Sebastian Verhelst

List of Publications by Year
in descending order

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134 papers	6,259 citations	101543 36 h-index	85541 71 g-index
135 all docs	135 docs citations	135 times ranked	3845 citing authors

#	Article	IF	Citations
1	Impact of Mileage on Particle Number Emission Factors for EURO5 and EURO6 Diesel Passenger Cars. Atmospheric Environment, 2021, 244, 117975.	4.1	14
2	Investigation of evaporating sprays in a medium speed marine engine. Experimental Thermal and Fluid Science, 2021, 121, 110278.	2.7	8
3	Retrofitting a high-speed marine engine to dual-fuel methanol-diesel operation: A comparison of multiple and single point methanol port injection. Fuel Communications, 2021, 7, 100010.	5.2	22
4	Effects of molar expansion ratio of fuels on engine efficiency. Fuel, 2020, 263, 116743.	6.4	13
5	Alcohol Fuels for Spark-Ignition Engines: Performance, Efficiency, and Emission Effects at Mid to High Blend Rates for Ternary Mixtures. Energies, 2020, 13, 6390.	3.1	10
6	On the effects of increased coolant temperatures of light duty engines on waste heat recovery. Applied Thermal Engineering, 2020, 172, 115157.	6.0	10
7	A novel technique for detailed and time-efficient combustion modeling of fumigated dual-fuel internal combustion engines. Applied Thermal Engineering, 2020, 174, 115224.	6.0	15
8	Exploring the potential of reformed-exhaust gas recirculation (R-EGR) for increased efficiency of methanol fueled SI engines. Fuel, 2019, 236, 778-791.	6.4	46
9	Methanol as a fuel for internal combustion engines. Progress in Energy and Combustion Science, 2019, 70, 43-88.	31.2	589
10	Increasing exhaust temperature to enable after-treatment operation on a two-stage turbo-charged medium speed marine diesel engine. Energy, 2018, 147, 681-687.	8.8	10
11	Alcohol fuels for spark-ignition engines: Performance, efficiency and emission effects at mid to high blend rates for binary mixtures and pure components. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2018, 232, 36-56.	1.9	37
12	Experimental investigation of emulsified fuels produced with a micro-channel emulsifier: Puffing and micro-explosion analyses. Fuel, 2018, 219, 320-330.	6.4	34
13	Quantification and Analysis of the Charge Cooling Effect of Methanol in a Compression Ignition Engine Utilizing PPC Strategy. , 2018, , .		11
14	Evaluation of wall heat flux calculation methods for CFD simulations of an internal combustion engine under both motored and HCCI operation. Applied Energy, 2018, 232, 451-461.	10.1	11
15	A quasi-dimensional combustion model for spark ignition engines fueled with gasolineâ€“methanol blends. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2018, 232, 57-74.	1.9	14
16	Investigating the Potential of an Integrated Coolant Waste Heat Recovery System in an HD Engine Using PPC Operation. , 2018, , .		0
17	Evaluation of empirical heat transfer models using TFG heat flux sensors. Applied Thermal Engineering, 2017, 118, 561-569.	6.0	15
18	Assessment of diesel engine performance when fueled with biodiesel from algae and microalgae: An overview. Renewable and Sustainable Energy Reviews, 2017, 69, 833-842.	16.4	109

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19	Multifuel CHP HCCI Engine towards Flexible Power-to-fuel: Numerical Study of Operating Range. Energy Procedia, 2017, 105, 1532-1538.	1.8	15
20	Effect of emulsified fuels based on fatty acid distillates on single cylinder diesel engine performance and exhaust emissions. Applied Thermal Engineering, 2017, 120, 187-195.	6.0	8
21	The Chemical Route to a Carbon Dioxide Neutral World. ChemSusChem, 2017, 10, 1039-1055.	6.8	174
22	Evaluation of empirical heat transfer models for HCCI combustion in a CFR engine. Applied Energy, 2017, 205, 1141-1150.	10.1	29
23	Computational Study of the Laminar Reaction Front Properties of Diluted Methanolâ€“Air Flames Enriched by the Fuel Reforming Product. Energy & Fuels, 2017, 31, 9991-10002.	5.1	14
24	Studying the Effect of the Flame Passage on the Convective Heat Transfer in a S.I. Engine. , 2017, , .		1
25	Heat transfer in premixed spark ignition engines part I: Identification of the factors influencing heat transfer. Energy, 2016, 116, 380-391.	8.8	29
26	Emulsified fuels based on fatty acid distillates and rapeseed oil: A physicochemical characterization. Fuel, 2016, 185, 734-742.	6.4	6
27	Heat transfer in premixed spark ignition engines part II: Systematic analysis of the heat transfer phenomena. Energy, 2016, 116, 851-860.	8.8	21
28	Experimental investigation of the effect of engine settings on the wall heat flux during HCCI combustion. Energy, 2016, 116, 1077-1086.	8.8	9
29	The Behavior of a Simplified Spray Model for Different Diesel and Bio-Diesel Surrogates. , 2015, , .		1
30	Emulsification of animal fats and vegetable oils for their use as a diesel engine fuel: An overview. Renewable and Sustainable Energy Reviews, 2015, 47, 623-633.	16.4	58
31	Performance of methanol kinetic mechanisms at oxy-fuel conditions. Combustion and Flame, 2015, 162, 1719-1728.	5.2	19
32	A quasi-dimensional model for SI engines fueled with gasolineâ€“alcohol blends: Knock modeling. Fuel, 2015, 140, 217-226.	6.4	28
33	Future vehicles will be driven by electricity, but not as you think [Point of View]. Proceedings of the IEEE, 2014, 102, 1399-1403.	21.3	12
34	Prediction of Cetane Number and Ignition Delay of Biodiesel Using Artificial Neural Networks. Energy Procedia, 2014, 57, 877-885.	1.8	20
35	Laminar burning velocities of primary reference fuels and simple alcohols. Fuel, 2014, 115, 32-40.	6.4	116
36	Recent progress in the use of hydrogen as a fuel for internal combustion engines. International Journal of Hydrogen Energy, 2014, 39, 1071-1085.	7.1	326

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37	A two control volume model for the Thermal Lag Engine. Energy Conversion and Management, 2014, 78, 565-573.	9.2	5
38	Development and validation of a quasi-dimensional model for methanol and ethanol fueled SI engines. Applied Energy, 2014, 132, 412-425.	10.1	45
39	Analysis of vehicle emission measurements on the new WLTC, the NEDC and the CADC. Transportation Research, Part D: Transport and Environment, 2014, 32, 70-85.	6.8	98
40	Experimental study of NO reduction on a medium speed heavy duty diesel engine by the application of EGR (exhaust gas recirculation) and Miller timing. Energy, 2014, 76, 614-621.	8.8	106
41	Performance and emissions of iso-stoichiometric ternary GEM blends on a production SI engine. Fuel, 2014, 117, 286-293.	6.4	46
42	The turbulent burning velocity of methanolâ€“air mixtures. Fuel, 2014, 130, 76-91.	6.4	23
43	Conversion of by-products from the vegetable oil industry into biodiesel and its use in internal combustion engines: a review. Brazilian Journal of Chemical Engineering, 2014, 31, 287-301.	1.3	38
44	Combustion and emissions characteristics of a dual fuel engine operated on alternative gaseous fuels. Fuel, 2013, 109, 669-678.	6.4	192
45	Experimental investigation concerning the influence of fuel type and properties on the injection and atomization of liquid biofuels inÂanÂoptical combustion chamber. Biomass and Bioenergy, 2013, 57, 215-228.	5.7	32
46	Setting a best practice for determining the EGR rate in hydrogen internal combustion engines. International Journal of Hydrogen Energy, 2013, 38, 2490-2503.	7.1	32
47	Laminar burning velocity of gasoline and the gasoline surrogate components iso-octane, n-heptane and toluene. Fuel, 2013, 112, 355-365.	6.4	218
48	Update on the Progress of Hydrogen-Fueled Internal Combustion Engines. , 2013, , 381-400.		21
49	Prediction of the cetane number of biodiesel using artificial neural networks and multiple linear regression. Energy Conversion and Management, 2013, 65, 255-261.	9.2	125
50	The effects of dilution with nitrogen and steam on the laminar burning velocity of methanol at room and elevated temperatures. Fuel, 2013, 105, 732-738.	6.4	33
51	The potential of methanol as a fuel for flex-fuel and dedicated spark-ignition engines. Applied Energy, 2013, 102, 140-149.	10.1	153
52	Evaluation of Some Important Boundary Conditions for Spray Measurements in a Constant Volume Combustion Chamber. , 2013, , .		2
53	Development and Validation of a Quasi-Dimensional Model for (M)Ethanol-Fuelled SI Engines. Lecture Notes in Electrical Engineering, 2013, , 977-994.	0.4	0
54	Evolutionary decarbonization of transport: a contiguous roadmap to affordable mobility using sustainable organic fuels for transport. , 2012, , 71-88.		6

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55	Recommendations for the new WLTP cycle based on an analysis of vehicle emission measurements on NEDC and CADC. Energy Policy, 2012, 49, 234-242.	8.8	70
56	Thermal behavior of Jatropha curcas oils and their derived fatty acid ethyl esters as potential feedstocks for energy production in Cuba. Journal of Thermal Analysis and Calorimetry, 2012, 109, 1005-1012.	3.6	5
57	Temperature Dependence of the Laminar Burning Velocity of Methanol Flames. Energy & Fuels, 2012, 26, 1557-1564.	5.1	66
58	CFD modeling and experimental study of combustion and nitric oxide emissions in hydrogen-fueled spark-ignition engine operating in a very wide range of EGR rates. International Journal of Hydrogen Energy, 2012, 37, 10917-10934.	7.1	57
59	Alternative Fuels for Spark-Ignition Engines: Mixing Rules for the Laminar Burning Velocity of Gasolineâ€“Alcohol Blends. Energy & Fuels, 2012, 26, 4721-4727.	5.1	43
60	Heat Loss Comparison Between Hydrogen, Methane, Gasoline and Methanol in a Spark-Ignition Internal Combustion Engine. Energy Procedia, 2012, 29, 138-146.	1.8	23
61	Spray Parameter Comparison between Diesel and Vegetable Oils for Non-Evaporating Conditions. , 2012, , .		9
62	Development and Testing of an EGR System for Medium Speed Diesel Engines. , 2012, , .		3
63	Drive Cycle Analysis of Load Control Strategies for Methanol Fuelled ICE Vehicle. , 2012, , .		11
64	A laminar burning velocity and flame thickness correlation for ethanolâ€“air mixtures valid at spark-ignition engine conditions. Fuel, 2012, 102, 460-469.	6.4	41
65	Thermal and electrical performance of an alkaline fuel cell. Applied Thermal Engineering, 2012, 40, 227-235.	6.0	11
66	Comparison of the renewable transportation fuels, hydrogen and methanol formed from hydrogen, with gasoline â€“ Engine efficiency study. International Journal of Hydrogen Energy, 2012, 37, 9914-9924.	7.1	103
67	Failure of fuel injectors in a medium speed diesel engine operating on bio-oil. Biomass and Bioenergy, 2012, 40, 27-35.	5.7	27
68	Electricity Powering Combustion: Hydrogen Engines. Proceedings of the IEEE, 2012, 100, 427-439.	21.3	23
69	How Efficient are Hydrogen-Fueled Internal Combustion Engines?. , 2012, , 275-311.		0
70	Laminar Burning Velocity Correlations for Methanol-Air and Ethanol-Air Mixtures Valid at SI Engine Conditions. , 2011, , .		31
71	Water management in an alkaline fuel cell. International Journal of Hydrogen Energy, 2011, 36, 11011-11024.	7.1	15
72	Characterization of Jatropha curcas oils and their derived fatty acid ethyl esters obtained from two different plantations in Cuba. Biomass and Bioenergy, 2011, 35, 4092-4098.	5.7	20

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73	Investigation of the influence of engine settings on the heat flux in a hydrogen- and methane-fueled spark ignition engine. Applied Thermal Engineering, 2011, 31, 1220-1228.	6.0	38
74	Ignition delay in a palm oil and rapeseed oil biodiesel fuelled engine and predictive correlations for the ignition delay period. Fuel, 2011, 90, 766-772.	6.4	51
75	A correlation for the laminar burning velocity for use in hydrogen spark ignition engine simulation. International Journal of Hydrogen Energy, 2011, 36, 957-974.	7.1	54
76	On the applicability of empirical heat transfer models for hydrogen combustion engines. International Journal of Hydrogen Energy, 2011, 36, 975-984.	7.1	53
77	A combined experimental and numerical study of thermal processes, performance and nitric oxide emissions in a hydrogen-fueled spark-ignition engine. International Journal of Hydrogen Energy, 2011, 36, 5163-5180.	7.1	44
78	Evaluation of Heat Transfer Models With Measurements in a Hydrogen-Fuelled Spark Ignition Engine. , 2010, , .		1
79	Impact of variable valve timing on power, emissions and backfire of a bi-fuel hydrogen/gasoline engine. International Journal of Hydrogen Energy, 2010, 35, 4399-4408.	7.1	52
80	Investigation of Supercharging Strategies for PFI Hydrogen Engines. , 2010, , .		6
81	Reducing Engine-Out Emissions for Medium High Speed Diesel Engines: Influence of Injection Parameters. , 2009, , .		2
82	Multi-zone thermodynamic modelling of spark-ignition engine combustion â€“ An overview. Energy Conversion and Management, 2009, 50, 1326-1335.	9.2	124
83	Hydrogen-fueled internal combustion engines. Progress in Energy and Combustion Science, 2009, 35, 490-527.	31.2	860
84	Thermal and kinetic evaluation of biodiesel derived from soybean oil and higuereta oil. Journal of Thermal Analysis and Calorimetry, 2009, 96, 897-901.	3.6	48
85	Efficiency comparison between hydrogen and gasoline, on a bi-fuel hydrogen/gasoline engine. International Journal of Hydrogen Energy, 2009, 34, 2504-2510.	7.1	70
86	Increasing the power output of hydrogen internal combustion engines by means of supercharging and exhaust gas recirculation. International Journal of Hydrogen Energy, 2009, 34, 4406-4412.	7.1	121
87	Local heat flux measurements in a hydrogen and methane spark ignition engine with a thermopile sensor. International Journal of Hydrogen Energy, 2009, 34, 9857-9868.	7.1	60
88	Combustion strategies for PFI hydrogen IC engines. International Journal of Nuclear Hydrogen Production and Applications, 2008, 1, 295.	0.2	1
89	FL1-3: A Two-Zone Thermodynamic Model for Hydrogen-Fueled S.I. Engines(FL: Fuels and) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5 and Modeling of Combustion in Internal Combustion Engines, 2008, 2008.7, 773-778.	0.1	2
90	A comprehensive overview of hydrogen engine design features. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2007, 221, 911-920.	1.9	34

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91	Combustion Studies for PFI Hydrogen IC Engines. , 2007, , .		17
92	A quasi-dimensional model for the power cycle of a hydrogen-fuelled ICE. International Journal of Hydrogen Energy, 2007, 32, 3545-3554.	7.1	87
93	Laminar burning velocities of lean hydrogenâ€“air mixtures at pressures up to 1.0 MPa. Combustion and Flame, 2007, 149, 162-172.	5.2	213
94	Development of a Simulation Code for Hydrogen Fuelled SI Engines. , 2006, , 247.		8
95	Laminar and unstable burning velocities and Markstein lengths of hydrogenâ€“air mixtures at engine-like conditions. Proceedings of the Combustion Institute, 2005, 30, 209-216.	3.9	140
96	Influence of the Injection Parameters on the Efficiency and Power Output of a Hydrogen Fueled Engine. Journal of Engineering for Gas Turbines and Power, 2003, 125, 444-449.	1.1	29
97	A Laminar Burning Velocity Correlation for Hydrogen/Air Mixtures Valid at Spark-Ignition Engine Conditions. , 2003, , 35.		12
98	Hydrogen engine-specific properties. International Journal of Hydrogen Energy, 2001, 26, 987-990.	7.1	97
99	Aspects concerning the optimisation of a hydrogen fueled engine. International Journal of Hydrogen Energy, 2001, 26, 981-985.	7.1	56
100	Experimental Study of a Hydrogen-Fueled Engine. Journal of Engineering for Gas Turbines and Power, 2001, 123, 211-216.	1.1	31
101	Influence of the Injection Parameters on the Efficiency and Power Output of a Hydrogen Fueled Engine. , 2001, , .		1
102	A Critical Review of Experimental Research on Hydrogen Fueled SI Engines. , 0, , .		73
103	Effects of Supercharging, EGR and Variable Valve Timing on Power and Emissions of Hydrogen Internal Combustion Engines. SAE International Journal of Engines, 0, 1, 647-656.	0.4	29
104	Using Vegetable Oils and Animal Fats in Diesel Engines: Chemical Analyses and Engine Tests. , 0, , .		2
105	Applying Design of Experiments to Determine the Effect of Gas Properties on In-Cylinder Heat Flux in a Motored SI Engine. SAE International Journal of Engines, 0, 5, 1286-1299.	0.4	10
106	Experimental Evaluation of Lean-burn and EGR as Load Control Strategies for Methanol Engines. , 0, , .		21
107	Evaluation of a Flow-Field-Based Heat Transfer Model for Premixed Spark-Ignition Engines on Hydrogen. , 0, , .		8
108	Performance and Emissions of a SI Engine using Methanol-Water Blends. , 0, , .		13

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109	Design of a Fast Responding Start-Up Mechanism for Bi-Propellant Fueled Engine for Miniature UAV Applications. , 0, , .		5
110	High-Speed Characterization of ECN Spray A Using Various Diagnostic Techniques. SAE International Journal of Engines, 0, 6, 1238-1248.	0.4	14
111	Development and Validation of a Knock Prediction Model for Methanol-Fuelled SI Engines. , 0, , .		18
112	Experimental Investigation of a DISI Production Engine Fuelled with Methanol, Ethanol, Butanol and ISO-Stoichiometric Alcohol Blends. , 0, , .		42
113	Calibration of a TFG Sensor for Heat Flux Measurements in a S.I. Engine. SAE International Journal of Engines, 0, 8, 1692-1700.	0.4	9
114	Assessment of Empirical Heat Transfer Models for a CFR Engine Operated in HCCI Mode. , 0, , .		10
115	Demonstrating the Use of Thin Film Gauges for Heat Flux Measurements in ICEs: Measurements on an Inlet Valve in Motored Operation. , 0, , .		6
116	Evaluation of Wall Heat Flux Models for Full Cycle CFD Simulation of Internal Combustion Engines under Motoring Operation. , 0, , .		7
117	Experimental Investigation and Modelling of the In-Cylinder Heat Transfer during Ringing Combustion in an HCCI Engine. , 0, , .		1
118	Development of Laminar Burning Velocity Correlation for the Simulation of Methanol Fueled SI Engines Operated with Onboard Fuel Reformer. , 0, , .		8
119	A Heat Transfer Model for Low Temperature Combustion Engines. , 0, , .		3
120	Downsizing Potential of Methanol Fueled DISIÂEngine with Variable Valve Timing and Boost Control. , 0, , .		20
121	Cold Flow Simulation of a Dual-Fuel Engine for Diesel-Natural Gas and Diesel-Methanol Fuelling Conditions. , 0, , .		1
122	Modeling of a Methanol Fueled Direct-Injection Spark-Ignition Engine with Reformed-Exhaust Gas Recirculation. , 0, , .		0
123	Performance of a single cylinder diesel engine fuelled with emulsified residual oleins and standard diesel fuel. Renewable Energy and Power Quality Journal, 0, , 183-188.	0.2	2
124	Combustion Characterization of Methanol in a Lean Burn Direct Injection Spark Ignition (DISI) Engine. , 0, , .		12
125	Simulation Based Investigation of Achieving Low Temperature Combustion with Methanol in a Direct Injected Compression Ignition Engine. , 0, , .		6
126	Influence of Injection Strategies on Engine Efficiency for a Methanol PPC Engine. SAE International Journal of Advances and Current Practices in Mobility, 0, 2, 653-671.	2.0	15

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127	Literature Review on Dual-Fuel Combustion Modelling. , 0, , .		6
128	Experimental investigation on puffing and micro-explosion occurrence of water in rapeseed oil emulsions droplets. Effect of the surfactant concentration.. , 0, , .		0
129	Cylinder to Cylinder Variation Related to Gas Injection Timing on a Dual-Fuel Engine. , 0, , .		0
130	The Relevance of Different Fuel Indices to Describe Autoignition Behaviour of Gasoline in Light Duty DICI Engine under PPC Mode. , 0, , .		2
131	Feasibility Study of a New Test Procedure to Identify High Emitters of Particulate Matter during Periodic Technical Inspection. , 0, , .		9
132	A Coupled Tabulated Kinetics and Flame Propagation Model for the Simulation of Fumigated Medium Speed Dual-Fuel Engines. , 0, , .		2
133	Numerical Optimization of Compression Ratio for a PPC Engine running on Methanol. , 0, , .		2
134	Optimization and Evaluation of a Low Temperature Waste Heat Recovery System for a Heavy Duty Engine over a Transient Cycle. SAE International Journal of Advances and Current Practices in Mobility, 0, 3, 159-170.	2.0	4