Roger Cracknell

List of Publications by Year
in descending order

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Version: 2024-02-01

132 papers	5,033 citations	101496 36 h-index	118793 62 g-index
134 all docs	134 docs citations	134 times ranked	3193 citing authors

#	Article	IF	Citations
1	Combustion performance of bio-ethanol at various blend ratios in a gasoline direct injection engine. Fuel, 2011, 90, 1999-2006.	3.4	242
2	Mapping surrogate gasoline compositions into RON/MON space. Combustion and Flame, 2010, 157, 1122-1131.	2.8	231
3	Nitrogen Adsorption in Slit Pores at Ambient Temperatures: Comparison of Simulation and Experiment. Langmuir, 1994, 10, 4606-4609.	1.6	211
4	Impact of fuel and injection system on particle emissions from a GDI engine. Applied Energy, 2014, 132, 178-191.	5.1	208
5	Direct Molecular Dynamics Simulation of Flow Down a Chemical Potential Gradient in a Slit-Shaped Micropore. Physical Review Letters, 1995, 74, 2463-2466.	2.9	204
6	Autoignition of toluene reference fuels at high pressures modeled with detailed chemical kinetics. Combustion and Flame, 2007, 149, 2-24.	2.8	158
7	A grand canonical Monte Carlo study of Lennard-Jones mixtures in slit shaped pores. Molecular Physics, 1993, 80, 885-897.	0.8	135
8	Effect of fuel temperature on in-nozzle cavitation and spray formation of liquid hydrocarbons and alcohols from a real-size optical injector for direct-injection spark-ignition engines. International Journal of Heat and Mass Transfer, 2010, 53, 4588-4606.	2.5	132
9	Cavitation, primary break-up and flash boiling of gasoline, iso-octane and n-pentane with a real-size optical direct-injection nozzle. Fuel, 2010, 89, 2592-2607.	3.4	129
10	Combustion and emission characteristics of diesel engine fueled with biodiesel/PODE blends. Applied Energy, 2017, 206, 425-431.	5.1	127
11	Ultra Boost for Economy: Extending the Limits of Extreme Engine Downsizing. SAE International Journal of Engines, 0, 7, 387-417.	0.4	126
12	Molecular simulation of hydrogen adsorption in graphitic nanofibres. Physical Chemistry Chemical Physics, 2001, 3, 2091-2097.	1.3	118
13	Rotational insertion bias: a novel method for simulating dense phases of structured particles, with particular application to water. Molecular Physics, 1990, 71, 931-943.	0.8	104
14	Effect of flash boiling on microscopic and macroscopic spray characteristics in optical GDI engine. Fuel, 2017, 190, 79-89.	3.4	100
15	Modeling Fluid Behavior in Well-Characterized Porous Materials. Accounts of Chemical Research, 1995, 28, 281-288.	7.6	92
16	Performance, combustion and emissions of a diesel engine operated with reformed EGR. Comparison of diesel and GTL fuelling. Fuel, 2009, 88, 1031-1041.	3.4	92
17	Adsorption and selectivity of carbon dioxide with methane and nitrogen in slit-shaped carbonaceous micropores: Simulation and experiment. Adsorption, 1996, 2, 193-203.	1.4	88
18	Effect of Gas-to-Liquid Diesel Fuels on Combustion Characteristics, Engine Emissions, and Exhaust Gas Fuel Reforming. Comparative Study. Energy & Fuels, 2006, 20, 2377-2384.	2.5	88

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19	Laminar burning velocity measurements of liquid fuels at elevated pressures and temperatures with combustion residuals. Combustion and Flame, 2011, 158, 1920-1932.	2.8	82
20	Probing the antagonistic effect of toluene as a component in surrogate fuel models at low temperatures and high pressures. A case study of toluene/dimethyl ether mixtures. Proceedings of the Combustion Institute, 2017, 36, 413-421.	2.4	71
21	Effect of fuel injector deposit on spray characteristics, gaseous emissions and particulate matter in a gasoline direct injection engine. Applied Energy, 2017, 203, 390-402.	5.1	67
22	Experimental investigation of ethanol/diesel dual-fuel combustion in a heavy-duty diesel engine. Fuel, 2020, 275, 117867.	3.4	60
23	Molecular dynamics study of the self-diffusion of supercritical methane in slit-shaped graphitic micropores. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 1377.	1.7	59
24	A Grand Canonical Monte-Carlo Study of Lennard-Jones Mixtures in Slit Pores; 2: Mixtures of Two Centre Ethane with Methane. Molecular Simulation, 1994, 13, 161-175.	0.9	58
25	The effect of oxygenate fuels on PN emissions from a highly boosted GDI engine. Fuel, 2018, 225, 277-286.	3.4	56
26	Quantitative planar laser-induced fluorescence imaging of multi-component fuel/air mixing in a firing gasoline-direct-injection engine: Effects of residual exhaust gas on quantitative PLIF. Combustion and Flame, 2010, 157, 1866-1878.	2.8	54
27	Molecular simulation of adsorption and diffusion in VPI 5 and other aluminophosphates. Langmuir, 1993, 9, 824-830.	1.6	53
28	Grand canonical Monte Carlo study of Lennard-Jones mixtures in slit pores. Part 3.â€"Mixtures of two molecular fluids: ethane and propane. Journal of the Chemical Society, Faraday Transactions, 1994, 90, 1487-1493.	1.7	50
29	Recent Progress in Automotive Gasoline Direct Injection Engine Technology. Automotive Innovation, 2018, 1, 95-113.	3.1	50
30	Combining GTL fuel, reformed EGR and HC-SCR aftertreatment system to reduce diesel NOx emissions. A statistical approach. International Journal of Hydrogen Energy, 2009, 34, 2789-2799.	3.8	48
31	Adsorption of gas mixtures on solid surfaces, theory and computer simulation. Adsorption, 1995, 1, 7-16.	1.4	47
32	Methanol as an octane booster for gasoline fuels. Fuel, 2019, 248, 76-84.	3.4	47
33	Sensitivity analysis of fuel types and operational parameters on the particulate matter emissions from an aviation piston engine burning heavy fuels. Fuel, 2017, 202, 520-528.	3.4	42
34	A Transition in the Diffusivity of Adsorbed Fluids through Micropores. Langmuir, 1996, 12, 4050-4052.	1.6	41
35	Advanced Combustion for Low Emissions and High Efficiency Part 2: Impact of Fuel Properties on HCCI Combustion. , 0, , .		41
36	Heat flux characteristics of spray wall impingement with ethanol, butanol, iso-octane, gasoline and E10 fuels. International Journal of Heat and Fluid Flow, 2013, 44, 662-683.	1.1	40

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37	Splash blended ethanol in a spark ignition engine â€" Effect of RON, octane sensitivity and charge cooling. Fuel, 2017, 196, 21-31.	3.4	40
38	Particulate emissions from a highly boosted gasoline direct injection engine. International Journal of Engine Research, 2018, 19, 347-359.	1.4	40
39	Octane Appetite: The Relevance of a Lower Limit to the MON Specification in a Downsized, Highly Boosted DISI Engine. SAE International Journal of Fuels and Lubricants, 0, 7, 743-755.	0.2	39
40	Understanding the Effect of DISI Injector Deposits on Vehicle Performance. , 0, , .		38
41	Effects of injection parameters and EGR on exhaust soot particle number-size distribution for diesel and RME fuels in HSDI engines. Fuel, 2013, 112, 224-235.	3.4	38
42	Laminar burning velocity measurements in constant volume vessels â€" Reconciliation of flame front imaging and pressure rise methods. Fuel, 2018, 211, 446-457.	3.4	38
43	Injector Fouling and Its Impact on Engine Emissions and Spray Characteristics in Gasoline Direct Injection Engines. SAE International Journal of Fuels and Lubricants, 0, 10, 287-295.	0.2	37
44	Impact of Fuel Properties on Advanced Combustion Performance in a Diesel Bench Engine and Demonstrator Vehicle. , 0, , .		36
45	Fuel Effects in a Boosted DISI Engine. , 0, , .		36
46	Spray Characteristics Study of DMF Using Phase Doppler Particle Analyzer. SAE International Journal of Passenger Cars - Mechanical Systems, 0, 3, 948-958.	0.4	35
47	The effect of fuel composition on particulate emissions from a highly boosted GDI engine â€" An evaluation of three particulate indices. Fuel, 2019, 252, 598-611.	3.4	35
48	Measurement of in-cylinder soot particles and their distribution in an optical HSDI diesel engine using time resolved laser induced incandescence (TR-LII). Combustion and Flame, 2012, 159, 2985-2998.	2.8	33
49	Advanced Combustion for Low Emissions and High Efficiency Part 1: Impact of Engine Hardware on HCCI Combustion. , 0, , .		31
50	Branched versus linear alkane adsorption in carbonaceous slit pores. Adsorption, 2014, 20, 427-437.	1.4	31
51	Research on the Effect of Lubricant Oil and Fuel Properties on LSPI Occurrence in Boosted S. I. Engines. , 0, , .		30
52	Combustion and soot processes of diesel and rapeseed methyl ester in an optical diesel engine. Fuel, 2014, 118, 406-415.	3.4	29
53	Aqueous ethanol laminar burning velocity measurements using constant volume bomb methods. Fuel, 2018, 214, 127-134.	3.4	29
54	Shear viscosity of linear alkanes through molecular simulations: quantitative tests for<i>n</i>-decane and<i>n</i>-hexadecane. Molecular Simulation, 2012, 38, 1234-1241.	0.9	28

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55	Experimental and modeling study of ultra-rich oxidation of n-heptane. Fuel, 2015, 144, 358-368.	3.4	28
56	Significance of RON and MON to a modern DISI engine. Fuel, 2017, 209, 172-183.	3.4	28
57	The chemical origin of octane sensitivity in gasoline fuels containing nitroalkanes. Combustion and Flame, 2009, 156, 1046-1052.	2.8	27
58	Simulation of hydrogen adsorption in carbon nanotubes. Molecular Physics, 2002, 100, 2079-2086.	0.8	26
59	Octane Response in a Downsized, Highly Boosted Direct Injection Spark Ignition Engine. SAE International Journal of Fuels and Lubricants, 0, 7, 131-143.	0.2	26
60	High pressure laminar burning velocity measurements and modelling of methane and n-butane. Combustion Theory and Modelling, 2010, 14, 519-540.	1.0	25
61	Impact of Fuel Sensitivity (RON-MON) on Engine Efficiency. SAE International Journal of Fuels and Lubricants, 0, 10, 115-125.	0.2	25
62	Investigation of injector coking effects on spray characteristic and engine performance in gasoline direct injection engines. Applied Energy, 2018, 220, 375-394.	5.1	25
63	Modelling a Gasoline Compression Ignition (GCI) Engine Concept. , 0, , .		24
64	Impact of injector tip deposits on gasoline direct injection engine combustion, fuel economy and emissions. Applied Energy, 2020, 262, 114538.	5.1	23
65	Evaluation of a Model Potential Function for Ar Graphite Interaction using Computer Simulation. Molecular Simulation, 1990, 5, 307-314.	0.9	22
66	A Monte Carlo study of methane adsorption in aluminophosphates and porous carbons.. Journal of Molecular Liquids, 1992, 54, 239-251.	2.3	22
67	An experimental investigation on thermal efficiency of a compression ignition engine fueled with five gasoline-like fuels. Fuel, 2017, 207, 56-63.	3.4	22
68	An experimental investigation into combustion characteristics of HVO compared with TME and ULSD at varied blend ratios. Fuel, 2019, 255, 115757.	3.4	22
69	Understanding the Octane Appetite of Modern Vehicles. SAE International Journal of Fuels and Lubricants, 0, 9, 345-357.	0.2	21
70	A physics-based approach to modeling real-fuel combustion chemistry â€" VI. Predictive kinetic models of gasoline fuels. Combustion and Flame, 2020, 220, 475-487.	2.8	21
71	Experimental and modelling study of the impacts of n-butanol blending on the auto-ignition behaviour of gasoline and its surrogate at low temperatures. Proceedings of the Combustion Institute, 2019, 37, 501-509.	2.4	21
72	A study of liquid fuel injection and combustion in a constant volume vessel at diesel engine conditions. Fuel, 2013, 107, 63-73.	3.4	20

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73	Influence of Laminar Burning Velocity on Performance of Gasoline Engines. , 0, , .		19
74	Modified Particle Swarm Optimization With Chaotic Attraction Strategy for Modular Design of Hybrid Powertrains. IEEE Transactions on Transportation Electrification, 2021, 7, 616-625.	5.3	19
75	Transient characteristics of diesel sprays from a deposit rich injector. Fuel, 2015, 153, 183-191.	3.4	18
76	Combustion of ligaments and droplets expelled after the end of injection in a multi-hole diesel injector. Fuel, 2017, 197, 459-466.	3.4	18
77	Macroscopic spray characteristics of iso-octane, ethanol, gasoline and methanol from a multi-hole injector under flash boiling conditions. Fuel, 2022, 307, 121820.	3.4	18
78	Spatio-temporal evolution of diesel sprays at the early start of injection. Applied Energy, 2017, 205, 391-398.	5.1	17
79	Multi-Component Quantitative PLIF: Robust Engineering Measurements of Cyclic Variation in a Firing Spray-Guided Gasoline Direct Injection Engine. , 2008, , .		16
80	Designing Fuels Compatible with Reformers and Internal Combustion Engines. , 0, , .		15
81	Engine performance and emissions from the combustion of low-temperature Fischer Tropsch synthetic diesel fuel and biodiesel rapeseed methyl ester blends. International Journal of Vehicle Design, 2009, 50, 196.	0.1	15
82	Simulating Combustion of Practical Fuels and Blends for Modern Engine Applications Using Detailed Chemical Kinetics. , 0, , .		14
83	Towards predictive molecular simulations of normal and branched alkane adsorption in carbonaceous engine deposits. Carbon, 2011, 49, 445-456.	5.4	14
84	The importance of endothermic pyrolysis reactions in the understanding of diesel spray combustion. Fuel, 2018, 224, 302-310.	3.4	13
85	A new method to simulate the octane appetite of any spark ignition engine.. , 2011, , .		12
86	Influence of spark ignition in the determination of Markstein lengths using spherically expanding flames. Fuel, 2016, 186, 579-586.	3.4	12
87	A chemical kinetic interpretation of the octane appetite of modern gasoline engines. Proceedings of the Combustion Institute, 2019, 37, 4857-4864.	2.4	12
88	Explosion characteristics of hydrous bio-ethanol in oxygen-enriched air. Fuel, 2020, 271, 117604.	3.4	11
89	Mechanism Analysis on the Effect of Fuel Properties on Knocking Performance at Boosted Conditions. , 0, , .		11
90	Structural characterization of carbonaceous combustion-chamber deposits. Carbon, 2009, 47, 3322-3331.	5.4	10

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91	THIP: A new TPRF-like fuel surrogate development approach to better match real fuel properties. Fuel, 2021, 286, 119395.	3.4	9
92	Experimental study of lubricant-derived ash effects on diesel particulate filter performance. International Journal of Engine Research, 2021, 22, 921-934.	1.4	9
93	Monte-Carlo Simulations of Centrifugal Gas Separation. Molecular Simulation, 2004, 30, 501-506.	0.9	8
94	GC-MS determination of low hydrocarbon species (C1â€"C6) from a diesel partial oxidation reformer. International Journal of Hydrogen Energy, 2008, 33, 7074-7083.	3.8	8
95	Adsorption-based Structural Characterization of Intake Valve Deposits. , 2011, , .		8
96	Octane requirements of modern downsized boosted gasoline engines. MTZ Worldwide, 2015, 76, 4-7.	0.1	8
97	Investigation of gasoline containing GTL naphtha in a spark ignition engine at full load conditions. Fuel, 2017, 194, 436-447.	3.4	8
98	Experimental study of the effect of C8 oxygenates on sooting processes in high pressure spray flames. Combustion and Flame, 2020, 220, 235-246.	2.8	8
99	Computer Simulation of Hydrogen Adsorption on Graphitic Materials. Molecular Simulation, 2001, 27, 287-293.	0.9	6
100	Vapour Space Flammability Considerations for Gasoline Compression Ignition Vehicles Operating on â€œDieselineâ€•Blends.. SAE International Journal of Fuels and Lubricants, 0, 9, 593-602.	0.2	6
101	Self Diffusion and Transport in Slit Shaped Pores. Kluwer International Series in Engineering and Computer Science, 1996, , 683-690.	0.2	6
102	Interbilayer repulsion in nonionic surfactant-water lamellar phases.. Molecular Physics, 1992, 75, 1023-1038.	0.8	5
103	Determination of Diesel Physical Properties at Injection Pressures and Temperatures via All-Atom Molecular Simulations. SAE International Journal of Fuels and Lubricants, 0, 9, 567-574.	0.2	5
104	Impact of Diesel Fuel Composition on Soot Oxidation Characteristics. , 2009, , .		4
105	Computer Simulation Studies of Adsorption of Binary and Ternary Mixtures of Gasoline Components in Engine Deposits. SAE International Journal of Fuels and Lubricants, 2014, 7, 756-761.	0.2	4
106	Investigation of the Livengoodâ€"Wu integral for modelling autoignition in a high-pressure bomb. Combustion Theory and Modelling, 2016, 20, 77-98.	1.0	4
107	Octane Response of a Highly Boosted Direct Injection Spark Ignition Engine at Different Compression Ratios. , 0, , .		4
108	Experimental study on the combustion characteristics of high-pressure octanal spray flames. Fuel, 2020, 262, 116596.	3.4	4

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109	Experimental Investigation of the Rail Pressure Fluctuations Correlated with Fuel Properties and Injection Settings. Automotive Innovation, 2021, 4, 215-226.	3.1	4
110	Evaluating a novel gasoline surrogate containing isopentane using a rapid compression machine and an engine. Proceedings of the Combustion Institute, 2021, 38, 5643-5653.	2.4	4
111	Is the â€œK Valueâ€•of an Engine Truly Fuel Independent?. , 0, , .		4
112	Interbilayer repulsion in nonionic surfactant-water lamellar phases.. Molecular Physics, 1992, 75, 1039-1045.	0.8	3
113	Molecular Simulation of Adsorption and Diffusion in Vpi-5 and other Aluminophosphates. Studies in Surface Science and Catalysis, 1993, 80, 105-112.	1.5	3
114	Octane Requirement and Efficiency in a Fleet of Modern Vehicles. , 2017, , .		3
115	Impact of Detailed Fuel Chemistry on Knocking Behaviour in Engines. , 2018, , 245-254.		3
116	Zonal control for selective catalytic reduction system using a model-based multi-objective genetic algorithm. International Journal of Engine Research, 2021, 22, 911-920.	1.4	3
117	Octane Index Applicability over the Pressure-Temperature Domain. Energies, 2021, 14, 607.	1.6	3
118	Engine Cleanliness in an Industry Standard Mercedes-Benz M111 Bench Engine: Effects of Inlet Valve Deposits on Combustion. , 2017, , .		2
119	A Mathematical Model for the Vapour Composition and Flammability of Gasoline - Diesel Mixtures in a Fuel Tank. , 2017, , .		2
120	Measurement of soot distribution in two cross-sections in a gasoline direct injection engine using laser-induced incandescence with the laser extinction method. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2019, 233, 211-223.	1.1	2
121	Accelerating Laminar Flame Speed of Hydrous Ethanol via Oxygen-Rich Combustion. Bioenergy Research, 2021, 14, 634-644.	2.2	2
122	Molecular Selectivity in Slit Shaped Micropores. Kluwer International Series in Engineering and Computer Science, 1996, , 675-682.	0.2	2
123	Investigation of Late Stage Conventional Diesel Combustion - Effect of Additives. , 0, , .		2
124	A Parametric Study of the Flammability of Dieseline Blends with and without Ethanol. , 0, , .		2
125	The fluidâ€"solid potential for a dynamic surface. Chemical Physics Letters, 1992, 196, 353-357.	1.2	1
126	Effect of Sulphur and Silicon in Fuels on an Automotive Reforming Catalyst. , 2005, , .		1

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127	Experimental study on sooting propensities of ternary blends of n-dodecane, isododecane, and C8 oxygenates at high pressures. Combustion and Flame, 2021, 231, 111469.	2.8	1
128	Numerical Simulations of the Effect of Cold Fuel Temperature on In-Nozzle Flow and Cavitation Using a Model Injector Geometry. , 0, , .		1
129	Effects of Octane Number and Sensitivity on Combustion of Jet Ignition Engine. , 0, , .		1
130	On the Sampling Method for Grand Canonical Monte Carlo Simulations. Molecular Simulation, 1994, 13, 235-240.	0.9	0
131	Transferable Representation Model Driven by Gaussion Process Regression for Real-time Energy Management of Plug-in Hybrid Vehicles. , 2021, , .		0
132	Explicit Equations for Designing Surrogate Gasoline Formulations Containing Toluene, n-Heptane and Iso-pentane. Energy, Environment, and Sustainability, 2022, , 351-367.	0.6	0