

# Steve F Son

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1196161/publications.pdf>

Version: 2024-02-01

248  
papers

8,466  
citations

41323

49  
h-index

58549

82  
g-index

256  
all docs

256  
docs citations

256  
times ranked

3852  
citing authors

#	ARTICLE	IF	CITATIONS
1	Metal particle combustion and nanotechnology. Proceedings of the Combustion Institute, 2009, 32, 1819-1838.	2.4	680
2	Two-phase modeling of deflagration-to-detonation transition in granular materials: Reduced equations. Physics of Fluids, 2001, 13, 3002-3024.	1.6	456
3	Combustion velocities and propagation mechanisms of metastable interstitial composites. Journal of Applied Physics, 2005, 98, 064903.	1.1	249
4	Reaction Propagation of Four Nanoscale Energetic Composites (Al/MoO <sub>3</sub> , Al/WO <sub>3</sub> , Al/CuO, and B <sub>12</sub> O <sub>3</sub> ). Journal of Propulsion and Power, 2007, 23, 707-714.	1.3	249
5	Aluminum agglomeration reduction in a composite propellant using tailored Al/PTFE particles. Combustion and Flame, 2014, 161, 311-321.	2.8	224
6	Two-phase modeling of deflagration-to-detonation transition in granular materials: A critical examination of modeling issues. Physics of Fluids, 1999, 11, 378-402.	1.6	200
7	Ultralow-Density Nanostructured Metal Foams: A Combustion Synthesis, Morphology, and Composition. Journal of the American Chemical Society, 2006, 128, 6589-6594.	6.6	200
8	Combustion of nano-aluminum and liquid water. Proceedings of the Combustion Institute, 2007, 31, 2029-2036.	2.4	175
9	Melt dispersion mechanism for fast reaction of nanothermites. Applied Physics Letters, 2006, 89, 071909.	1.5	159
10	Combustion of Nanoscale Al/MoO <sub>3</sub> Thermite in Microchannels. Journal of Propulsion and Power, 2007, 23, 715-721.	1.3	155
11	Flame acceleration and the transition to detonation of stoichiometric ethylene/oxygen in microscale tubes. Proceedings of the Combustion Institute, 2007, 31, 2429-2436.	2.4	134
12	Mechanochemical mechanism for fast reaction of metastable intermolecular composites based on dispersion of liquid metal. Journal of Applied Physics, 2007, 101, 083524.	1.1	131
13	Altering Reactivity of Aluminum with Selective Inclusion of Polytetrafluoroethylene through Mechanical Activation. Propellants, Explosives, Pyrotechnics, 2013, 38, 286-295.	1.0	121
14	Thermal Explosion in Al-Ni System: Influence of Mechanical Activation. Journal of Physical Chemistry A, 2009, 113, 13541-13547.	1.1	101
15	Tailored Reactivity of Ni+Al Nanocomposites: Microstructural Correlations. Journal of Physical Chemistry C, 2012, 116, 21027-21038.	1.5	97
16	Novel High Nitrogen Propellant Use in Solid Fuel Micropropulsion. Journal of Propulsion and Power, 2004, 20, 120-126.	1.3	94
17	Additive manufacturing of ammonium perchlorate composite propellant with high solids loadings. Proceedings of the Combustion Institute, 2019, 37, 3135-3142.	2.4	93
18	Steady Deflagration of HMX With Simple Kinetics: A Gas Phase Chain Reaction Model. Combustion and Flame, 1998, 114, 556-568.	2.8	92

#	ARTICLE	IF	CITATIONS
19	Dynamics of phase transformation during thermal explosion in the Al-Ni system: Influence of mechanical activation. <i>Physica B: Condensed Matter</i> , 2010, 405, 778-784.	1.3	91
20	Two-phase modeling of DDT: Structure of the velocity-relaxation zone. <i>Physics of Fluids</i> , 1997, 9, 3885-3897.	1.6	90
21	Design and Synthesis of a Series of Nitrogen-Rich Energetic Cocrystals of 5,5-Dinitro-2,2,3,3-tetraazobis-1,2,4-triazole (DNBT). <i>Crystal Growth and Design</i> , 2015, 15, 2545-2549.	1.4	88
22	Kinetics of High Temperature Reaction in Ni-Al System: Influence of Mechanical Activation. <i>Journal of Physical Chemistry A</i> , 2010, 114, 6111-6116.	1.1	81
23	Dynamic Measurement of the HMX Phase Transition by Second Harmonic Generation. <i>Physical Review Letters</i> , 1999, 82, 1213-1216.	2.9	80
24	The effect of stoichiometry on the combustion behavior of a nanoscale Al/MoO <sub>3</sub> thermite. <i>Proceedings of the Combustion Institute</i> , 2009, 32, 1921-1928.	2.4	79
25	Combustion of damaged PBX 9501 explosive. <i>Thermochimica Acta</i> , 2002, 384, 261-277.	1.2	77
26	Exploring mechanisms for agglomerate reduction in composite solid propellants with polyethylene inclusion modified aluminum. <i>Combustion and Flame</i> , 2015, 162, 846-854.	2.8	75
27	Thermal and Impact Reaction Initiation in Ni/Al Heterogeneous Reactive Systems. <i>Journal of Physical Chemistry C</i> , 2010, 114, 14772-14780.	1.5	72
28	Hypergolic ionic liquids to mill, suspend, and ignite boron nanoparticles. <i>Chemical Communications</i> , 2012, 48, 4311.	2.2	72
29	Additive manufacturing of multifunctional reactive materials. <i>Additive Manufacturing</i> , 2017, 17, 176-182.	1.7	72
30	The effect of decorated graphene addition on the burning rate of ammonium perchlorate composite propellants. <i>Combustion and Flame</i> , 2017, 183, 322-329.	2.8	71
31	The role of gas permeation in convective burning. <i>International Journal of Multiphase Flow</i> , 1996, 22, 923-952.	1.6	67
32	Combustion of Silicon/Teflon/Viton and Aluminum/Teflon/Viton Energetic Composites. <i>Journal of Propulsion and Power</i> , 2010, 26, 734-743.	1.3	66
33	Ignition and combustion behavior of mechanically activated Al-Mg particles in composite solid propellants. <i>Combustion and Flame</i> , 2018, 194, 410-418.	2.8	66
34	Burn rate measurements of HMX, TATB, DHT, DAAF, and BTATz. <i>Proceedings of the Combustion Institute</i> , 2000, 28, 919-924.	2.4	64
35	Combustion and Conversion Efficiency of Nanoaluminum-Water Mixtures. <i>Combustion Science and Technology</i> , 2008, 180, 2127-2142.	1.2	61
36	Mechanical activation and gasless explosion: Nanostructural aspects. <i>Chemical Engineering Journal</i> , 2011, 174, 677-686.	6.6	59

#	ARTICLE	IF	CITATIONS
37	Coupling micro and meso-scale combustion models of AP/HTPB propellants. Combustion and Flame, 2013, 160, 982-992.	2.8	59
38	The effect of encapsulated nanosized catalysts on the combustion of composite solid propellants. Combustion and Flame, 2015, 162, 1821-1828.	2.8	59
39	Linear burning rate dynamics of solids subjected to pressure or external radiant heat flux oscillations. Journal of Propulsion and Power, 1993, 9, 222-232.	1.3	56
40	High speed X-ray phase contrast imaging of energetic composites under dynamic compression. Applied Physics Letters, 2016, 109, .	1.5	56
41	A mechanism for shattering microexplosions and dispersive boiling phenomena in aluminum-lithium alloy based solid propellant. Proceedings of the Combustion Institute, 2017, 36, 2309-2316.	2.4	56
42	Combustion Behaviors Resulting from Bimodal Aluminum Size Distributions in Thermites. Journal of Propulsion and Power, 2007, 23, 181-185.	1.3	55
43	The Effect of Added $Al_2O_3$ on the Propagation Behavior of an Al/CuO Nanoscale Thermite. Combustion Science and Technology, 2008, 180, 1278-1294.	1.2	55
44	High-repetition-rate three-dimensional OH imaging using scanned planar laser-induced fluorescence system for multiphase combustion. Applied Optics, 2014, 53, 316.	0.9	55
45	3D printing of extremely viscous materials using ultrasonic vibrations. Additive Manufacturing, 2018, 22, 98-103.	1.7	55
46	High-irradiance laser ignition of explosives. Combustion Science and Technology, 2003, 175, 1551-1571.	1.2	53
47	Combustion characteristics of nanoaluminum, liquid water, and hydrogen peroxide mixtures. Combustion and Flame, 2008, 154, 587-600.	2.8	53
48	New High-Nitrogen Materials Based on Nitroguanyl-Tetrazines: Explosive Properties, Thermal Decomposition and Combustion Studies. Propellants, Explosives, Pyrotechnics, 2005, 30, 412-417.	1.0	51
49	Removing hydrochloric acid exhaust products from high performance solid rocket propellant using aluminum-lithium alloy. Journal of Hazardous Materials, 2016, 317, 259-266.	6.5	51
50	Experimental modeling of explosive blast-related traumatic brain injuries. NeuroImage, 2011, 54, S45-S54.	2.1	50
51	An experimental study of the effects of catalysts on an ammonium perchlorate based composite propellant using 5kHz PLIF. Combustion and Flame, 2012, 159, 1748-1758.	2.8	49
52	Effect of Solids Loading on Resonant Mixed $Al_2O_3$ Nanothermite Powders. Propellants, Explosives, Pyrotechnics, 2013, 38, 605-610.	1.0	48
53	Mechanical, pyrolysis, and combustion characterization of briquetted coal fines with municipal solid waste plastic (MSW) binders. Fuel, 2014, 115, 62-69.	3.4	48
54	Amine-Boranes: Green Hypergolic Fuels with Consistently Low Ignition Delays. Chemistry - A European Journal, 2014, 20, 16869-16872.	1.7	47

#	ARTICLE	IF	CITATIONS
55	Introduction: Nanoscale Composite Energetic Materials. Journal of Propulsion and Power, 2007, 23, 643-644.	1.3	46
56	Quasi-steady combustion modeling of homogeneous solid propellants. Combustion and Flame, 1995, 103, 11-26.	2.8	44
57	Graphene Oxide/Ammonium Perchlorate Composite Material for Use in Solid Propellants. Journal of Propulsion and Power, 2016, 32, 682-686.	1.3	44
58	Microexplosions and ignition dynamics in engineered aluminum/polymer fuel particles. Combustion and Flame, 2017, 176, 162-171.	2.8	44
59	Prediction of Energetic Material Properties from Electronic Structure Using 3D Convolutional Neural Networks. Journal of Chemical Information and Modeling, 2020, 60, 4457-4473.	2.5	42
60	The role of microstructure refinement on the impact ignition and combustion behavior of mechanically activated Ni/Al reactive composites. Journal of Applied Physics, 2013, 114, 113501.	1.1	41
61	Laser ignition of CL-20 (hexanitrohexaazaisowurtzitane) cocrystals. Combustion and Flame, 2018, 188, 104-115.	2.8	40
62	Combustion of micron-aluminum and hydrogen peroxide propellants. Combustion and Flame, 2013, 160, 184-190.	2.8	37
63	Dynamic Observation of a Thermally Activated Structure Change in 1,3,5-Triamino-2,4,6-trinitrobenzene (TATB) by Second Harmonic Generation. Journal of Physical Chemistry B, 1999, 103, 5434-5440.	1.2	36
64	Selectively-deposited energetic materials: A feasibility study of the piezoelectric inkjet printing of nanothermites. Additive Manufacturing, 2018, 22, 69-74.	1.7	36
65	Combustion of Nanoaluminum and Water Propellants: Effect of Equivalence Ratio and Safety/Aging Characterization. Propellants, Explosives, Pyrotechnics, 2013, 38, 56-66.	1.0	35
66	Performance of Dicyclopentadiene/H2O2-Based Hybrid Rocket Motors with Metal Hydride Additives. Journal of Propulsion and Power, 2013, 29, 1122-1129.	1.3	35
67	Photoflash and laser ignition of select high-nitrogen materials. Combustion and Flame, 2016, 167, 207-217.	2.8	35
68	Role of gas- and condensed-phase kinetics in burning rate control of energetic solids. Combustion Theory and Modelling, 1998, 2, 293-312.	1.0	35
69	Feasibility Study and Demonstration of an Aluminum and Ice Solid Propellant. International Journal of Aerospace Engineering, 2012, 2012, 1-11.	0.5	34
70	Two-component additive manufacturing of nanothermite structures via reactive inkjet printing. Journal of Applied Physics, 2017, 122, .	1.1	34
71	Tailoring burning rates using reactive wires in composite solid rocket propellants. Proceedings of the Combustion Institute, 2017, 36, 2283-2290.	2.4	34
72	Characterization of HMX particles in PBX 9501. , 1998, , .		33

#	ARTICLE	IF	CITATIONS
73	Thermal and mechanical response of PBX 9501 under contact excitation. Journal of Applied Physics, 2013, 113, 084904.	1.1	33
74	Solid Amine Boranes as High-Performance and Hypergolic Hybrid Rocket Fuels. Journal of Propulsion and Power, 2016, 32, 23-31.	1.3	33
75	Agglomerate Sizing in Aluminized Propellants Using Digital Inline Holography and Traditional Diagnostics. Journal of Propulsion and Power, 2018, 34, 1002-1014.	1.3	31
76	Combustion Performance of Several Nanosilicon-Based Nanoenergetics. Journal of Propulsion and Power, 2013, 29, 1435-1444.	1.3	30
77	Tailoring the reactivity of printable Al/PVDF filament. Combustion and Flame, 2021, 223, 110-117.	2.8	30
78	Experimental observation of the flame structure of a bimodal ammonium perchlorate composite propellant using 5 kHz PLIF. Combustion and Flame, 2012, 159, 427-437.	2.8	29
79	Formulation and Characterization of a New Nitroglycerin-Free Double Base Propellant. Propellants, Explosives, Pyrotechnics, 2014, 39, 205-210.	1.0	29
80	Characterization of Ethylenediamine Bisborane as a Hypergolic Hybrid Rocket Fuel Additive. Journal of Propulsion and Power, 2015, 31, 365-372.	1.3	29
81	Rheological Characterization of Monomethylhydrazine Gels. Journal of Propulsion and Power, 2013, 29, 313-320.	1.3	28
82	Characterization of the Hypergolic Ignition Delay of Ammonia Borane. Journal of Propulsion and Power, 2019, 35, 182-189.	1.3	27
83	Development and Characterization of a Photopolymeric Binder for Additively Manufactured Composite Solid Propellant Using Vibration Assisted Printing. Propellants, Explosives, Pyrotechnics, 2020, 45, 853-863.	1.0	27
84	Characterization of components of nano-energetics by small-angle scattering techniques. Journal of Materials Research, 2007, 22, 1907-1920.	1.2	25
85	Convective burning in gaps of PBX 9501. Proceedings of the Combustion Institute, 2000, 28, 911-917.	2.4	24
86	X-Band Microwave Properties and Ignition Predictions of Neat Explosives. Propellants, Explosives, Pyrotechnics, 2013, 38, 810-817.	1.0	24
87	Microexplosion Investigation of Monomethylhydrazine Gelled Droplet with OH Planar Laser-Induced Fluorescence. Journal of Propulsion and Power, 2013, 29, 1303-1310.	1.3	24
88	Nano Aluminum Energetics: The Effect of Synthesis Method on Morphology and Combustion Performance. Propellants, Explosives, Pyrotechnics, 2011, 36, 551-557.	1.0	23
89	Solid-Fuel Regression Rates and Flame Characteristics in an Opposed Flow Burner. Journal of Propulsion and Power, 2014, 30, 1675-1682.	1.3	23
90	Combustion of mechanically activated Ni/Al reactive composites with microstructural refinement tailored using two-step milling. Intermetallics, 2015, 66, 88-95.	1.8	23

#	ARTICLE	IF	CITATIONS
91	Modifying Aluminum Reactivity with Poly(Carbon Monofluoride) via Mechanical Activation. Propellants, Explosives, Pyrotechnics, 2013, 38, 321-326.	1.0	22
92	An experimental and numerical study of blast induced shock wave mitigation in sandwich structures. Applied Acoustics, 2013, 74, 1-9.	1.7	22
93	Preparation and Characterization of Aqueous Nanothermite Inks for Direct Deposition on SCB Initiators. Propellants, Explosives, Pyrotechnics, 2014, 39, 463-470.	1.0	22
94	Photoflash and laser ignition of full density nano-aluminum PVDF films. Combustion and Flame, 2021, 233, 111570.	2.8	22
95	Unsteady combustion of homogeneous energetic solids using the laser-recoil method. Combustion and Flame, 1995, 100, 283-291.	2.8	21
96	Simplified Combustion Modeling of Double Base Propellant: Gas Phase Chain Reaction Vs. Thermal Decomposition. Combustion Science and Technology, 2000, 154, 2-30.	1.2	21
97	Nano-aluminum flame spread with fingering combustion instabilities. Proceedings of the Combustion Institute, 2007, 31, 2617-2624.	2.4	21
98	Characterization of the influence of aluminum particle size on the temperature of composite-propellant flames using CO absorption and AlO emission spectroscopy. Proceedings of the Combustion Institute, 2021, 38, 4365-4372.	2.4	21
99	Importance of the gas phase role to the prediction of energetic material behavior: An experimental study. Journal of Applied Physics, 2005, 97, 063505.	1.1	20
100	Combustion and Characterization of Nanoscale Aluminum and Ice Propellants. , 2008, , .		20
101	The impact of crystal morphology on the thermal responses of ultrasonically-excited energetic materials. Journal of Applied Physics, 2016, 119, .	1.1	20
102	RADIATION-AUGMENTED COMBUSTION OF HOMOGENEOUS SOLIDS. Combustion Science and Technology, 1995, 107, 127-154.	1.2	19
103	Preparation and Characterization of Energetic Crystals with Nanoparticle Inclusions. Propellants, Explosives, Pyrotechnics, 2012, 37, 635-638.	1.0	19
104	Effects of ammonia borane on the combustion of an ethanol droplet at atmospheric pressure. Combustion and Flame, 2013, 160, 2194-2203.	2.8	19
105	The Effect of Silicon Powder Characteristics on the Combustion of Silicon/Teflon/Viton Nanoenergetics. Propellants, Explosives, Pyrotechnics, 2014, 39, 337-347.	1.0	19
106	Performance and Aging of Mn/MnO <sub>2</sub> as an Environmentally Friendly Energetic Time Delay Composition. ACS Sustainable Chemistry and Engineering, 2014, 2, 1312-1317.	3.2	19
107	Detonation Velocity Measurement of a Hydrogen Peroxide Solvate of CL <sub>20</sub> . Propellants, Explosives, Pyrotechnics, 2019, 44, 313-318.	1.0	19
108	Void Collapse in Shocked $\alpha$ -HMX Single Crystals: Simulations and Experiments. Propellants, Explosives, Pyrotechnics, 2020, 45, 243-253.	1.0	19

#	ARTICLE	IF	CITATIONS
109	The effect of polymeric binder on composite propellant flame structure investigated with 5 kHz OH PLIF. <i>Combustion and Flame</i> , 2013, 160, 1531-1540.	2.8	18
110	Altering combustion of silicon/polytetrafluoroethylene with two-step mechanical activation. <i>Combustion and Flame</i> , 2015, 162, 1350-1357.	2.8	18
111	Oxidizer coarse-to-fine ratio effect on microscale flame structure in a bimodal composite propellant. <i>Combustion and Flame</i> , 2016, 163, 406-413.	2.8	18
112	The role of fracture in the impact initiation of Ni-Al intermetallic composite reactives during dynamic loading. <i>Acta Materialia</i> , 2017, 133, 247-257.	3.8	18
113	The diffusion flame structure of an ammonium perchlorate based composite propellant at elevated pressures. <i>Proceedings of the Combustion Institute</i> , 2013, 34, 649-656.	2.4	17
114	Heat generation in an elastic binder system with embedded discrete energetic particles due to high-frequency, periodic mechanical excitation. <i>Journal of Applied Physics</i> , 2014, 116, .	1.1	17
115	The effects of crystal proximity and crystal-binder adhesion on the thermal responses of ultrasonically-excited composite energetic materials. <i>Journal of Applied Physics</i> , 2017, 122, .	1.1	17
116	Detonation Performance Characterization of a Novel CL <sub>20</sub> Cocrystal Using Microwave Interferometry. <i>Propellants, Explosives, Pyrotechnics</i> , 2018, 43, 38-47.	1.0	17
117	The Effects of Confinement on the Fracturing Performance of Printed Nanothermites. <i>Propellants, Explosives, Pyrotechnics</i> , 2019, 44, 47-54.	1.0	17
118	Insight into the Chemistry of PETN Under Shock Compression Through Ultrafast Broadband Mid-Infrared Absorption Spectroscopy. <i>Journal of Physical Chemistry A</i> , 2020, 124, 7031-7046.	1.1	17
119	Burning rate and flame structure of cocrystals of CL-20 and a polycrystalline composite crystal of HMX/AP. <i>Combustion and Flame</i> , 2020, 219, 129-135.	2.8	17
120	Flame spread through cracks of PBX 9501 (a composite) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 307 Td (octahydro-1,3,5,7-tetranitro-1,3,114901.	1.1	16
121	Aluminum-ICE (ALICE) Propellants for Hydrogen Generation and Propulsion. , 2009, , .		16
122	Fate and Toxicity of CuO Nanospheres and Nanorods used in Al/CuO Nanothermites Before and After Combustion. <i>Environmental Science &amp; Technology</i> , 2013, 47, 11258-11267.	4.6	16
123	Controlled Substrate Destruction Using Nanothermite. <i>Propellants, Explosives, Pyrotechnics</i> , 2017, 42, 579-584.	1.0	16
124	The effect of the particle surface and binder properties on the response of polymer bonded explosives at low impact velocities. <i>Computational Materials Science</i> , 2019, 166, 170-178.	1.4	16
125	Ti/C-3Ni/Al as a Replacement Time Delay Composition. <i>Propellants, Explosives, Pyrotechnics</i> , 2014, 39, 138-147.	1.0	15
126	Near-surface flame structure characterization of simplified ammonium perchlorate/hydroxyl-terminated polybutadiene compositions. <i>Combustion and Flame</i> , 2016, 164, 201-211.	2.8	15



#	ARTICLE	IF	CITATIONS
127	Steady-State Hydrazinium Nitroformate (HNF) Combustion Modeling. Journal of Propulsion and Power, 1999, 15, 772-777.	1.3	14
128	Oxy-fuel combustion: Laboratory experiments and pilot scale tests. Fuel, 2013, 104, 452-461.	3.4	14
129	Performance and Flame Visualization of Dicyclopentadiene Rocket Propellants with Metal Hydride Additives. Journal of Propulsion and Power, 2016, 32, 869-881.	1.3	14
130	Experimental study of blast-induced traumatic brain injury using a physical head model. Stapp Car Crash Journal, 2009, 53, 215-27.	1.1	14
131	Microstructural transformations and kinetics of high-temperature heterogeneous gasless reactions by high-speed x-ray phase-contrast imaging. Physical Review B, 2009, 80, .	1.1	13
132	Reactive flow modeling of small scale detonation failure experiments for a baseline non-ideal explosive. Journal of Applied Physics, 2016, 120, .	1.1	13
133	High speed OH PLIF applied to multiphase combustion (Review). Combustion, Explosion and Shock Waves, 2016, 52, 1-13.	0.3	13
134	Influence of Stoichiometry on the Thrust and Heat Deposition of On-Chip Nanothermites. Propellants, Explosives, Pyrotechnics, 2018, 43, 258-266.	1.0	13
135	Characterization of an Aluminum-Lithium-Alloy-Based Composite Propellant at Elevated Pressures. Journal of Propulsion and Power, 2021, 37, 332-337.	1.3	13
136	Performance and Characterization of Nanoenergetic Materials at Los Alamos. Materials Research Society Symposia Proceedings, 2003, 800, 173.	0.1	12
137	Intermetallic Compounds as Fuels for Composite Rocket Propellants. , 2011, , .		12
138	Validation of Numerical Simulations for Nano-Aluminum Composite Solid Propellants. Journal of Propulsion and Power, 2011, 27, 1280-1287.	1.3	12
139	Fluoropolymer and aluminum piezoelectric reactives. AIP Conference Proceedings, 2012, , .	0.3	12
140	Dependence of Nano-Aluminum and Water Propellant Combustion on pH and Rheology. Combustion Science and Technology, 2013, 185, 817-834.	1.2	12
141	Composite Propellant Based on a New Nitrate Ester. Propellants, Explosives, Pyrotechnics, 2014, 39, 684-688.	1.0	12
142	Simulations of nanoscale Ni/Al multilayer foils with intermediate Ni <sub>2</sub> Al <sub>3</sub> growth. Journal of Applied Physics, 2015, 117, .	1.1	12
143	High-speed multi-spectral imaging of the hypergolic ignition of ammonia borane. Proceedings of the Combustion Institute, 2021, 38, 4433-4440.	2.4	12
144	Effects of flexoelectric and piezoelectric properties on the impact-driven ignition sensitivity of P(VDF-TrFE)/nAl films. Combustion and Flame, 2022, 242, 112181.	2.8	12

#	ARTICLE	IF	CITATIONS
145	Dynamic measurements of electrical conductivity in metastable intermolecular composites. Journal of Applied Physics, 2006, 99, 023705.	1.1	11
146	Energy release characteristics of the nanoscale aluminum-tungsten oxide hydrate metastable intermolecular composite. Journal of Applied Physics, 2007, 101, 064313.	1.1	11
147	Ignition of Gelled Monomethylhydrazine and Red Fuming Nitric Acid in an Impinging Jet Apparatus. , 2011, , .		11
148	Nanoscale Characterization of Mock Explosive Materials Using Advanced Atomic Force Microscopy Methods. Journal of Energetic Materials, 2015, 33, 51-65.	1.0	11
149	X-ray Phase Contrast Imaging of the Impact of a Single HMX Particle in a Polymeric Matrix. Propellants, Explosives, Pyrotechnics, 2019, 44, 447-454.	1.0	11
150	The effect of doping on the combustion and reaction kinetics of silicon reactives. Combustion and Flame, 2013, 160, 1835-1841.	2.8	10
151	Transition from Impact-induced Thermal Runaway to Prompt Mechanochemical Explosion in Nanoscaled Ni/Al Reactive Systems. Propellants, Explosives, Pyrotechnics, 2013, 38, 611-621.	1.0	10
152	Micro-RVE modeling of mechanistic response in porous intermetallics subject to weak and moderate impact loading. International Journal of Plasticity, 2013, 51, 1-32.	4.1	10
153	Using time-frequency analysis to determine time-resolved detonation velocity with microwave interferometry. Review of Scientific Instruments, 2015, 86, 044705.	0.6	10
154	Critical Ignition Criteria for Monomethylhydrazine and Red Fuming Nitric Acid. Journal of Propulsion and Power, 2015, 31, 1184-1192.	1.3	10
155	Photoflash and laser ignition of Al/PVDF films and additively manufactured igniters for solid propellant. Combustion and Flame, 2022, 244, 112252.	2.8	10
156	Aspects of Monomethylhydrazine and Red Fuming Nitric Acid Ignition. , 2010, , .		9
157	CuO/Al Thermites for Solid Rocket Motor Ignition. Journal of Propulsion and Power, 2013, 29, 1194-1199.	1.3	9
158	Shock-induced reaction synthesis of cubic boron nitride. Applied Physics Letters, 2018, 112, 171903.	1.5	9
159	Altering Agglomeration in a Composite Propellant with Aluminum-Silicon Eutectic Alloy. Journal of Propulsion and Power, 2019, 35, 1048-1056.	1.3	9
160	A benchtop shock physics laboratory: Ultrafast laser driven shock spectroscopy and interferometry methods. Review of Scientific Instruments, 2019, 90, 063001.	0.6	9
161	X-ray Phase Contrast Imaging of the Impact of Multiple HMX Particles in a Polymeric Matrix. Propellants, Explosives, Pyrotechnics, 2020, 45, 607-614.	1.0	9
162	Structural Energetic Properties of Al/PVDF Composite Materials Prepared Using Fused Filament Fabrication. Propellants, Explosives, Pyrotechnics, 2021, 46, 670-678.	1.0	9

#	ARTICLE	IF	CITATIONS
163	Visible emission spectra of thermographic phosphors under x-ray excitation. Measurement Science and Technology, 2021, 32, 094008.	1.4	9
164	Dynamic Combustion of Functionally Graded Additively Manufactured Composite Solid Propellant. Journal of Propulsion and Power, 2021, 37, 725-732.	1.3	9
165	The role of adhesion and binder stiffness in the impact sensitivity of cast composite energetic materials. Journal of Applied Physics, 2020, 128, .	1.1	9
166	COMBUSTION OF BIMODAL ALUMINUM PARTICLES AND ICE MIXTURES. International Journal of Energetic Materials and Chemical Propulsion, 2012, 11, 259-273.	0.2	9
167	Characterization of Metastable Intermolecular Composites. ACS Symposium Series, 2005, , 227-240.	0.5	8
168	Ammonia Borane Based-Propellants. , 2008, , .		8
169	Tuning azolium azolate ionic liquids to promote surface interactions with titanium nanoparticles leading to increased passivation and colloidal stability. Physical Chemistry Chemical Physics, 2012, 14, 13194.	1.3	8
170	Influence of Ammonia Borane on the Stability of a Liquid Rocket Combustor. Journal of Propulsion and Power, 2014, 30, 290-298.	1.3	8
171	Detonation Failure Characterization of Homemade Explosives. Propellants, Explosives, Pyrotechnics, 2014, 39, 609-616.	1.0	8
172	Numerical modeling of self-propagating reactions in Ru/Al nanoscale multilayer foils. Applied Physics Letters, 2015, 107, .	1.5	8
173	Experimental Study of Factors Affecting Hypergolic Ignition of Ammonia Borane. Journal of Propulsion and Power, 2021, 37, 202-210.	1.3	8
174	The Effect of Process Parameters on the Structural Energetic Properties of Additively Manufactured Reactive Structures. Journal of Engineering Materials and Technology, Transactions of the ASME, 2020, 142, .	0.8	8
175	Dynamic imaging of the temperature field within an energetic composite using phosphor thermography. Applied Optics, 2019, 58, 4320.	0.9	8
176	Preparation and characterization of multifunctional piezoenergetic polyvinylidene fluoride/aluminum nanocomposite films. Journal of Applied Physics, 2022, 131, .	1.1	8
177	Unsteady combustion of solid propellants subject to dynamic external radiant heating. Combustion, Explosion and Shock Waves, 1993, 29, 281-285.	0.3	7
178	Unsteady combustion modeling of energetic solids. , 1995, , .		7
179	The Elusive Ketene (H <sub>2</sub> CCO) Channel in the Infrared Multiphoton Dissociation of Solid 1,3,5-trinitro-1,3,5-triazine (RDX). ChemPhysChem, 2020, 21, 837-842.	1.0	7
180	Investigation of Additively Manufactured Layered Composite Solid Propellant. , 2020, , .		7

#	ARTICLE	IF	CITATIONS
181	On the Use of Fluorine-Containing Nano-Aluminum Composite Particles to Tailor Composite Solid Rocket Propellants. <i>Propellants, Explosives, Pyrotechnics</i> , 2022, 47, .	1.0	7
182	Further Development of an Aluminum and Water Solid Rocket Propellant. , 2011, , .		6
183	Probing the Reaction Mechanisms Involved in the Decomposition of Solid 1,3,5-Trinitro-1,3,5-triazinane by Energetic Electrons. <i>Journal of Physical Chemistry A</i> , 2019, 123, 9479-9497.	1.1	6
184	Investigation of Polymer Matrix Nano-Aluminum Composites with Pulsed Laser Heating by In-Situ TEM. <i>Propellants, Explosives, Pyrotechnics</i> , 2019, 44, 1608-1612.	1.0	6
185	In-situ X-ray observations of ultrasound-induced explosive decomposition. <i>Applied Materials Today</i> , 2019, 15, 286-294.	2.3	6
186	Investigating the Photochemical Decomposition of Solid 1,3,5-Trinitro-1,3,5-triazinane (RDX). <i>Journal of Physical Chemistry A</i> , 2020, 124, 6801-6823.	1.1	6
187	Wavelength-modulation spectroscopy in the mid-infrared for temperature and HCl measurements in aluminum-lithium composite-propellant flames. <i>Combustion and Flame</i> , 2022, 242, 112180.	2.8	6
188	Comment on "Intrinsic Combustion Instability of Solid Energetic Materials". <i>Journal of Propulsion and Power</i> , 1997, 13, 454-456.	1.3	5
189	Detailed Characterization of Al/Ice Propellants. , 2010, , .		5
190	Innovative scheme for high-repetition-rate imaging of CN radical. <i>Optics Letters</i> , 2018, 43, 443.	1.7	5
191	Observation of Damage During Dynamic Compression of Production and Low-Defect HMX Crystals in Sylgard® Binder Using X-Ray Phase Contrast Imaging. <i>Journal of Dynamic Behavior of Materials</i> , 2020, 6, 34-44.	1.1	5
192	Dynamic X-Ray Imaging of Additively Manufactured Reactive Components in Solid Propellants. <i>Journal of Propulsion and Power</i> , 2021, 37, 362-368.	1.3	5
193	BURNING RATE STUDIES OF BIS-TRIAMINOGUANIDINIUM AZOTETRAZOLATE (TAGzT) AND HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE (RDX) MIXTURES. <i>International Journal of Energetic Materials and Chemical Propulsion</i> , 2009, 8, 31-38.	0.2	5
194	Combustion Properties of Silicon/Teflon/Viton and Aluminum/Teflon/Viton Composites. , 2009, , .		4
195	Detonation failure characterization of non-ideal explosives. <i>AIP Conference Proceedings</i> , 2012, , .	0.3	4
196	Paraffin Fuel and Additive Combustion in an Opposed Flow Burner Configuration. , 2012, , .		4
197	Microscopic two-color infrared imaging of Ni Al reactive particles and pellets. <i>Thin Solid Films</i> , 2016, 620, 48-53.	0.8	4
198	Localized Heating Near a Rigid Spherical Inclusion in a Viscoelastic Binder Material Under Compressional Plane Wave Excitation. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2017, 84, .	1.1	4

#	ARTICLE	IF	CITATIONS
199	Relating a small-scale shock sensitivity experiment to large-scale failure diameter in an aluminized ammonium nitrate non-ideal explosive. <i>Combustion and Flame</i> , 2018, 194, 271-277.	2.8	4
200	Mesoscale observations of the thermal decomposition of energetic composites under ultrasonic excitation. <i>Journal of Applied Physics</i> , 2019, 125, 215114.	1.1	4
201	Shock-induced reactions in metal nitride " Boron nanostructured composites. <i>Scripta Materialia</i> , 2020, 189, 58-62.	2.6	4
202	Dynamic stress-strain response of high-energy ball milled aluminium powder compacts. <i>Mechanics of Materials</i> , 2020, 143, 103337.	1.7	4
203	Decomposition of Ammonium-Perchlorate-Encapsulated Nanoscale and Micron-Scale Catalyst Particles. <i>Journal of Propulsion and Power</i> , 2020, 36, 862-868.	1.3	4
204	Laser Ignition of Solid Propellants Using Energetic nAl-PVDF Optical Sensitizers. , 2022, , .		4
205	An Investigation of Novel Metal Complexes as Composite Propellant Burn Rate Modifiers. , 2008, , .		3
206	Critical Ignition Criteria for Monomethylhydrazine and Red Fuming Nitric Acid in an Impinging Jet Apparatus. , 2012, , .		3
207	The effect of the chosen distribution form on reaction probability estimates from drop-weight impact results. <i>Journal of Energetic Materials</i> , 2021, 39, 377-398.	1.0	3
208	Characterization of Aluminum-Lithium Composite-Propellant Flames via Laser Absorption Spectroscopy. , 2021, , .		3
209	Identification of Elusive Keto and Enol Intermediates in the Photolysis of 1,3,5-Trinitro-1,3,5-Triazinane. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 6062-6069.	2.1	3
210	Phase Changes in Embedded HMX in Response to Periodic Mechanical Excitation. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2017, , 79-86.	0.3	3
211	The influence of microstructure and polymorphic conformer on the shock sensitivity of 1,3,5,7-tetranitro-1,3,5,7-tetrazoctane (HMX). <i>Journal of Energetic Materials</i> , 2023, 41, 483-509.	1.0	3
212	Measurement of convective burn rates in gaps of PBX 9501. <i>AIP Conference Proceedings</i> , 2000, , .	0.3	2
213	Flame spread across surfaces of PBX 9501. <i>Proceedings of the Combustion Institute</i> , 2007, 31, 2063-2070.	2.4	2
214	Realizing microgravity flame spread characteristics at 1g over a bed of nano-aluminum powder. <i>Proceedings of the Combustion Institute</i> , 2009, 32, 2437-2444.	2.4	2
215	COMPARISON OF MECHANICAL AND THERMAL IGNITION CHARACTERISTICS FOR REACTIVITY ENHANCED Ni~Al POWDERS. , 2009, , .		2
216	Microstructural effects on ignition sensitivity in Ni/Al systems subjected to high strain rate impacts. <i>AIP Conference Proceedings</i> , 2012, , .	0.3	2

#	ARTICLE	IF	CITATIONS
217	The Relationship Between Flame Structure and Burning Rate for Ammonium Perchlorate Composite Propellants. <i>Challenges and Advances in Computational Chemistry and Physics</i> , 2017, , 171-211.	0.6	2
218	Scanned-Wavelength-Modulation Spectroscopy in the Mid-Infrared for Measurements of Temperature and CO in Aluminized Composite Propellant Flames. , 2020, , .		2
219	The kinetics of thermal decomposition and hot-stage microscopy of selected energetic cocrystals. <i>Journal of Energetic Materials</i> , 2021, 39, 313-332.	1.0	2
220	The influence of microstructure and conformational polymorph on the drop-weight impact sensitivity of $\alpha$ -phase HMX. <i>Journal of Energetic Materials</i> , 2022, 40, 445-470.	1.0	2
221	The Effect of Microscale Confinement Diameter on the Combustion of an Al/MoO <sub>3</sub> Thermite. , 2008, , .		1
222	BLAST LOADING EXPERIMENTS OF SURROGATE MODELS FOR TBI SCENARIOS. , 2009, , .		1
223	Instrumented Burn Tube: Experimental Observations and Analysis of Data. , 2010, , .		1
224	Improvements in Nanoparticle Dispersion Methods for Solid Propellants. , 2010, , .		1
225	Performance of Dicyclopentadiene (DCPD)/Gaseous Oxygen Based Hybrid Rocket Propellants with Pyrophoric Fuel Additives. , 2013, , .		1
226	Microwave frequency material properties of PBS 9501 and PBX 9501 and small scale heating experiments. <i>Journal of Physics: Conference Series</i> , 2014, 500, 052040.	0.3	1
227	Encapsulated Nanoscale Particles and Inclusions in Solid Propellant Ingredients. , 2016, , 323-340.		1
228	Modeling of Layered Ammonium Perchlorate Composite Propellant with Different Burning Rates. , 2021, , .		1
229	Ultrafast-laser-absorption-spectroscopy measurements of gas temperature in multi-phase, high-pressure combustion gases. , 2021, , .		1
230	COMBUSTION MODES OF NANOSCALE ENERGETIC COMPOSITES. <i>International Journal of Energetic Materials and Chemical Propulsion</i> , 2009, 8, 309-319.	0.2	1
231	Vibration-assisted printing of highly viscous food. <i>Additive Manufacturing</i> , 2022, 56, 102851.	1.7	1
232	Electrical Conductivity Measurements in Reacting Metastable Intermolecular Composites. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	0
233	Flame Spread across Surfaces of PBX 9501. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	0
234	Nano-Aluminum Reaction with Nitrogen in the Burn Front of Oxygen-Free Energetic Materials. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	0

#	ARTICLE	IF	CITATIONS
235	EXPERIMENTAL STUDIES OF MITIGATION MATERIALS FOR BLAST INDUCED TBI. , 2009, , .		0
236	ULTRAFAST X-RAY PHASE CONTRAST IMAGING OF A GASLESS REACTIVE SYSTEM USING 3RD GENERATION SYNCHROTRON RADIATION. , 2009, , .		0
237	Burning Rates of Nano-Aluminum/ FC-2175/ Nickel Oxide Composites as a Function of Doping, Pressure and Magnetic Field. , 2011, , .		0
238	Development of a Novel Thermoelectric Propellant Temperature Controller for Stand Burning Studies. , 2011, , .		0
239	Experimental analysis of blast mitigation associated with water sheets. , 2012, , .		0
240	Impact Sensitivity and Ignition Mechanisms of Nanoaluminum-poly(perfluorinated methacrylate) Nanocomposites. MRS Advances, 2018, 3, 887-903.	0.5	0
241	An Experimental Study of Factors Affecting Hypergolic Ignition of Ammonia Borane. , 2019, , .		0
242	The Effect of Encapsulated Nanoscale and Micron-scale Catalyst Particles on the Decomposition of Ammonium Perchlorate Crystals. , 2019, , .		0
243	Extrusion of AP Composite Propellant with Self-aligned Reactive Fibers. , 2021, , .		0
244	Temperature-dependent x-ray fluorescent response from thermographic phosphors under x-ray excitation. Applied Physics Letters, 2021, 119, 034103.	1.5	0
245	Conductive Polymer Spark Gap Igniters. Propellants, Explosives, Pyrotechnics, 2021, 46, 1500.	1.0	0
246	Direct observations of ultrasonically generated hot spots in polymer composite energetic materials. Combustion and Flame, 2022, 235, 111704.	2.8	0
247	10.1063/1.4963137.1. , 2016, , .		0
248	10.1063/1.5088153.3. , 2019, , .		0