David Frost

List of Publications by Year
in descending order

89 papers	1,862 citations	257450 24 h-index	276875 41 g-index
93 all docs	93 docs citations	93 times ranked	1121 citing authors

#	Article	IF	Citations
1	Hydrogen production rates of aluminum reacting with varying densities of supercritical water. RSC Advances, 2022, 12, 12335-12343.	3.6	14
2	Hydrogen production <i>via</i> reaction of metals with supercritical water. Sustainable Energy and Fuels, 2022, 6, 3394-3401.	4.9	4
3	Thermocouple Temperature Measurements in Metalized Explosive Fireballs. Propellants, Explosives, Pyrotechnics, 2021, 46, 899-911.	1.6	11
4	Light emission signatures from ballistic impact of reactive metal projectiles. International Journal of Impact Engineering, 2021, 150, 103814.	5.0	10
5	Blast enhancement from metalized explosives. Shock Waves, 2021, 31, 203-230.	1.9	8
6	The use of supercritical water for the catalyst-free oxidation of coarse aluminum for hydrogen production. Sustainable Energy and Fuels, 2020, 4, 5628-5635.	4.9	17
7	Simulating the propulsive capability of explosives loaded with inert and reactive materials. AIP Conference Proceedings, 2020, , .	0.4	0
8	Triboluminescent sensor for detection of impacts of submillimeter explosion fragments. AIP Conference Proceedings, 2020, , .	0.4	0
9	Reaction initiation of metal spheres upon ballistic impact with an anvil. AIP Conference Proceedings, 2020, , .	0.4	0
10	Stabilized, flat iron flames on a hot counterflow burner. Proceedings of the Combustion Institute, 2019, 37, 3185-3191.	3.9	37
11	Numerical investigation of particleâ€“blast interaction during explosive dispersal of liquids and granular materials. Shock Waves, 2018, 28, 513-531.	1.9	18
12	Experimental investigation of blast mitigation and particleâ€“blast interaction during the explosive dispersal of particles and liquids. Shock Waves, 2018, 28, 489-511.	1.9	31
13	The propulsive capability of explosives heavily loaded with inertÂmaterials. Shock Waves, 2018, 28, 709-741.	1.9	10
14	Heterogeneous/particle-laden blast waves. Shock Waves, 2018, 28, 439-449.	1.9	34
15	Suppression of jet formation during explosive dispersal of concentric particle layers. AIP Conference Proceedings, 2018, , .	0.4	1
16	Blast wave mitigation in granular materials. AIP Conference Proceedings, 2018, , .	0.4	4
17	Scaling of the propulsive capability of aluminized gelled nitromethane. AIP Conference Proceedings, 2018, , .	0.4	1
18	Non-Gurney scaling of explosives heavily loaded with dense inert additives. , 2018, , .		0

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19	Terminal velocity of liquids and granular materials dispersed by a high explosive. Shock Waves, 2018, 28, 473-487.	1.9	18
20	Emission and laser absorption spectroscopy of flat flames in aluminum suspensions. Combustion and Flame, 2017, 180, 230-238.	5.2	43
21	Effect of particle coating on the thermal response of mixtures of micro- and nano-aluminum particles with water. Journal of Thermal Analysis and Calorimetry, 2017, 127, 1027-1036.	3.6	6
22	Particle segregation during explosive dispersal of binary particle mixtures. AIP Conference Proceedings, 2017, , .	0.4	9
23	The effect of detonation wave incidence angle on the acceleration of flyers by explosives heavily laden with inert additives. AIP Conference Proceedings, 2017, , .	0.4	1
24	Propagation of isobaric spherical flames in hybrid aluminum-methane fuel mixtures. Journal of Loss Prevention in the Process Industries, 2017, 49, 472-480.	3.3	13
25	Visualization of stress propagation in dynamically compacted wetted particle beds. AIP Conference Proceedings, 2017, , .	0.4	0
26	Fracture of explosively compacted aluminum particles in a cylinder. AIP Conference Proceedings, 2017, , .	0.4	7
27	Thermal structure and burning velocity of flames in non-volatile fuel suspensions. Proceedings of the Combustion Institute, 2017, 36, 2351-2358.	3.9	18
28	Metal-water combustion for clean propulsion and power generation. Applied Energy, 2017, 186, 13-27.	10.1	116
29	Explosive fragmentation of liquids in spherical geometry. Shock Waves, 2017, 27, 383-393.	1.9	15
30	Flame speed measurements in aluminum suspensions using a counterflow burner. Proceedings of the Combustion Institute, 2017, 36, 2291-2298.	3.9	39
31	Lateral stress evolution in chromium sulfide cermets with varying excess chromium. Journal of Applied Physics, 2016, 119, 134903.	2.5	0
32	Comments on: â€œCombustion of nano-sized aluminum particles in steam: Numerical modelingâ€ by V.B. Storozhev and A.N. Yermakov. Combustion and Flame, 2016, 171, 262-263.	5.2	4
33	Measurement of Particle Density During Explosive Particle Dispersal. Propellants, Explosives, Pyrotechnics, 2016, 41, 245-253.	1.6	10
34	Development of a Novel Biodegradable Metallic Stent Based on Microgalvanic Effect. Annals of Biomedical Engineering, 2016, 44, 404-418.	2.5	17
35	Ballistic Response of Chromium/Chromium-Sulfide Cermets. Journal of Dynamic Behavior of Materials, 2015, 1, 347-358.	1.7	4
36	Reaction of a Particle Suspension in a Rapidlyâ€Heated Oxidizing Gas. Propellants, Explosives, Pyrotechnics, 2015, 40, 604-612.	1.6	31

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37	Flame structure and particle-combustion regimes in premixed methaneâ€“ironâ€“air suspensions. Proceedings of the Combustion Institute, 2015, 35, 2431-2438.	3.9	66
38	Quenching distance of flames in hybrid methaneâ€“aluminum mixtures. Proceedings of the Combustion Institute, 2015, 35, 2463-2470.	3.9	26
39	Mechanical properties of chromiumâ€“chromium sulfide cermets fabricated by self-propagating high-temperature synthesis. Journal of Materials Science, 2015, 50, 3434-3446.	3.7	18
40	A comparison of the ballistic performance of shear thickening fluids based on particle strength and volume fraction. International Journal of Impact Engineering, 2015, 85, 83-96.	5.0	79
41	Freely-propagating flames in aluminum dust clouds. Combustion and Flame, 2015, 162, 4241-4253.	5.2	103
42	Effect of scale on freely propagating flames in aluminum dust clouds. Journal of Loss Prevention in the Process Industries, 2015, 36, 230-236.	3.3	48
43	Comparative reactivity of industrial metal powders with water for hydrogen production. International Journal of Hydrogen Energy, 2015, 40, 1026-1036.	7.1	68
44	A novel method for net-shape manufacturing of metalâ€“metal sulfide cermets. Journal of Materials Science, 2014, 49, 8095-8106.	3.7	10
45	Development of multi-component explosive lenses for arbitrary phase velocity generation. Journal of Physics: Conference Series, 2014, 500, 192010.	0.4	3
46	Combustion of Aluminum Suspensions in Hydrocarbon Flame Products. Journal of Propulsion and Power, 2014, 30, 1047-1054.	2.2	53
47	Development of a Metallic Biodegradable Stent Based on Microgalvanic Corrosion1. Journal of Medical Devices, Transactions of the ASME, 2014, 8, .	0.7	0
48	Shock Hugoniot measurements in foam. Journal of Physics: Conference Series, 2014, 500, 112050.	0.4	10
49	Lateral stress evolution in Chromium Sulfide. Journal of Physics: Conference Series, 2014, 500, 182031.	0.4	0
50	Shock-induced deformation in wetted particle beds. Journal of Physics: Conference Series, 2014, 500, 112044.	0.4	4
51	Acceleration of plates using non-conventional explosives heavily-loaded with inert materials. Journal of Physics: Conference Series, 2014, 500, 182027.	0.4	3
52	Explosive formation of coherent particle jets. Journal of Physics: Conference Series, 2014, 500, 112026.	0.4	1
53	Stabilized flames in hybrid aluminum-methane-air mixtures. Proceedings of the Combustion Institute, 2013, 34, 2213-2220.	3.9	48
54	Enhanced hydrogen generation from aluminumâ€“water reactions. International Journal of Hydrogen Energy, 2013, 38, 14992-15002.	7.1	103

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55	The elasticâ€“plastic behaviour of foam under shock loading. Shock Waves, 2013, 23, 55-67.	1.9	39
56	The effect of particle strength on the ballistic resistance of shear thickening fluids. Applied Physics Letters, 2013, 102, .	3.3	52
57	Degradation Behavior of Nanostructured Stent Materials Using Cold Spray. , 2013, , .		1
58	Experimental technique for direct observation of onset of reaction in shocked powder mixtures. , 2012, , .		0
59	Shock initiation of powder mixtures of aluminum with dense metal oxides. AIP Conference Proceedings, 2012, , .	0.4	2
60	Shock-induced formation of a disordered solid from a dense particle suspension. , 2012, , .		2
61	Development of instabilities in explosively dispersed particles. , 2012, , .		4
62	On the Relationship between Shock and Thermal Initiating Conditions for Various Reactive Powder Mixtures. Propellants, Explosives, Pyrotechnics, 2012, 37, 345-358.	1.6	5
63	Formation of a disordered solid via a shock-induced transition in a dense particle suspension. Physical Review E, 2012, 85, 021401.	2.1	12
64	Lateral stress measurements in dense suspensions. AIP Conference Proceedings, 2012, , .	0.4	5
65	In-situ measurements of the onset of bulk exothermicity in shock initiation of reactive powder mixtures. Journal of Applied Physics, 2011, 109, .	2.5	22
66	Blast wave attenuation through a composite of varying layer distribution. Shock Waves, 2011, 21, 215-224.	1.9	19
67	Numerical modelling of the entrainment of particles in inviscid supersonic flow. Shock Waves, 2011, 21, 341-355.	1.9	11
68	Simplified modeling of blast waves from metalized heterogeneous explosives. Shock Waves, 2011, 21, 425-438.	1.9	13
69	Preignition characteristics of nano- and micrometer-scale aluminum particles in Alâ€“CO2 oxidation systems. Proceedings of the Combustion Institute, 2009, 32, 1913-1919.	3.9	18
70	TIME-RESOLVED TEMPERATURE MEASUREMENTS OF SHOCK INITIATION IN HETEROGENEOUS EXOTHERMIC MIXTURES. , 2009, , .		1
71	EFFECT OF PARTICLE MORPHOLOGY ON CRITICAL CONDITIONS FOR SHOCK-INITIATED REACTIONS IN TITANIUM-SILICON POWDER MIXTURES. AIP Conference Proceedings, 2009, , .	0.4	1
72	EFFECT OF PARTICLE MORPHOLOGY ON THE REACTIVITY OF EXPLOSIVELY DISPERSED TITANIUM PARTICLES. , 2009, , .		0

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73	REACTION OF TITANIUM AND ZIRCONIUM PARTICLES IN CYLINDRICAL EXPLOSIVE CHARGES. , 2008, , .		1
74	Particle momentum effects from the detonation of heterogeneous explosives. Journal of Applied Physics, 2007, 101, 113529.	2.5	67
75	Optical Pyrometry of Fireballs of Metalized Explosives. Propellants, Explosives, Pyrotechnics, 2006, 31, 169-181.	1.6	64
76	Critical Conditions for Ignition of Aluminum Particles in Cylindrical Explosive Charges. AIP Conference Proceedings, 2006, , .	0.4	10
77	Near-Field Impulse Effects From Detonation of Heterogeneous Explosives. AIP Conference Proceedings, 2002, , .	0.4	2
78	Front curvature analysis and detonation shock dynamics calibration for pure and sensitized nitromethane. AIP Conference Proceedings, 2000, , .	0.4	3
79	Effect of an inhibitor on high-speed turbulent flames and the transition to detonation. Shock Waves, 1996, 5, 305-309.	1.9	4
80	Effect of an inhibitor on high-speed turbulent flames and the transition to detonation. Shock Waves, 1996, 5, 305-309.	1.9	0
81	Effect of diethylenetriamine sensitization on detonation of nitromethane in porous media. Combustion and Flame, 1995, 100, 292-300.	5.2	19
82	Propagation of nitromethane detonations in porous media. Shock Waves, 1995, 5, 115-119.	1.9	22
83	Two-dimensional autocorrelation function analysis of smoked foil patterns. Shock Waves, 1995, 5, 169-174.	1.9	14
84	Effect of boundary conditions on the propagation of a vapor explosion in stratified molten tin/water systems. Nuclear Engineering and Design, 1995, 155, 311-333.	1.7	11
85	Fragmentation mechanisms based on single drop steam explosion experiments using flash X-ray radiography. Nuclear Engineering and Design, 1994, 146, 109-132.	1.7	57
86	Numerical computation of underwater explosions due to Fuelâ€"coolant interactions. Nuclear Engineering and Design, 1994, 146, 165-179.	1.7	3
87	The use of Hugoniot analysis for the propagation of vapor explosion waves. Shock Waves, 1991, 1, 99-110.	1.9	24
88	Initiation of explosive boiling of a droplet with a shock wave. Experiments in Fluids, 1989, 8, 121-128.	2.4	10
89	Dynamics of explosive boiling of a droplet. Physics of Fluids, 1988, 31, 2554-2561.	1.4	71