

Christopher David Depcik

List of Publications by Year in descending order

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104
papers

1,954
citations

331670
21
h-index

302126
39
g-index

106
all docs

106
docs citations

106
times ranked

1705
citing authors

#	ARTICLE	IF	CITATIONS
1	Exploring the Possibility of Achieving Partially Premixed Charge Compression Ignition Combustion of Biodiesel in Comparison to Ultra Low Sulfur Diesel on a High Compression Ratio Engine. Combustion Science and Technology, 2023, 195, 746-777.	2.3	4
2	Thermodynamic modeling of in-situ rocket propellant fabrication on Mars. IScience, 2022, 25, 104323.	4.1	5
3	Simulink Model of a Thermoelectric Generator for Vehicle Waste Heat Recovery. Applied Sciences (Switzerland), 2021, 11, 1340.	2.5	15
4	Air conditioning cycle simulations using a ultrahigh-speed centrifugal compressor for electric vehicle applications. International Journal of Refrigeration, 2021, 131, 803-816.	3.4	4
5	Modification of the Wiebe function for methane-air and oxy-methane- based spark-ignition engines. Fuel, 2021, 303, 121218.	6.4	6
6	Review of propane-air chemical kinetic mechanisms for a unique jet propulsion application. Journal of the Energy Institute, 2020, 93, 857-877.	5.3	12
7	Comparison of lithium ion Batteries, hydrogen fueled combustion Engines, and a hydrogen fuel cell in powering a small Unmanned Aerial Vehicle. Energy Conversion and Management, 2020, 207, 112514.	9.2	102
8	Second law analysis of waste cooking oil biodiesel versus ULSD during operation of a CI engine. Fuel, 2019, 255, 115753.	6.4	7
9	The effect of working fluid properties on the performance of a miniature free piston expander for waste heat harvesting. Applied Thermal Engineering, 2019, 151, 431-438.	6.0	16
10	Performance and Emission Analysis of Partially Premixed Charge Compression Ignition Combustion. Journal of Engineering for Gas Turbines and Power, 2019, 141, .	1.1	1
11	Adaptive Wiebe Function Parameters for a Port-Fuel Injected Hydrogen-Fueled Engine. , 2019, , .		5
12	Availability Analysis of Alternative Fuels for Compression Ignition Engine Combustion. Proceedings in Automotive Engineering, 2019, , 542-549.	0.1	1
13	Verification and Validation of a Homogeneous Reaction Kinetics Model Using a Detailed H2-O2 Reaction Mechanism Versus Chemkin and Cantera. , 2019, , .		1
14	Design and Development of a Cost-Effective LIDAR System for Transportation. , 2019, , .		1
15	Optimal pulse-modulated Lithium-ion battery charging: Algorithms and simulation. Journal of Energy Storage, 2018, 15, 359-367.	8.1	42
16	Exergy Analysis of Dual-Fuel Operation with Diesel and Moderate Amounts of Compressed Natural Gas in a Single-Cylinder Engine. Combustion Science and Technology, 2018, 190, 471-489.	2.3	5
17	Revisiting the Single Equation Pressure Drop Model for Particulate Filters. , 2018, , .		6
18	An Analysis of Dual-Fuel Combustion of Diesel with Compressed Natural Gas in a Single-Cylinder Engine. , 2018, , .		9

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19	Comparative study of various cathodes for lithium ion batteries using an enhanced Peukert capacity model. Journal of Power Sources, 2018, 396, 621-631.	7.8	38
20	Fuel Control and Spark Optimization of a Propane Fuel System for an Engine-Generator System. , 2018, , .		0
21	Use of the Glycerin By-Product From Biodiesel Production for Power Generation. Journal of Engineering for Gas Turbines and Power, 2018, 140, .	1.1	2
22	Performance and Emissions Analysis of Partially Pre-Mixed Charge Compression Ignition Combustion. , 2018, , .		1
23	The Effects of Scaling on the Design and Performance of the Brayton-Gluhareff Pressure Jet Engine. , 2017, , .		0
24	The Effects of Planar Symmetry and Radiative Heat Losses in a Three-Dimensional Transient CFD Simulation of Right Angle Flow Through a Brayton-Gluhareff Cycle Pressure Jet Engine. , 2017, , .		1
25	Moderate Substitution of Varying Compressed Natural Gas Constituents for Assisted Diesel Combustion. Combustion Science and Technology, 2017, 189, 1354-1372.	2.3	32
26	Repurposing of a Hybrid Vehicle Nickel Metal Hydride Battery Pack for Electrical Grid Storage. , 2017, , .		0
27	Influence of Fuel Injection Pressure and Biodiesel upon NOx Emissions. , 2016, , .		8
28	First and Second Law Heat Release Analysis in a Single Cylinder Engine. SAE International Journal of Engines, 2016, 9, 536-545.	0.4	16
29	Second-Law Heat Release Modeling of a Compression Ignition Engine Fueled With Blends of Palm Biodiesel. Journal of Engineering for Gas Turbines and Power, 2016, 138, .	1.1	2
30	Two-phase heat and mass transfer of phase change materials in thermal management systems. International Journal of Heat and Mass Transfer, 2016, 100, 215-223.	4.8	45
31	Usage of glycerin-derived, hydrogen-rich syngas augmented by soybean biodiesel to power a biodiesel production facility. International Journal of Hydrogen Energy, 2016, 41, 17132-17144.	7.1	10
32	Small-Scale Smart Electrical Grid Design, Construction, and Analysis. , 2016, , .		0
33	Combustion analysis of pyrolysis end of life plastic fuel blended with ultra low sulfur diesel. Fuel Processing Technology, 2016, 142, 212-218.	7.2	27
34	Experimental, detailed, and global kinetic reaction model for NO oxidation over platinum/alumina catalysts. Reaction Kinetics, Mechanisms and Catalysis, 2016, 117, 15-34.	1.7	4
35	Influence of Fuel Injection System and Engine-Timing Adjustments on Regulated Emissions from Four Biodiesel Fuels. Transportation Research Record, 2015, 2503, 20-28.	1.9	2
36	Design and Analysis of Electric Bikes for Local Commutes. , 2015, , .		0

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37	Second Law Heat Release Modeling of a Compression Ignition Engine Fueled With Blends of Palm Biodiesel. , 2015, , .		4
38	Combining the Classical and Lumped Diesel Particulate Filter Models. SAE International Journal of Engines, 2015, 8, 1261-1270.	0.4	4
39	Modified Heat Release Analysis for Diesel-Assisted CNG Combustion. , 2015, , .		4
40	Performance and Emissions Characteristics of Hydroprocessed Renewable Jet Fuel Blends in a Single-Cylinder Compression Ignition Engine with Electronically Controlled Fuel Injection. Combustion Science and Technology, 2015, 187, 857-873.	2.3	18
41	Investigating the compression ignition combustion of multiple biodiesel/ULSD (ultra-low sulfur) Tj ETQq1 1 0.784314 rgBT /Overlock 10	8.8	34
42	Combining a Diesel Particulate Filter and Heat Exchanger for Waste Heat Recovery and Particulate Matter Reduction. , 2014, , .		2
43	Construction, Instrumentation, and Implementation of a Low Cost, Single-Cylinder Compression Ignition Engine Test Cell. , 2014, , .		18
44	A Cost-Effective Alternative to Moving Floor Wind Tunnels in Order to Calculate Rolling Resistance and Aerodynamic Drag Coefficients. SAE International Journal of Passenger Cars - Mechanical Systems, 2014, 7, 703-713.	0.4	1
45	Efficiency and Emissions Mapping for a Single-Cylinder, Direct Injected Compression Ignition Engine. , 2014, , .		17
46	Ozone-Assisted Combustionâ€”Part I: Literature Review and Kinetic Study Using Detailed n-Heptane Kinetic Mechanism. Journal of Engineering for Gas Turbines and Power, 2014, 136, .	1.1	13
47	Well to wheels energy and emissions analysis of a recycled 1974 VW Super Beetle converted into a plug-in series hybrid electric vehicle. Journal of Cleaner Production, 2014, 68, 93-103.	9.3	12
48	Emissionsâ€”calibrated equilibrium heat release model for direct injection compression ignition engines. Fuel, 2014, 117, 1096-1110.	6.4	23
49	Comparison of Neat Biodiesels and ULSD in an Optimized Single-Cylinder Diesel Engine with Electronically-Controlled Fuel Injection. Energy & Fuels, 2014, 28, 3849-3862.	5.1	27
50	A Swappable Battery Pack for Short-Range Electric Vehicles. , 2014, , .		0
51	Fixed Bed Solid Fuel Combustor for the Purpose of Testing Solid Biomass Emissions Properties. , 2014, , .		1
52	Employing Adaptive Mesh Refinement for Simulating the Exhaust Gas Recirculation Mixing Process. , 2014, , .		2
53	Catalyzed diesel particulate filter modeling. Reviews in Chemical Engineering, 2013, 29, 1-61.	4.4	85
54	Review of organic Rankine cycles for internal combustion engine exhaust waste heat recovery. Applied Thermal Engineering, 2013, 51, 711-722.	6.0	378

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55	Modifying the Classical One-Dimensional Catalyst Model to Include Axial Conduction and Diffusion. Journal of Engineering for Gas Turbines and Power, 2013, 135, .	1.1	2
56	Oneâ€Dimensional Pseudoâ€Homogeneous Packedâ€Bed Reactor Modeling: I. Chemical Species Equation and Effective Diffusivity. Chemical Engineering and Technology, 2013, 36, 22-32.	1.5	11
57	Expanding the Peukert equation for battery capacity modeling through inclusion of a temperature dependency. Journal of Power Sources, 2013, 235, 148-158.	7.8	124
58	Combustion of Reformed Propane as Segue to Glycerin Reforming. , 2013, , .		2
59	Proof-of-Concept Combined Shrouded Wind Turbine and Compressed Air Energy Storage System. , 2013, , .		1
60	Development of an Adaptive Human-Machine-Interface to Minimize Driver Distraction and Workload. , 2013, , .		4
61	Adaptive Global Carbon Monoxide Kinetic Mechanism over Platinum/Alumina Catalysts. Catalysts, 2013, 3, 517-542.	3.5	4
62	Oneâ€Dimensional Pseudoâ€Homoâ€ogeneous Packedâ€Bed Reactor Modeling: II. Energy Equation and Effective Thermal Conductivity. Chemical Engineering and Technology, 2013, 36, 379-389.	1.5	2
63	Small Scale Prototype Biomass Drying System for Co-Combustion With Coal. , 2013, , .		0
64	The Effects of CO, H ₂ , and C ₃ H ₆ on the SCR Reactions of an Fe Zeolite SCR Catalyst. , 2013, , .		4
65	Dashboard Videos. Physics Teacher, 2012, 50, 477-479.	0.3	0
66	REVIEW OF CHEMICAL REACTIONS IN THE NO REDUCTION BY CO ON PLATINUM/ALUMINA CATALYSTS. Surface Review and Letters, 2012, 19, 1230001.	1.1	6
67	Modifying the Classical 1D Catalyst Model to Include Axial Conduction and Diffusion. , 2012, , .		0
68	Shape Comparison for Solar Thermal Parabolic Collector. , 2012, , .		0
69	High-Pressure Viscosity of Soybean-Oil-Based Biodiesel Blends with Ultra-Low-Sulfur Diesel Fuel. Energy & Fuels, 2012, 26, 7023-7036.	5.1	22
70	Investigation of the Effects of Biodiesel Feedstock on the Performance and Emissions of a Single-Cylinder Diesel Engine. Energy & Fuels, 2012, 26, 2331-2341.	5.1	84
71	Analysis of the effects of reformat (hydrogen/carbon monoxide) as an assistive fuel on the performance and emissions of used canola-oil biodiesel. International Journal of Hydrogen Energy, 2012, 37, 3510-3527.	7.1	20
72	Waste Cooking Oil Biodiesel Use in Two Off-Road Diesel Engines. , 2012, 2012, 1-10.		11

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73	One + Oneâ€Dimensional Modeling of Monolithic Catalytic Converters. Chemical Engineering and Technology, 2011, 34, 1949-1965.	1.5	10
74	High-Pressure Viscosity of Biodiesel from Soybean, Canola, and Coconut Oils. Energy & Fuels, 2010, 24, 5708-5716.	5.1	40
75	Simulating the Concentration Equations and the Gas-Wall Interface for One-Dimensional Based Diesel Particulate Filter Models. Journal of Engineering for Gas Turbines and Power, 2010, 132, .	1.1	10
76	Influence of Density Variation on One-Dimensional Modeling of Exhaust Assisted Catalytic Fuel Reforming. Heat Transfer Engineering, 2010, 31, 1098-1113.	1.9	10
77	Review of Chemical Reactions in the NO Reduction by CO on Rhodium/Alumina Catalysts. Catalysis Reviews - Science and Engineering, 2010, 52, 462-493.	12.9	51
78	Adaptive Carbon Monoxide Kinetics for Exhaust Aftertreatment Modeling. , 2009, , .		2
79	A Sustainable Approach to Advanced Energy and Vehicular Technologies at the University of Kansas. , 2009, , .		1
80	Simulating Area Conservation and the Gas-Wall Interface for One-Dimensional Based Diesel Particulate Filter Models. Journal of Engineering for Gas Turbines and Power, 2008, 130, .	1.1	34
81	A one-dimensional lean NO _x trap model with a global kinetic mechanism that includes NH ₃ and N ₂ O. International Journal of Engine Research, 2008, 9, 57-77.	2.3	26
82	Instructional Use of a Single-Zone, Premixed Charge, Spark-Ignition Engine Heat Release Simulation. International Journal of Mechanical Engineering Education, 2007, 35, 1-31.	1.0	52
83	One-dimensional automotive catalyst modeling. Progress in Energy and Combustion Science, 2005, 31, 308-369.	31.2	139
84	Graphical user interfaces in an engineering educational environment. Computer Applications in Engineering Education, 2005, 13, 48-59.	3.4	53
85	Framework for Modeling the Components of a Fuel Processing System for Fuel Cell Applications. , 2005, , .		0
86	THE NUMERICAL SIMULATION OF VARIABLE-PROPERTY REACTING-GAS DYNAMICS: NEW INSIGHTS AND VALIDATION. Numerical Heat Transfer; Part A: Applications, 2004, 47, 27-56.	2.1	12
87	In Search of an Optimal Local Navier-Stokes Preconditioner. , 2003, , .		3
88	A Universal Heat Transfer Correlation for Intake and Exhaust Flows in an Spark-Ignition Internal Combustion Engine. , 0, , .		40
89	Comparison of ULSD, Used Cooking Oil Biodiesel, and JP-8 Performance and Emissions in a Single-Cylinder Compression-Ignition Engine. SAE International Journal of Fuels and Lubricants, 0, 5, 1382-1394.	0.2	16
90	Macroscopic Study of Projected Catalytic Converter Requirements. , 0, , .		1

#	ARTICLE	IF	CITATIONS
91	Recommendations for the Next Generation of Hydrocarbon Modeling with Respect to Diesel Exhaust Aftertreatment and Biodiesel Fuels. , 0, , .		2
92	Organic Rankine Cycles with Dry Fluids for Small Engine Exhaust Waste Heat Recovery. SAE International Journal of Alternative Powertrains, 0, 2, 96-104.	0.8	14
93	Development of a Simplified Diesel Particulate Filter Model Intended for an Engine Control Unit. , 0, , .		13
94	Ozone-Assisted Combustion: Experimental Assessment of the Influence of Ozone in a Single-Cylinder Diesel Engine. , 0, , .		3
95	Statistical Analyses of CNG Constituents on Dual-Fuel Compression Ignition Combustion. , 0, , .		14
96	Investigating Pre-Mixed Charge Compression Ignition Combustion in a High Compression Ratio Engine. , 0, , .		3
97	Development of a Low-Cost LIDAR System for Bicycles. , 0, , .		4
98	Exploring the Potential of Combustion on Titan. SAE International Journal of Aerospace, 0, 11, 27-46.	4.0	3
99	Electrifying Long-Haul Freightâ€”Part II: Assessment of the Battery Capacity. SAE International Journal of Commercial Vehicles, 0, 12, .	0.4	7
100	Electrifying Long-Haul Freightâ€”Part I: Review of Drag, Rolling Resistance, and Weight Reduction Potential. SAE International Journal of Commercial Vehicles, 0, 12, .	0.4	1
101	Dynamically Incompressible Flow. , 0, , .		8
102	Design and Control of an Automated Cooled Exhaust Gas Recirculation System for a Teaching and Research Engine Test Cell. , 0, , .		0
103	Comparison of Engine Operational Modes with Respect to Compression Ignition Engine Knock. , 0, , .		1
104	Review of Additive Manufacturing for Internal Combustion Engine Components. SAE International Journal of Engines, 0, 13, .	0.4	10