 168, 628-635.	5.1	32
42	Catalytic oxidation of natural gas over supported platinum: Flow reactor experiments and detailed numerical modeling. <i>Proceedings of the Combustion Institute</i> , 1996, 26, 1771-1778.	0.3	31
43	Application of a robust \hat{I}^2 -pdf treatment to analysis of thermal NO formation in nonpremixed hydrogen-air flame. <i>Combustion and Flame</i> , 1994, 98, 375-390.	2.8	29
44	A Eulerian PDF scheme for LES of nonpremixed turbulent combustion with second-order accurate mixture fraction. <i>Combustion Theory and Modelling</i> , 2007, 11, 675-695.	1.0	27
45	Speedy solution of quasi-steady-state species by combination of fixed-point iteration and matrix inversion. <i>Combustion and Flame</i> , 2008, 153, 634-646.	2.8	27
46	Maximizing Power Output in an Automotive Scale Multi-Cylinder Homogeneous Charge Compression Ignition (HCCI) Engine. , 0, , .		27
47	ANALYSIS OF IN SITU ADAPTIVE TABULATION PERFORMANCE FOR COMBUSTION CHEMISTRY AND IMPROVEMENT WITH A MODIFIED SEARCH ALGORITHM. <i>Combustion Science and Technology</i> , 2004, 176, 1153-1169.	1.2	26
48	Further Validation of an Augmented Reduced Mechanism for Methane Oxidation: Comparison of Global Parameters and Detailed Structure. <i>Combustion Science and Technology</i> , 2000, 156, 201-220.	1.2	25
49	Extending Lean Operating Limit and Reducing Emissions of Methane Spark-Ignited Engines Using a Microwave-Assisted Spark Plug. <i>Journal of Combustion</i> , 2012, 2012, 1-8.	0.5	24
50	Optimization of homogeneous charge compression ignition with genetic algorithms. <i>Combustion Science and Technology</i> , 2003, 175, 373-392.	1.2	23
51	Numerical Modeling of NO Formation in Laminar Bunsen Flames—A Flamelet Approach. <i>Combustion and Flame</i> , 1998, 114, 420-435.	2.8	22
52	Modeling Differential Diffusion Effects in Turbulent Nonreacting/Reacting Jets with Stochastic Mixing Models. <i>Combustion Science and Technology</i> , 1998, 133, 343-375.	1.2	22
53	Computational study of the pressure dependence of sequential auto-ignition for partial fuel stratification with gasoline. <i>Proceedings of the Combustion Institute</i> , 2015, 35, 2993-3000.	2.4	22
54	The \dot{m} - \dot{V} curve characteristics of burner-stabilized premixed flames: detailed and reduced models. <i>Proceedings of the Combustion Institute</i> , 2017, 36, 1241-1250.	2.4	22

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55	Reduced Reaction Mechanisms for Methanol-Air Diffusion Flames. <i>Combustion Science and Technology</i> , 1991, 78, 127-145.	1.2	20
56	Evaluation of a reduced mechanism for turbulent premixed combustion. <i>Combustion and Flame</i> , 2014, 161, 3085-3099.	2.8	19
57	Modeling of turbulent opposed-jet mixing flows with ϵ model and second-order closure. <i>International Journal of Heat and Mass Transfer</i> , 2004, 47, 1023-1035.	2.5	18
58	Probability density function treatment of turbulence/chemistry interactions during the ignition of a temperature-stratified mixture for application to HCCI engine modeling. <i>Combustion and Flame</i> , 2008, 155, 571-584.	2.8	18
59	COMPUTATIONAL STUDY OF PARTIAL FUEL STRATIFICATION FOR HCCI ENGINES USING GASOLINE SURROGATE REDUCED MECHANISM. <i>Combustion Science and Technology</i> , 2014, 186, 332-354.	1.2	18
60	Fuel-Dithering Optimization of Efficiency of TWC on Natural Gas IC Engine. <i>SAE International Journal of Engines</i> , 0, 8, 1246-1252.	0.4	18
61	Numerical study of buoyancy effects on the structure and propagation of triple flames. <i>Combustion Theory and Modelling</i> , 2001, 5, 499-515.	1.0	17
62	Modes of reaction front propagation and end-gas combustion of hydrogen/air mixtures in a closed chamber. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 10501-10512.	3.8	17
63	Prediction of NO(x) production in a turbulent hydrogen-air jet flame. <i>Journal of Propulsion and Power</i> , 1994, 10, 161-168.	1.3	16
64	H Radical Sensitivity-Assisted Automatic Chemical Kinetic Model Reduction for Laminar Flame Chemistry Retaining: A Case Study of Gasoline-DME Mixture under Engine Conditions. <i>Energy & Fuels</i> , 2019, 33, 3551-3556.	2.5	16
65	Reduced reaction mechanism for natural gas combustion in novel power cycles. <i>Combustion and Flame</i> , 2021, 223, 486-494.	2.8	16
66	Simulations of planar non-thermal plasma assisted ignition at atmospheric pressure. <i>Proceedings of the Combustion Institute</i> , 2017, 36, 4155-4163.	2.4	15
67	Improved skeletal reduction on multiple gasoline-ethanol surrogates using a Jacobian-aided DRGEP approach under gasoline compression ignition (GCI) engine conditions. <i>Fuel</i> , 2017, 210, 617-624.	3.4	15
68	Analysis of the current-voltage curves and saturation currents in burner-stabilised premixed flames with detailed ion chemistry and transport models. <i>Combustion Theory and Modelling</i> , 2018, 22, 939-972.	1.0	15
69	Experimental study of microwave assisted spark ignition on expanding C ₂ H ₂ -Air spherical flames. <i>Combustion and Flame</i> , 2020, 222, 111-122.	2.8	15
70	Engine efficiency enhancement and operation range extension by argon power cycle using natural gas. <i>Applied Energy</i> , 2021, 281, 116109.	5.1	15
71	A Model for Prediction of Knock in the Cycle Simulation by Detail Characterization of Fuel and Temperature Stratification. <i>SAE International Journal of Engines</i> , 0, 8, 1520-1534.	0.4	14
72	Experimental and numerical investigation of ion signals in boosted HCCI combustion using cesium and potassium acetate additives. <i>Energy Conversion and Management</i> , 2016, 108, 181-189.	4.4	14

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73	A hybrid flamelet finite-rate chemistry approach for efficient LES with a transported FDF. <i>Combustion and Flame</i> , 2019, 199, 183-193.	2.8	13
74	Numerical analysis and model development for laminar flame speed of stratified methane/air mixtures. <i>Combustion and Flame</i> , 2017, 184, 233-245.	2.8	12
75	Propulsive effect of microwave-induced plasma jet on spark ignition of CO ₂ -diluted CH ₄ -air mixture. <i>Combustion and Flame</i> , 2021, 229, 111400.	2.8	12
76	Fuel-dilution effect on differential molecular diffusion in laminar hydrogen diffusion flames. <i>Combustion Theory and Modelling</i> , 1998, 2, 497-514.	1.0	11
77	Strengthening effect of microwave on spark ignited spherical expanding flames of methane-air mixture. <i>Energy Conversion and Management</i> , 2020, 224, 113368.	4.4	10
78	Characterization of Ion Signals under Ringing Conditions in an HCCI Engine. , 0, , .		8
79	Modes of Detonation Wave Propagation in Water Vapor Concentration Gradients. <i>Combustion Science and Technology</i> , 2020, 192, 1910-1930.	1.2	7
80	Modeling hydrogen inhibition in gasification surface reactions. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 6059-6071.	3.8	6
81	Nanosecond Pulsed Discharge Ignition in a Lean Methane-Air Mixture. , 2015, , .		6
82	Code-Validation Scalar Measurements in High-Pressure Hydrogen-Added Methane Combustion. <i>Journal of Propulsion and Power</i> , 2017, 33, 285-304.	1.3	5
83	The Role of Hydrodynamic Enhancement on Ignition of Lean Methane-Air Mixtures by Pulsed Nanosecond Discharges for Automotive Engine Applications. <i>Combustion Science and Technology</i> , 2017, 189, 2023-2037.	1.2	4
84	Accelerating simulations using REDCHEM_v0.0 for atmospheric chemistry mechanism reduction. <i>Geoscientific Model Development</i> , 2018, 11, 3391-3407.	1.3	4
85	Effect of Microwave Pulses on the Morphology and Development of Spark-Ignited Flame Kernel. <i>Energies</i> , 2021, 14, 6205.	1.6	3
86	Experimental and Numerical Investigation of the Argon Power Cycle. , 2018, , .		3
87	HCCI Intelligent Rapid Modeling by Artificial Neural Network and Genetic Algorithm. <i>Journal of Combustion</i> , 2012, 2012, 1-11.	0.5	2
88	Experimental Study of Methane Fuel Oxycombustion in an SI Engine. , 2012, , .		2
89	Investigation of the Down-Scaling Effects on the Low Swirl Burner and its Application to Microturbines. , 2018, , .		2
90	Three-dimensional Linear Eddy Modeling of a Turbulent Lifted Hydrogen Jet Flame in a Vitiated Co-flow. <i>Flow, Turbulence and Combustion</i> , 2018, 101, 993-1007.	1.4	2

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91	Catalytic Combustion of Natural Gas Over Supported Platinum: Flow Reactor Experiments and Detailed Numerical Modeling. , 1996, , .		2
92	A Parametric Study of LEM3D Based on Comparison with a Turbulent Lifted Hydrogen Jet Flame in a Vitiated Co-Flow. Combustion Science and Technology, 2020, 192, 610-637.	1.2	1
93	A Skeletal Mechanism for MILD Combustion of <i>n</i> -Heptane/Air Mixtures. Combustion Science and Technology, 0, , 1-32.	1.2	1
94	Improvements on a Newton-Krylov Based Solver for CFD Models Using Finite Rate NOx Chemistry. , 2004, , .		0