

Sudarshan Kumar

List of Publications by Year in descending order

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135
papers

3,867
citations

94269

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139
docs citations

139
times ranked

1460
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluation of Fuel and Air Mixing in a Scramjet Engine Using an Asymmetric Strut-Based Fuel Injection Using CFD. Combustion Science and Technology, 2022, 194, 898-918.	1.2	2
2	Effect of CO ₂ /N ₂ Dilution on Characteristics of Liquid Fuel Combustion in Flameless Combustion Mode. Combustion Science and Technology, 2022, 194, 721-744.	1.2	11
3	Laminar Burning Velocity Measurements at Elevated Pressure and Temperatures and the Challenges in Kinetic Scheme Optimization. Green Energy and Technology, 2022, , 291-307.	0.4	0
4	Experimental investigations on laminar burning velocity variation of CH ₄ +H ₂ +air mixtures at elevated temperatures. International Journal of Hydrogen Energy, 2022, 47, 16686-16697.	3.8	17
5	Experimental investigation to assess the efficacy of gasoline surrogates with engine testing. Fuel, 2022, 324, 124493.	3.4	9
6	Laminar Burning Velocity Measurements of Toluene + Air Mixtures and Ternary Surrogate Formulation at Elevated Temperatures. Energy & Fuels, 2022, 36, 6420-6432.	2.5	3
7	Optimization of aromatic species in formulated fuel for simultaneous reduction of PM and NO _x emissions from combustion engines. Journal of the Energy Institute, 2022, 103, 94-103.	2.7	3
8	Flame dynamics of premixed CH ₄ /H ₂ /air flames in a microchannel with a wall temperature gradient. Combustion Theory and Modelling, 2022, 26, 989-1013.	1.0	4
9	Role of H ₂ /CO Addition to Flame Instabilities and Their Control in a Stepped Microcombustor. Combustion Science and Technology, 2021, 193, 2704-2723.	1.2	1
10	Laminar burning velocity measurements of iso-octane+air mixtures at higher unburnt mixture temperatures. Fuel, 2021, 288, 119652.	3.4	14
11	Effect of hydrocarbon addition on tip opening of hydrogen-air bunsen flames. International Journal of Hydrogen Energy, 2021, 46, 5763-5775.	3.8	3
12	Combustion of methylcyclohexane at elevated temperatures to investigate burning velocity for surrogate fuel development. Journal of Hazardous Materials, 2021, 406, 124627.	6.5	10
13	Impact of Fuel Formulation with Particular Selection of Aromatics on Compression Engine Performance and Emission Control. , 2021, , .		1
14	Investigations on Combustion and Emissions Characteristics of Aromatic Fuel Blends in a Distributed Combustor. Energy & Fuels, 2021, 35, 3150-3163.	2.5	4
15	EXPERIMENTAL INVESTIGATIONS INTO LIQUID BREAKUP MORPHOLOGY AND SPRAY CHARACTERISTICS OF A CROSS-FLOW INJECTOR. Atomization and Sprays, 2021, 31, 63-86.	0.3	2
16	Experimental investigation and correlation development for engine emissions with polycyclic aromatic blended formulated fuels. Fuel, 2021, 303, 121280.	3.4	8
17	Formulation of a three-component gasoline surrogate model using laminar burning velocity data at elevated mixture temperatures. Fuel, 2021, 306, 121581.	3.4	10
18	Microcombustion-based portable power generators. , 2021, , .		0

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19	Effect of Engine Parameters on the Performance of Dual-Fuel CI Engines with Producer Gasâ€”A Review. <i>Energy & Fuels</i> , 2021, 35, 16377-16402.	2.5	12
20	Numerical Investigation on Combustion Characteristics of Premixed H ₂ /Air in Stepped Micro-Combustors. <i>Lecture Notes in Mechanical Engineering</i> , 2021, , 863-872.	0.3	0
21	A Three-Dimensional Numerical Model to Predict the Performance of a Microcombustion-Based Thermoelectric Generator. <i>Lecture Notes in Mechanical Engineering</i> , 2021, , 853-862.	0.3	0
22	Review of Laminar Burning Velocity of Methaneâ€”Air Mixtures at High Pressure and Temperature Conditions. <i>Lecture Notes in Mechanical Engineering</i> , 2021, , 663-670.	0.3	0
23	Numerical Investigation on the Effect of Wall Preheating on Flame Stability of Stepped Microcombustor. <i>Lecture Notes in Mechanical Engineering</i> , 2021, , 883-893.	0.3	0
24	Numerical Investigation on Flame Dynamics of Premixed Hydrogenâ€”Air Flame in a Sudden Convergingâ€”Diverging Microscale Tube. <i>Lecture Notes in Mechanical Engineering</i> , 2021, , 873-882.	0.3	0
25	Experimental and Numerical Studies on Combustion-Based Small-Scale Power Generators. <i>Green Energy and Technology</i> , 2021, , 221-247.	0.4	0
26	Effect of Burner Wall Material on Microjet Hydrogen Diffusion Flames near Extinction: A Numerical Study. <i>Energies</i> , 2021, 14, 8266.	1.6	2
27	A novel air injection scheme to achieve MILD combustion in a can-type gas turbine combustor. <i>Energy</i> , 2020, 194, 116819.	4.5	34
28	Machine learning model to predict the laminar burning velocities of H ₂ /CO/CH ₄ /CO ₂ /N ₂ /air mixtures at high pressure and temperature conditions. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 3216-3232.	3.8	25
29	Development of a numerical model for performance prediction of an integrated microcombustor-thermoelectric power generator. <i>Energy</i> , 2020, 192, 116624.	4.5	32
30	Applicability of aromatic selection towards newer formulated fuels for regulated and unregulated emissions reduction in CI engine. <i>Fuel Processing Technology</i> , 2020, 209, 106548.	3.7	16
31	Novel flame dynamics in rich mixture of premixed propaneâ€”air in a planar microcombustor. <i>Physics of Fluids</i> , 2020, 32, .	1.6	13
32	Testing of formulated fuel with variable aromatic type and contents in a compression-ignition engine. <i>Fuel Processing Technology</i> , 2020, 208, 106413.	3.7	15
33	Combustion characteristics of syngas laminar microjet diffusion flames. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2020, 115, 47-59.	2.7	4
34	Distributed combustion mode in a can-type gas turbine combustor â€” A numerical and experimental study. <i>Applied Energy</i> , 2020, 277, 115573.	5.1	14
35	Development of an ultra-high capacity hydrocarbon fuel based micro thermoelectric power generator. <i>Energy</i> , 2020, 206, 118099.	4.5	21
36	Laminar burning velocities of LCV syngas-air mixtures at high temperature and pressure conditions. <i>Fuel</i> , 2020, 279, 118475.	3.4	9

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37	Impact of alkylbenzenes in formulated surrogate fuel on characteristics of compression ignition engine. Fuel, 2020, 266, 116981.	3.4	18
38	Towards the development of a high power density, high efficiency, micro power generator. Applied Energy, 2020, 261, 114386.	5.1	45
39	Experimental Investigations on Laminar Burning Velocities of <i>n</i> -Heptane + Air Mixtures at Higher Mixture Temperatures Using Externally Heated Diverging Channel Method. Energy & Fuels, 2020, 34, 2405-2416.	2.5	21
40	10.1063/5.0020518.3. , 2020, , .		0
41	10.1063/5.0020518.2. , 2020, , .		0
42	Measurement of laminar burning velocities of methane-air mixtures simultaneously at elevated pressures and elevated temperatures. Fuel, 2019, 257, 116120.	3.4	49
43	Flame dynamics in a stepped micro-combustor for non-adiabatic wall conditions. Thermal Science and Engineering Progress, 2019, 13, 100394.	1.3	11
44	First step towards atomization at ultra-low flow rates using conventional twin-fluid atomizer. Experimental Thermal and Fluid Science, 2019, 109, 109844.	1.5	12
45	Numerical investigations on behaviour bifurcation of premixed H ₂ -air flames in mesoscale tubes. Combustion Theory and Modelling, 2019, 23, 969-993.	1.0	7
46	Laminar burning velocities of H ₂ /CO/CH ₄ /CO ₂ /N ₂ -air mixtures at elevated temperatures. International Journal of Hydrogen Energy, 2019, 44, 12188-12199.	3.8	58
47	Experimental and numerical investigations on the laminar burning velocity of <i>n</i> -butanol+air mixtures at elevated temperatures. Fuel, 2019, 249, 36-44.	3.4	13
48	Influence of liquid properties on atomization characteristics of flow-blurring injector at ultra-low flow rates. Energy, 2019, 171, 1-13.	4.5	24
49	Experimental investigations on the role of various heat sinks in developing an efficient combustion based micro power generator. Applied Thermal Engineering, 2019, 148, 22-32.	3.0	38
50	Demarcation of reaction effects on laminar burning velocities of diluted syngas+air mixtures at elevated temperatures. International Journal of Chemical Kinetics, 2019, 51, 95-104.	1.0	19
51	Measurement of laminar burning velocity of <i>n</i> -pentanol+air mixtures at elevated temperatures and a skeletal kinetic model. Fuel, 2019, 237, 10-17.	3.4	18
52	Model Order Identification of Combustion Instability Using Lipschitz Indices. , 2019, , .		0
53	Experimental investigations on the stabilization of lifted kerosene spray flames with coflow air. Combustion Science and Technology, 2018, 190, 1689-1709.	1.2	8
54	Effect of hole pattern on the structure of small scale perforated plate burner flames. Fuel, 2018, 216, 722-733.	3.4	15

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55	Laminar Burning Velocity of n -Propanol and Air Mixtures at Elevated Mixture Temperatures. Energy & Fuels, 2018, 32, 6363-6370.	2.5	27
56	A new emission reduction approach in MILD combustion through asymmetric fuel injection. Combustion and Flame, 2018, 193, 61-75.	2.8	37
57	Compact design of planar stepped micro combustor for portable thermoelectric power generation. Energy Conversion and Management, 2018, 156, 224-234.	4.4	118
58	Effect of CO content on laminar burning velocities of syngas-air premixed flames at elevated temperatures. Fuel, 2018, 214, 144-153.	3.4	66
59	Experimental Investigations on Laminar Burning Velocity Variation of Methyl Formate-Air Mixtures at Elevated Temperatures. Energy & Fuels, 2018, 32, 12936-12948.	2.5	22
60	Measurement of laminar burning velocity of ethanol-air mixtures at elevated temperatures. Fuel, 2018, 231, 37-44.	3.4	43
61	A comprehensive review of measurements and data analysis of laminar burning velocities for various fuel+air mixtures. Progress in Energy and Combustion Science, 2018, 68, 197-267.	15.8	329
62	Experimental investigations on a new high intensity dual microcombustor based thermoelectric micropower generator. Applied Energy, 2018, 228, 1173-1181.	5.1	57
63	Parametric Studies on Thermo-electric Power Generation Using Micro Combustor. , 2018, , 589-597.		2
64	Effect of Wall Thermal Boundary Conditions on Flame Dynamics of CH_4 -Air and H_2 -Air Mixtures in Straight Microtubes. Combustion Science and Technology, 2017, 189, 150-168.	1.2	20
65	Dynamics of premixed methane/air mixtures in a heated microchannel with different wall temperature gradients. RSC Advances, 2017, 7, 2066-2073.	1.7	30
66	On the effect of spray parameters on CO and NO _x emissions in a liquid fuel fired flameless combustor. Fuel, 2017, 199, 229-238.	3.4	28
67	Experimental Investigations on Stabilization Mechanism of Lifted Kerosene Spray Flames. Combustion Science and Technology, 2017, 189, 1241-1259.	1.2	14
68	Burning velocities of DME(dimethyl ether)-air premixed flames at elevated temperatures. Energy, 2017, 126, 34-41.	4.5	47
69	Effects of CO ₂ /N ₂ dilution on laminar burning velocity of stoichiometric DME-air mixture at elevated temperatures. Journal of Hazardous Materials, 2017, 333, 215-221.	6.5	19
70	Thermal decomposition of ammonium perchlorate-A TGA-FTIR-MS study: Part II. Thermochimica Acta, 2017, 653, 83-96.	1.2	48
71	Flame anchoring regime of filtrational gas combustion: Theory and experiment. Proceedings of the Combustion Institute, 2017, 36, 4383-4389.	2.4	26
72	Investigations on flame dynamics of premixed H_2 -air mixtures in microscale tubes. RSC Advances, 2016, 6, 50358-50367.	1.7	25

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73	Evaluating the efficiency of thermo-electric conversion of heat from gas combustion in a small-scale system with counterflow heat exchange. <i>Thermophysics and Aeromechanics</i> , 2016, 23, 581-589.	0.1	0
74	Measurement of laminar burning velocities of methanol-air mixtures at elevated temperatures. <i>Fuel</i> , 2016, 182, 57-63.	3.4	49
75	Temperature and radiative characteristics of cylindrical porous Ni-Al burners. <i>International Journal of Heat and Mass Transfer</i> , 2016, 98, 277-284.	2.5	33
76	Effect OF CO ₂ /N ₂ dilution on laminar burning velocity of liquid petroleum gas-air mixtures at elevated temperatures. <i>Energy</i> , 2016, 100, 145-153.	4.5	28
77	Investigations on Emission Characteristics of Liquid Fuels in a Swirl Combustor. <i>Combustion Science and Technology</i> , 2015, 187, 469-488.	1.2	29
78	Glow-plug-assisted combustion of nitromethane sprays in a constant volume chamber. <i>Applied Thermal Engineering</i> , 2015, 76, 462-474.	3.0	8
79	Solution Precursor Plasma Spray (SPPS) technique of catalyst coating for hydrogen production in a single channel with cavities plate type methanol based microreformer. <i>Chemical Engineering Journal</i> , 2015, 277, 168-175.	6.6	8
80	Dynamics of Premixed Hydrogen-Air Flames in Microchannels with a Wall Temperature Gradient. <i>Combustion Science and Technology</i> , 2015, 187, 1620-1637.	1.2	36
81	Investigations on a new internally-heated tubular packed-bed methanol steam reformer. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 5715-5725.	3.8	44
82	Experimental studies on a micro power generator using thermo-electric modules mounted on a micro-combustor. <i>Energy Conversion and Management</i> , 2015, 99, 1-7.	4.4	87
83	Predictions of lift-off height of turbulent methane and propane flames issuing in cold surroundings using conditional moment closure coupled with an extinction model. <i>Combustion and Flame</i> , 2015, 162, 1164-1166.	2.8	6
84	Thermal decomposition of ammonium perchlorate A TGA-FTIR-MS study: Part I. <i>Thermochimica Acta</i> , 2015, 610, 57-68.	1.2	77
85	Numerical investigations of unsteady flame propagation in stepped microtubes. <i>RSC Advances</i> , 2015, 5, 100879-100890.	1.7	26
86	Experimental and numerical analysis for high intensity swirl based ultra-low emission flameless combustor operating with liquid fuels. <i>Proceedings of the Combustion Institute</i> , 2015, 35, 3581-3589.	2.4	59
87	Slag Prediction in Submerged Rocket Nozzle Through Two-Phase CFD Simulations. <i>Defence Science Journal</i> , 2015, 65, 99-106.	0.5	5
88	Development and Validation of Power Performance Prediction Chart for Conversion of Diesel Engine to Dual Fuel Engine. , 2014, , .		3
89	A prototype micro-thermoelectric power generator for micro-electromechanical systems. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	54
90	A new approach to model turbulent lifted CH ₄ /air flame issuing in a vitiated coflow using conditional moment closure coupled with an extinction model. <i>Combustion and Flame</i> , 2014, 161, 197-209.	2.8	14

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91	Regimes of combustion of a premixed mixture of gases in a heated microchannel with the wall temperature smoothly increasing in the downstream direction. <i>Combustion, Explosion and Shock Waves</i> , 2014, 50, 25-31.	0.3	6
92	Combustion characteristics of biodiesel fuel in high recirculation conditions. <i>Fuel Processing Technology</i> , 2014, 118, 310-317.	3.7	44
93	Application of CFD and the Kriging method for optimizing the performance of a generic scramjet combustor. <i>Acta Astronautica</i> , 2014, 101, 111-119.	1.7	28
94	Design and calibration of a new compact radiative heat-flux gauge (RHFG) for combustion applications. <i>Sensors and Actuators A: Physical</i> , 2013, 203, 62-68.	2.0	5
95	Methanol reformation for hydrogen production from a single channel with cavities. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 13216-13229.	3.8	20
96	Oscillating and rotating flame patterns in radial microchannels. <i>Proceedings of the Combustion Institute</i> , 2013, 34, 3427-3434.	2.4	10
97	Studies on a liquid fuel based two stage flameless combustor. <i>Proceedings of the Combustion Institute</i> , 2013, 34, 3319-3326.	2.4	64
98	Effect of N ₂ /CO ₂ dilution on laminar burning velocity of H ₂ -air mixtures at high temperatures. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 13812-13821.	3.8	54
99	Development of high intensity low emission combustor for achieving flameless combustion of liquid fuels. <i>Propulsion and Power Research</i> , 2013, 2, 139-147.	2.0	33
100	On the formation of spinning flames and combustion completeness for premixed fuel-air mixtures in stepped tube microcombustors. <i>Applied Thermal Engineering</i> , 2013, 51, 91-101.	3.0	46
101	Investigations on the Formation of Planar Flames in Mesoscale Divergent Channels and Prediction of Burning Velocity at High Temperatures. <i>Combustion Science and Technology</i> , 2013, 185, 645-660.	1.2	32
102	Experimental studies on flame stabilization in a three step rearward facing configuration based micro channel combustor. <i>Applied Thermal Engineering</i> , 2013, 58, 363-368.	3.0	89
103	Thermal performance of a micro combustor with heat recirculation. <i>Fuel Processing Technology</i> , 2013, 109, 179-188.	3.7	79
104	Laminar Burning Velocity of Methane-Air Mixtures at Elevated Temperatures. <i>Energy & Fuels</i> , 2013, 27, 3460-3466.	2.5	72
105	Experimental and Computational Determination of Laminar Burning Velocity of Liquefied Petroleum Gas-Air Mixtures at Elevated Temperatures. <i>Journal of Engineering for Gas Turbines and Power</i> , 2013, 135, .	0.5	20
106	Studies on Optimization of a Liquid Fuel Based Low Emission Combustor. , 2012, , .		1
107	Experimental Investigations on Lifted Spray Flames for a Range of Coflow Conditions. <i>Combustion Science and Technology</i> , 2012, 184, 44-63.	1.2	31
108	Laminar Burning Velocity of Propane/CO ₂ /N ₂ -Air Mixtures at Elevated Temperatures. <i>Energy & Fuels</i> , 2012, 26, 5509-5518.	2.5	64

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109	Measurement of Laminar Burning Velocity of Liquified Petroleum Gas Air Mixtures at Elevated Temperatures. <i>Energy & Fuels</i> , 2012, 26, 3267-3274.	2.5	56
110	Laminar Burning Velocity of LPG-Air Mixture at Elevated Temperatures. , 2012, , .		2
111	Experimental Studies on Flame Stabilization in Backward Facing Step Micro-Combustors. , 2011, , .		0
112	Experimental investigations on a new active swirl based microcombustor for an integrated micro-reformer system. <i>Energy Conversion and Management</i> , 2011, 52, 3206-3213.	4.4	36
113	Experimental studies on dynamics of methane-air premixed flame in meso-scale diverging channels. <i>Combustion and Flame</i> , 2011, 158, 915-924.	2.8	93
114	Theoretical analysis of the effect of water and ethanol injection on axial compressor instabilities. <i>Applied Thermal Engineering</i> , 2011, 31, 1703-1711.	3.0	1
115	Numerical Studies on Flame Stabilization Behavior of Premixed Methane-Air Mixtures in Diverging Mesoscale Channels. <i>Combustion Science and Technology</i> , 2011, 183, 779-801.	1.2	29
116	Modeling of Lifted Methane Jet Flames in a Vitiated Coflow Using a New Flame Extinction Model. <i>Combustion Science and Technology</i> , 2010, 182, 1961-1978.	1.2	7
117	Experimental investigations on flame stabilization behavior in a diverging micro channel with premixed methane-air mixtures. <i>Applied Thermal Engineering</i> , 2010, 30, 2718-2723.	3.0	43
118	Experimental investigation on flame pattern formations of DME-air mixtures in a radial microchannel. <i>Combustion and Flame</i> , 2010, 157, 1637-1642.	2.8	22
119	Investigations into the flame stability limits in a backward step micro scale combustor with premixed methane-air mixtures. <i>Journal of Micromechanics and Microengineering</i> , 2010, 20, 095030.	1.5	51
120	Experimental and numerical investigations of flame pattern formations in a radial microchannel. <i>Proceedings of the Combustion Institute</i> , 2009, 32, 3059-3066.	2.4	50
121	Regime diagrams and characteristics of flame patterns in radial microchannels with temperature gradients. <i>Combustion and Flame</i> , 2008, 153, 479-489.	2.8	78
122	Appearance of target pattern and spiral flames in radial microchannels with CH ₄ -air mixtures. <i>Physics of Fluids</i> , 2008, 20, 024101.	1.6	40
123	Analysis of Non Recoverable Stall & Other Instabilities Using Moore Greitzer Model. , 2008, , .		1
124	Pattern formation of flames in radial microchannels with lean methane-air mixtures. <i>Physical Review E</i> , 2007, 75, 016208.	0.8	41
125	Experimental investigations on the combustion behavior of methane-air mixtures in a micro-scale radial combustor configuration. <i>Journal of Micromechanics and Microengineering</i> , 2007, 17, 900-908.	1.5	34
126	Experimental study on flame pattern formation and combustion completeness in a radial microchannel. <i>Journal of Micromechanics and Microengineering</i> , 2007, 17, 2398-2406.	1.5	52

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127	PREDICTION OF FLAME LIFTOFF HEIGHT OF DIFFUSION/PARTIALLY PREMIXED JET FLAMES AND MODELING OF MILD COMBUSTION BURNERS. Combustion Science and Technology, 2007, 179, 2219-2253.	1.2	59
128	On the formation of multiple rotating Pelton-like flame structures in radial microchannels with lean methane-air mixtures. Proceedings of the Combustion Institute, 2007, 31, 3261-3268.	2.4	61
129	Flame behavior in heated porous sand bed. Proceedings of the Combustion Institute, 2007, 31, 2117-2124.	2.4	19
130	Hypersonic flow over a multi-step afterbody. Shock Waves, 2005, 14, 421-424.	1.0	23
131	Investigations of the scaling criteria for a mild combustion burner. Proceedings of the Combustion Institute, 2005, 30, 2613-2621.	2.4	65
132	Studies on a new high-intensity low-emission burner. Proceedings of the Combustion Institute, 2002, 29, 1131-1137.	2.4	121
133	Common Design of Jet Pump for Gasoline and Diesel Based Vehicles. , 0, , .		1
134	Efficiency of Microcombustion System with Thermoelectric Generator Combined with Countercurrent Heat Exchanger. Key Engineering Materials, 0, 685, 422-426.	0.4	0
135	Prototype development of a new self-aspirating liquid-fueled microcombustor. Combustion Science and Technology, 0, , 1-21.	1.2	2