Edward L Dreizin

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Ignition Mechanisms of Reactive Nanocomposite Powders Combining Al, B, and Si as Fuels with Metal Fluorides as Oxidizers. Combustion Science and Technology, 2023, 195, 597-618.	1.2	6
2	At what ambient temperature can thermal runaway of a burning metal particle occur?. Combustion and Flame, 2022, 236, 111800.	2.8	12
3	Effect of particle morphology on reactivity, ignition and combustion of boron powders. Fuel, 2022, 324, 124538.	3.4	17
4	Atomic Scale Insights into the First Reaction Stages Prior to Al/CuO Nanothermite Ignition: Influence of Porosity. ACS Applied Materials & Interfaces, 2022, 14, 29451-29461.	4.0	11
5	Effect of Purity, Surface Modification and Iron Coating on Ignition and Combustion of Boron in Air. Combustion Science and Technology, 2021, 193, 1567-1586.	1.2	11
6	Rapid destruction of sarin surrogates by gas phase reactions with focus on diisopropyl methylphosphonate (DIMP). Defence Technology, 2021, 17, 703-714.	2.1	12
7	Iodine Release by Combustion of Composite Mgâ˘™Ca(IO3)2 Powder. Combustion Science and Technology, 2021, 193, 1042-1054.	1.2	3
8	Combustion of Composites of Boron with Bismuth and Cobalt Fluorides in Different Environments. Combustion Science and Technology, 2021, 193, 1343-1358.	1.2	6
9	Transition Metal Catalysts for Boron Combustion. Combustion Science and Technology, 2021, 193, 1400-1424.	1.2	14
10	Effect of metal nitrate on mechanochemical nitration of toluene. Reaction Chemistry and Engineering, 2021, 6, 2050-2057.	1.9	1
11	Low-Temperature Exothermic Reactions in Al/CuO Nanothermites Producing Copper Nanodots and Accelerating Combustion. ACS Applied Nano Materials, 2021, 4, 3811-3820.	2.4	26
12	Fast energy release from reactive materials under shock compression. Applied Physics Letters, 2021, 118, 101902.	1.5	4
13	Study of particle lifting mechanisms in an electrostatic discharge plasma. International Journal of Multiphase Flow, 2021, 137, 103564.	1.6	11
14	Boron-Rich Composite Thermite Powders with Binary Bi₂O₃Â·CuO Oxidizers. Energy & Fuels, 2021, 35, 10327-10338.	2.5	4
15	Zirconium-boron reactive composite powders prepared by arrested reactive milling. Journal of Energetic Materials, 2020, 38, 142-161.	1.0	11
16	Microspheres with Diverse Material Compositions Can be Prepared by Mechanical Milling. Advanced Engineering Materials, 2020, 22, 1901204.	1.6	19
17	Bismuth fluoride-coated boron powders as enhanced fuels. Combustion and Flame, 2020, 221, 1-10.	2.8	31
18	Preparation and Characterization of Silicon-Metal Fluoride Reactive Composites. Nanomaterials, 2020, 10, 2367.	1.9	5

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19	Mechanochemical nitration of toluene with metal oxide catalysts. Applied Catalysis A: General, 2020, 601, 117604.	2.2	6
20	Fluorine-containing oxidizers for metal fuels in energetic formulations. Defence Technology, 2019, 15, 1-22.	2.1	112
21	Displacement of powders from surface by shock and plasma generated by electrostatic discharge. Journal of Electrostatics, 2019, 100, 103353.	1.0	7
22	Combustion of Aluminumâ€Metal Fluoride Reactive Composites in Different Environments. Propellants, Explosives, Pyrotechnics, 2019, 44, 1327-1336.	1.0	17
23	Fuel-rich aluminumâ€“nickel fluoride reactive composites. Combustion and Flame, 2019, 210, 439-453.	2.8	18
24	Heterogeneous reaction kinetics for oxidation and combustion of boron. Thermochimica Acta, 2019, 682, 178415.	1.2	19
25	Boron doped with iron: Preparation and combustion in air. Combustion and Flame, 2019, 200, 286-295.	2.8	51
26	Reactive Shell Model for Boron Oxidation. Journal of Physical Chemistry C, 2019, 123, 11807-11813.	1.5	15
27	Composite Alâˆ™Ti powders prepared by high-energy milling with different process controls agents. Advanced Powder Technology, 2019, 30, 1319-1328.	2.0	14
28	Combustion of a rapidly initiated fully dense nanocomposite Alâ€“CuO thermite powder. Combustion Theory and Modelling, 2019, 23, 651-673.	1.0	5
29	Preparation, ignition, and combustion of magnesium-calcium iodate reactive nano-composite powders. Chemical Engineering Journal, 2019, 359, 955-962.	6.6	12
30	Combustion of boron and boronâ€“iron composite particles in different oxidizers. Combustion and Flame, 2018, 192, 44-58.	2.8	69
31	Combustion of Mg and composite MgÂ·S powders in different oxidizers. Combustion and Flame, 2018, 195, 292-302.	2.8	15
32	Inactivation of aerosolized surrogates of Bacillus anthracis spores by combustion products of aluminum- and magnesium-based reactive materials: Effect of exposure time. Aerosol Science and Technology, 2018, 52, 579-587.	1.5	8
33	High density reactive composite powders. Journal of Alloys and Compounds, 2018, 735, 1863-1870.	2.8	11
34	Nanocomposite thermite powders with improved flowability prepared by mechanical milling. Powder Technology, 2018, 327, 368-380.	2.1	22
35	Reactive Composite Boronâ€“Magnesium Powders Prepared byÂMechanical Milling. Journal of Propulsion and Power, 2018, 34, 787-794.	1.3	22
36	Mechanochemical Nitration of Aromatic Compounds. Journal of Energetic Materials, 2018, 36, 191-201.	1.0	8

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37	Reactive Structural Materials: Preparation and Characterization. Advanced Engineering Materials, 2018, 20, 1700631.	1.6	63
38	Effect of milling temperature on structure and reactivity of Alâ€"Ni composites. Journal of Materials Science, 2018, 53, 1178-1190.	1.7	8
39	Biocidal effectiveness of combustion products of iodine-bearing reactive materials against aerosolized bacterial spores. Journal of Aerosol Science, 2018, 116, 106-115.	1.8	19
40	Combustion of Magnesium-Sulfur Composite Particles Ignited by Different Stimuli. Propellants, Explosives, Pyrotechnics, 2018, 43, 1178-1183.	1.0	1
41	Effect of process parameters on mechanochemical nitration of toluene. Journal of Materials Science, 2018, 53, 13690-13700.	1.7	11
42	Modes of Ignition of Powder Layers of Nanocomposite Thermites by Electrostatic Discharge. Journal of Energetic Materials, 2017, 35, 29-43.	1.0	15
43	Mechanochemically prepared reactive and energetic materials: a review. Journal of Materials Science, 2017, 52, 11789-11809.	1.7	85
44	Effect of purity and surface modification on stability and oxidation kinetics of boron powders. Thermochimica Acta, 2017, 652, 17-23.	1.2	32
45	Combustion of Boron and Boron-Containing Reactive Composites in Laminar and Turbulent Air Flows. Combustion Science and Technology, 2017, 189, 683-697.	1.2	24
46	Metal-rich aluminumâ€"polytetrafluoroethylene reactive composite powders prepared by mechanical milling at different temperatures. Journal of Materials Science, 2017, 52, 7452-7465.	1.7	32
47	Boron-based reactive materials with high concentrations of iodine as a biocidal additive. Chemical Engineering Journal, 2017, 325, 495-501.	6.6	21
48	Nanocomposite Thermites with Calcium Iodate Oxidizer. Propellants, Explosives, Pyrotechnics, 2017, 42, 284-292.	1.0	27
49	Combustion Characteristics of Stoichiometric Al-CuO Nanocomposite Thermites Prepared by Different Methods. Combustion Science and Technology, 2017, 189, 555-574.	1.2	37
50	Aluminum-based materials for inactivation of aerosolized spores of <i>Bacillus anthracis</i> surrogates. Aerosol Science and Technology, 2017, 51, 224-234.	1.5	14
51	Preparation, Ignition, and Combustion of MgÂ·S Reactive Nanocomposites. Combustion Science and Technology, 2016, 188, 1345-1364.	1.2	14
52	Combustion of Energetic Porous Silicon Composites Containing Different Oxidizers. Propellants, Explosives, Pyrotechnics, 2016, 41, 179-188.	1.0	22
53	Combustion of thermite mixtures based on mechanically alloyed aluminumâ€"iodine material. Combustion and Flame, 2016, 164, 164-166.	2.8	19
54	Ignition and combustion of boron-based AlÂ·BÂ·I2 and MgÂ·BÂ·I2 composites. Chemical Engineering Journal, 2016, 293, 112-117.	6.6	32

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55	Effect of flow conditions on burn rates of metal particles. Combustion and Flame, 2016, 168, 10-19.	2.8	30
56	Oxidation of nano-sized aluminum powders. Thermochimica Acta, 2016, 636, 48-56.	1.2	65
57	Bimetal Alâ€“Ni nano-powders for energetic formulations. Combustion and Flame, 2016, 173, 179-186.	2.8	30
58	Oxidation kinetics and combustion of boron particles with modified surface. Combustion and Flame, 2016, 173, 288-295.	2.8	89
59	Combustion of boron particles in products of an airâ€“acetylene flame. Combustion and Flame, 2016, 172, 194-205.	2.8	52
60	Oxidation of differently prepared Al-Mg alloy powders in oxygen. Journal of Alloys and Compounds, 2016, 685, 402-410.	2.8	10
61	Initial stages of oxidation of aluminum powder in oxygen. Journal of Thermal Analysis and Calorimetry, 2016, 125, 129-141.	2.0	25
62	Reactive Liners Prepared Using Powders of Aluminum and Aluminum-Magnesium Alloys. Propellants, Explosives, Pyrotechnics, 2016, 41, 605-611.	1.0	13
63	Reactive Materials for Evaporating Samarium. Propellants, Explosives, Pyrotechnics, 2016, 41, 926-935.	1.0	3
64	Oxidation of Magnesium: Implication for Aging and Ignition. Journal of Physical Chemistry C, 2016, 120, 974-983.	1.5	43
65	Mechanically alloyed magnesiumâ€“boronâ€“iodine composite powders. Journal of Materials Science, 2016, 51, 3585-3591.	1.7	14
66	Energy storage materials with oxide-encapsulated inclusions of low melting metal. Acta Materialia, 2016, 107, 254-260.	3.8	11
67	Combustion of Mechanically Alloyed Aluminumâ€Magnesium Powders in Steam. Propellants, Explosives, Pyrotechnics, 2015, 40, 749-754.	1.0	10
68	Combustion of magnesium powders in products of an air/acetylene flame. Combustion and Flame, 2015, 162, 1316-1325.	2.8	40
69	Correlating ignition mechanisms of aluminum-based reactive materials with thermoanalytical measurements. Progress in Energy and Combustion Science, 2015, 50, 81-105.	15.8	65
70	Combustion of Mechanically Alloyed Alâˆ™Mg Powders in Products of a Hydrocarbon Flame. Combustion Science and Technology, 2015, 187, 807-825.	1.2	37
71	Ignition and combustion of AlÂ·Mg alloy powders prepared by different techniques. Combustion and Flame, 2015, 162, 1440-1447.	2.8	58
72	Hydrogen generation from ammonia borane and water through combustion reactions with mechanically alloyed AlÂ·Mg powder. Combustion and Flame, 2015, 162, 1498-1506.	2.8	27

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73	Effect of composition on properties of reactive AlÂ·BÂ·I2 powders prepared by mechanical milling. Journal of Physics and Chemistry of Solids, 2015, 83, 1-7.	1.9	19
74	Electro-Static Discharge Ignition of Monolayers of Nanocomposite Thermite Powders Prepared by Arrested Reactive Milling. Combustion Science and Technology, 2015, 187, 1276-1294.	1.2	9
75	Exploring mechanisms for agglomerate reduction in composite solid propellants with polyethylene inclusion modified aluminum. Combustion and Flame, 2015, 162, 846-854.	2.8	75
76	Depression of melting point for protective aluminum oxide films. Chemical Physics Letters, 2015, 618, 63-65.	1.2	17
77	Validation of the Thermal Oxidation Model for Al/CuO Nanocomposite Powder. Combustion Science and Technology, 2014, 186, 47-67.	1.2	18
78	Aluminumâ€"Iodoform Composite Reactive Material. Advanced Engineering Materials, 2014, 16, 909-917.	1.6	15
79	Nanocomposite and mechanically alloyed reactive materials as energetic additives in chemical oxygen generators. Combustion and Flame, 2014, 161, 2708-2716.	2.8	18
80	Kinetics of thermal decomposition of a synthetic Kâ€"H3O jarosite analog. Journal of Thermal Analysis and Calorimetry, 2014, 115, 609-620.	2.0	5
81	Iodine-containing aluminum-based fuels for inactivation of bioaerosols. Combustion and Flame, 2014, 161, 303-310.	2.8	29
82	Effect of surface tension on the temperature of burning metal droplets. Combustion and Flame, 2014, 161, 3263-3266.	2.8	10
83	Low-temperature exothermic reactions in fully-dense Al/MoO3 nanocomposite powders. Thermochimica Acta, 2014, 594, 1-10.	1.2	23
84	Ignition of Nanocomposite Thermites by Electric Spark and Shock Wave. Propellants, Explosives, Pyrotechnics, 2014, 39, 444-453.	1.0	20
85	Ignition of Fully Dense Nanocomposite Thermite Powders by an Electric Spark. Journal of Propulsion and Power, 2014, 30, 765-774.	1.3	15
86	Evaluation of Kâ€"H3O jarosite as thermal witness material. Journal of Thermal Analysis and Calorimetry, 2014, 117, 141-149.	2.0	1
87	Reactive, Mechanically Alloyed AlÂ·Mg Powders with Customized Particle Sizes and Compositions. Journal of Propulsion and Power, 2014, 30, 96-104.	1.3	28
88	Model of heterogeneous combustion of small particles. Combustion and Flame, 2013, 160, 2982-2989.	2.8	24
89	Combustion of fine aluminum and magnesium powders in water. Combustion and Flame, 2013, 160, 2242-2250.	2.8	64
90	Ignition and combustion of mechanically alloyed Alâ€"Mg powders with customized particle sizes. Combustion and Flame, 2013, 160, 835-842.	2.8	79

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91	Combustion of micron-sized particles of titanium and zirconium. Proceedings of the Combustion Institute, 2013, 34, 2237-2243.	2.4	69
92	Reaction interface between aluminum and water. International Journal of Hydrogen Energy, 2013, 38, 11222-11232.	3.8	44
93	Correlation of optical emission and pressure generated upon ignition of fully-dense nanocomposite thermite powders. Combustion and Flame, 2013, 160, 734-741.	2.8	34
94	Reaction Interface for Heterogeneous Oxidation of Aluminum Powders. Journal of Physical Chemistry C, 2013, 117, 14025-14031.	1.5	56
95	Nearly Pure Aluminum Powders with Modified Protective Surface. Combustion Science and Technology, 2013, 185, 1360-1377.	1.2	5
96	Real time indicators of material refinement in an attritor mill. AICHE Journal, 2013, 59, 1088-1095.	1.8	4
97	Model of heating and ignition of conductive polydisperse powder in electrostatic discharge. Combustion Theory and Modelling, 2012, 16, 976-993.	1.0	8
98	A multi-step reaction model for ignition of fully-dense Al-CuO nanocomposite powders. Combustion Theory and Modelling, 2012, 16, 1011-1028.	1.0	30
99	Inactivation of Aerosolized <i>Bacillus atrophaeus</i> (BG) Endospores and MS2 Viruses by Combustion of Reactive Materials. Environmental Science & Technology, 2012, 46, 7334-7341.	4.6	42
100	On Weak Effect of Particle Size on Its Burn Time for Micron-Sized Aluminum Powders. Combustion Science and Technology, 2012, 184, 1993-2007.	1.2	20
101	Calorimetric investigation of the aluminumâ€“water reaction. International Journal of Hydrogen Energy, 2012, 37, 11035-11045.	3.8	39
102	Oxidation, ignition, and combustion of AlÂ·I2 composite powders. Combustion and Flame, 2012, 159, 1980-1986.	2.8	41
103	Low-temperature exothermic reactions in fully dense Alâ€“CuO nanocomposite powders. Thermochimica Acta, 2012, 527, 52-58.	1.2	39
104	Predicting conditions for scaled-up manufacturing of materials prepared by ball milling. Powder Technology, 2012, 221, 403-411.	2.1	66
105	Pyrophoricity of nano-sized aluminum particles. Journal of Nanoparticle Research, 2012, 14, 1.	0.8	25
106	OXIDATION, IGNITION AND COMBUSTION OF AL-HYDROCARBON COMPOSITE REACTIVE POWDERS. International Journal of Energetic Materials and Chemical Propulsion, 2012, 11, 353-373.	0.2	3
107	ON GAS RELEASE BY THERMALLY-INITIATED FULLY-DENSE 2AlÂ·3CuO NANOCOMPOSITE POWDER. International Journal of Energetic Materials and Chemical Propulsion, 2012, 11, 275-292.	0.2	9
108	Aluminum-Metal Reactive Composites. Combustion Science and Technology, 2011, 183, 1107-1132.	1.2	35

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109	Thermal Initiation of Al-MoO3 Nanocomposite Materials Prepared by Different Methods. Journal of Propulsion and Power, 2011, 27, 1079-1087.	1.3	35
110	Ignition of Titanium Powder Layers by Electrostatic Discharge. Combustion Science and Technology, 2011, 183, 823-845.	1.2	19
111	PARTICLE COMBUSTION DYNAMICS OF METAL-BASED REACTIVE MATERIALS. International Journal of Energetic Materials and Chemical Propulsion, 2011, 10, 297-319.	0.2	10
112	Combustion characteristics of micron-sized aluminum particles in oxygenated environments. Combustion and Flame, 2011, 158, 2064-2070.	2.8	93
113	Reactions leading to ignition in fully dense nanocomposite Al-oxide systems. Combustion and Flame, 2011, 158, 1076-1083.	2.8	38
114	Thermal initiation of consolidated nanocomposite thermites. Combustion and Flame, 2011, 158, 1631-1637.	2.8	27
115	Hydrogen production by reacting water with mechanically milled composite aluminum-metal oxide powders. International Journal of Hydrogen Energy, 2011, 36, 4781-4791.	3.8	170
116	Consolidation and mechanical properties of reactive nanocomposite powders. Powder Technology, 2011, 208, 637-642.	2.1	25
117	Method for Studying Survival of Airborne Viable Microorganisms in Combustion Environments: Development and Evaluation. Aerosol and Air Quality Research, 2010, 10, 414-424.	0.9	32
118	The effect of surface modification of aluminum powder on its flowability, combustion and reactivity. Powder Technology, 2010, 204, 63-70.	2.1	67
119	Mechanically alloyed Alâ€“I composite materials. Journal of Physics and Chemistry of Solids, 2010, 71, 1213-1220.	1.9	42
120	Aluminum particle ignition in different oxidizing environments. Combustion and Flame, 2010, 157, 1356-1363.	2.8	38
121	Combustion times and emission profiles of micron-sized aluminum particles burning in different environments. Combustion and Flame, 2010, 157, 2015-2023.	2.8	78
122	Characteristics of Aluminum Combustion Obtained from Constant-Volume Explosion Experiments. Combustion Science and Technology, 2010, 182, 904-921.	1.2	31
123	Oxidation of Aluminum Particles in Mixed CO₂/H₂O Atmospheres. Journal of Physical Chemistry C, 2010, 114, 18925-18930.	1.5	18
124	Iodine Release, Oxidation, and Ignition of Mechanically Alloyed Alâˆ’I Composites. Journal of Physical Chemistry C, 2010, 114, 19653-19659.	1.5	43
125	Aluminum Powder Oxidation in CO₂ and Mixed CO₂/O₂ Environments. Journal of Physical Chemistry C, 2009, 113, 6768-6773.	1.5	23
126	Nanocomposite thermite powders prepared by cryomilling. Journal of Alloys and Compounds, 2009, 488, 386-391.	2.8	50

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127	Oxidation of Aluminum Particles in the Presence of Water. Journal of Physical Chemistry B, 2009, 113, 5136-5140.	1.2	50
128	On problems of isoconversion data processing for reactions in Al-rich Alâ€“MoO3 thermites. Thermochimica Acta, 2008, 477, 1-6.	1.2	22
129	Fully Dense, Aluminum-Rich Al-CuO Nanocomposite Powders for Energetic Formulations. Combustion Science and Technology, 2008, 181, 97-116.	1.2	84
130	Aluminum-Rich Al-MoO3 Nanocomposite Powders Prepared by Arrested Reactive Milling. Journal of Propulsion and Power, 2008, 24, 192-198.	1.3	97
131	Kinetic Analysis of Thermite Reactions in Al-MoO3 Nanocomposites. Journal of Propulsion and Power, 2007, 23, 683-687.	1.3	56
132	Oxidation and Melting of Aluminum Nanopowders. Journal of Physical Chemistry B, 2006, 110, 13094-13099.	1.2	143
133	Effect of polymorphic phase transformations in alumina layer on ignition of aluminium particles. Combustion Theory and Modelling, 2006, 10, 603-623.	1.0	281
134	Control of Structural Refinement and Composition in Al-MoO3 Nanocomposites Prepared by Arrested Reactive Milling. Propellants, Explosives, Pyrotechnics, 2006, 31, 382-389.	1.0	74
135	Ignition of aluminum-rich Alâ€“Ti mechanical alloys in air. Combustion and Flame, 2006, 144, 688-697.	2.8	94
136	Experimental methodology and heat transfer model for identification of ignition kinetics of powdered fuels. International Journal of Heat and Mass Transfer, 2006, 49, 4943-4954.	2.5	109
137	A study of mechanical alloying processes using reactive milling and discrete element modeling. Acta Materialia, 2005, 53, 2909-2918.	3.8	79
138	Effect of polymorphic phase transformations in Al2O3 film on oxidation kinetics of aluminum powders. Combustion and Flame, 2005, 140, 310-318.	2.8	448
139	Numerical Simulation of Mechanical Alloying in a Shaker Mill by Discrete Element Method. KONA Powder and Particle Journal, 2005, 23, 152-162.	0.9	10
140	Effect of temperature on synthesis and properties of aluminumâ€“magnesium mechanical alloys. Journal of Alloys and Compounds, 2005, 402, 70-77.	2.8	33
141	Morphology and composition of the fly ash particles produced in incineration of municipal solid waste. Fuel Processing Technology, 2002, 75, 173-184.	3.7	50
142	The Effect of Heating Rate on Combustion of Fully Dense Nanocomposite Thermite Particles. Combustion Science and Technology, 0, , 1-19.	1.2	4