Christopher David Depcik

List of Publications by Year
in descending order

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	Review of organic Rankine cycles for internal combustion engine exhaust waste heat recovery. Applied Thermal Engineering, 2013, 51, 711-722.	6.0	378
2	One-dimensional automotive catalyst modeling. Progress in Energy and Combustion Science, 2005, 31, 308-369.	31.2	139
3	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
4	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
5	Catalyzed diesel particulate filter modeling. Reviews in Chemical Engineering, 2013, 29, 1-61.	4.4	85
6	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
7	Graphical user interfaces in an engineering educational environment. Computer Applications in Engineering Education, 2005, 13, 48-59.	3.4	53
8	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
9	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
10	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
11	Optimal pulse-modulated Lithium-ion battery charging: Algorithms and simulation. Journal of Energy Storage, 2018, 15, 359-367.	8.1	42
12	A Universal Heat Transfer Correlation for Intake and Exhaust Flows in an Spark-Ignition Internal Combustion Engine. , 0, , .		40
13	High-Pressure Viscosity of Biodiesel from Soybean, Canola, and Coconut Oils. Energy & Fuels, 2010, 24, 5708-5716.	5.1	40
14	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
15	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
16	Investigating the compression ignition combustion of multiple biodiesel/ULSD (ultra-low sulfur) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 14	8.8	34
17	Moderate Substitution of Varying Compressed Natural Gas Constituents for Assisted Diesel Combustion. Combustion Science and Technology, 2017, 189, 1354-1372.	2.3	32
18	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

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19	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
20	A one-dimensional lean NO_xtrap model with a global kinetic mechanism that includes NH₃and N₂O. International Journal of Engine Research, 2008, 9, 57-77.	2.3	26
21	Emissionsâ€"calibrated equilibrium heat release model for direct injection compression ignition engines. Fuel, 2014, 117, 1096-1110.	6.4	23
22	High-Pressure Viscosity of Soybean-Oil-Based Biodiesel Blends with Ultra-Low-Sulfur Diesel Fuel. Energy & Fuels, 2012, 26, 7023-7036.	5.1	22
23	Analysis of the effects of reformate (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
24	Construction, Instrumentation, and Implementation of a Low Cost, Single-Cylinder Compression Ignition Engine Test Cell. , 2014, , .		18
25	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
26	Efficiency and Emissions Mapping for a Single-Cylinder, Direct Injected Compression Ignition Engine. , 2014, , .		17
27	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
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	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
30	Simulink Model of a Thermoelectric Generator for Vehicle Waste Heat Recovery. Applied Sciences (Switzerland), 2021, 11, 1340.	2.5	15
31	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
32	Statistical Analyses of CNG Constituents on Dual-Fuel Compression Ignition Combustion. , 0, , .		14
33	Development of a Simplified Diesel Particulate Filter Model Intended for an Engine Control Unit. , 0, , .		13
34	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
35	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
36	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

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37	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
38	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
39	Waste Cooking Oil Biodiesel Use in Two Off-Road Diesel Engines. , 2012, 2012, 1-10.		11
40	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
41	Influence of Density Variation on One-Dimensional Modeling of Exhaust Assisted Catalytic Fuel Reforming. Heat Transfer Engineering, 2010, 31, 1098-1113.	1.9	10
42	One + Oneâ€Dimensional Modeling of Monolithic Catalytic Converters. Chemical Engineering and Technology, 2011, 34, 1949-1965.	1.5	10
43	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
44	Review of Additive Manufacturing for Internal Combustion Engine Components. SAE International Journal of Engines, 0, 13, .	0.4	10
45	An Analysis of Dual-Fuel Combustion of Diesel withÂCompressed Natural Gas in a Single-CylinderÂEngine. , 2018, , .		9
46	Influence of Fuel Injection Pressure and Biodiesel upon NOx Emissions. , 2016, , .		8
47	Dynamically Incompressible Flow. , 0, , .		8
48	Second law analysis of waste cooking oil biodiesel versus ULSD during operation of a CI engine. Fuel, 2019, 255, 115753.	6.4	7
49	Electrifying Long-Haul Freightâ€"Part II: Assessment of the Battery Capacity. SAE International Journal of Commercial Vehicles, 0, 12, .	0.4	7
50	REVIEW OF CHEMICAL REACTIONS IN THE NO REDUCTION BY CO ON PLATINUM/ALUMINA CATALYSTS. Surface Review and Letters, 2012, 19, 1230001.	1.1	6
51	Revisiting the Single Equation Pressure Drop Model for Particulate Filters. , 2018, , .		6
52	Modification of the Wiebe function for methane-air and oxy-methane- based spark-ignition engines. Fuel, 2021, 303, 121218.	6.4	6
53	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
54	Adaptive Wiebe Function Parameters for a Port-Fuel Injected Hydrogen-Fueled Engine. , 2019, , .		5

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55	Thermodynamic modeling of in-situ rocket propellant fabrication on Mars. IScience, 2022, 25, 104323.	4.1	5
56	Development of an Adaptive Human-Machine-Interface to Minimize Driver Distraction and Workload. , 2013, , .		4
57	Adaptive Global Carbon Monoxide Kinetic Mechanism over Platinum/Alumina Catalysts. Catalysts, 2013, 3, 517-542.	3.5	4
58	The Effects of CO, H2, and C3H6 on the SCR Reactions of an Fe Zeolite SCR Catalyst. , 2013, , .		4
59	Second Law Heat Release Modeling of a Compression Ignition Engine Fueled With Blends of Palm Biodiesel. , 2015, , .		4
60	Combining the Classical and Lumped Diesel Particulate Filter Models. SAE International Journal of Engines, 2015, 8, 1261-1270.	0.4	4
61	Modified Heat Release Analysis for Diesel-Assisted CNG Combustion. , 2015, , .		4
62	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
63	Development of a Low-Cost LIDAR System for Bicycles. , 0, , .		4
64	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
65	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
66	In Search of an Optimal Local Navier-Stokes Preconditioner. , 2003, , .		3
67	Ozone-Assisted Combustion: Experimental Assessment of the Influence of Ozone in a Single-Cylinder Diesel Engine. , 0, , .		3
68	Investigating Pre-Mixed Charge Compression Ignition Combustion in a High Compression RatioÂEngine. , 0, , .		3
69	Exploring the Potential of Combustion on Titan. SAE International Journal of Aerospace, 0, 11, 27-46.	4.0	3
70	Adaptive Carbon Monoxide Kinetics for Exhaust Aftertreatment Modeling. , 2009, , .		2
71	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
72	Combustion of Reformed Propane as Segue to Glycerin Reforming. , 2013, , .		2

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73	Oneâ€Dimensional Pseudoâ€Homoâ€geneous Packedâ€Bed Reactor Modeling: II. Energy Equation and Effective Thermal Conductivity. Chemical Engineering and Technology, 2013, 36, 379-389.	1.5	2
74	Recommendations for the Next Generation of Hydrocarbon Modeling with Respect to Diesel Exhaust Aftertreatment and Biodiesel Fuels. , 0, , .		2
75	Combining a Diesel Particulate Filter and Heat Exchanger for Waste Heat Recovery and Particulate Matter Reduction. , 2014, , .		2
76	Employing Adaptive Mesh Refinement for Simulating the Exhaust Gas Recirculation Mixing Process. , 2014, , .		2
77	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
78	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
79	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
80	Proof-of-Concept Combined Shrouded Wind Turbine and Compressed Air Energy Storage System. , 2013, , .		1
81	Macroscopic Study of Projected Catalytic Converter Requirements. , 0, , .		1
82	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
83	Fixed Bed Solid Fuel Combustor for the Purpose of Testing Solid Biomass Emissions Properties. , 2014, , .		1
84	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
85	Performance and Emission Analysis of Partially Premixed Charge Compression Ignition Combustion. Journal of Engineering for Gas Turbines and Power, 2019, 141, .	1.1	1
86	Performance and Emissions Analysis of Partially Pre-Mixed Charge Compression Ignition Combustion. , 2018, , .		1
87	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
88	A Sustainable Approach to Advanced Energy and Vehicular Technologies at the University of Kansas. , 2009, , .		1
89	Comparison of Engine Operational Modes with Respect to Compression Ignition Engine Knock. , 0, , .		1
90	Availability Analysis of Alternative Fuels for Compression Ignition Engine Combustion. Proceedings in Automotive Engineering, 2019, , 542-549.	0.1	1

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91	Verification and Validation of a Homogeneous Reaction Kinetics Model Using a Detailed H2-O2 Reaction Mechanism Versus Chemkin and Cantera. , 2019, , .		1
92	Design and Development of a Cost-Effective LIDAR System for Transportation. , 2019, , .		1
93	Dashboard Videos. Physics Teacher, 2012, 50, 477-479.	0.3	0
94	Modifying the Classical 1D Catalyst Model to Include Axial Conduction and Diffusion. , 2012, , .		0
95	Shape Comparison for Solar Thermal Parabolic Collector. , 2012, , .		0
96	Small Scale Prototype Biomass Drying System for Co-Combustion With Coal. , 2013, , .		0
97	A Swappable Battery Pack for Short-Range Electric Vehicles. , 2014, , .		0
98	Design and Analysis of Electric Bikes for Local Commutes. , 2015, , .		0
99	Small-Scale Smart Electrical Grid Design, Construction, and Analysis. , 2016, , .		0
100	The Effects of Scaling on the Design and Performance of the Brayton-Gluhareff Pressure Jet Engine. , 2017, , .		0
101	Repurposing of a Hybrid Vehicle Nickel Metal Hydride Battery Pack for Electrical Grid Storage. , 2017, , .		0
102	Fuel Control and Spark Optimization of a Propane Fuel System for an Engine-Generator System. , 2018, , .		0
103	Framework for Modeling the Components of a Fuel Processing System for Fuel Cell Applications. , 2005, , .		0
104	Design and Control of an Automated Cooled Exhaust Gas Recirculation System for a Teaching and Research Engine Test Cell. , 0, , .		0