

Ruiqi Shen

List of Publications by Year in descending order

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81
papers

1,933
citations

331670

21
h-index

276875

41
g-index

82
all docs

82
docs citations

82
times ranked

1005
citing authors

#	ARTICLE	IF	CITATIONS
1	Nanostructured Energetic Composites: Synthesis, Ignition/Combustion Modeling, and Applications. ACS Applied Materials & Interfaces, 2014, 6, 3058-3074.	8.0	249
2	Core-Shell Structured Nanoenergetic Materials: Preparation and Fundamental Properties. Advanced Materials, 2020, 32, e2001291.	21.0	144
3	Influence of Al/CuO reactive multilayer films additives on exploding foil initiator. Journal of Applied Physics, 2011, 110, .	2.5	101
4	Significantly Enhanced Energy Output from 3D Ordered Macroporous Structured Fe ₂ O ₃ /Al Nanothermite Film. ACS Applied Materials & Interfaces, 2013, 5, 239-242.	8.0	98
5	Tuning the Ignition Performance of a Microchip Initiator by Integrating Various Al/MoO ₃ Reactive Multilayer Films on a Semiconductor Bridge. ACS Applied Materials & Interfaces, 2017, 9, 5580-5589.	8.0	79
6	Recent Developments in Spectroscopic Techniques for the Detection of Explosives. Materials, 2018, 11, 1364.	2.9	67
7	Ammonium Perchlorate as an Effective Additive for Enhancing the Combustion and Propulsion Performance of Al/CuO Nanothermites. Journal of Physical Chemistry C, 2018, 122, 10240-10247.	3.1	61
8	Superior performance of a MEMS-based solid propellant microthruster (SPM) array with nanothermites. Microsystem Technologies, 2017, 23, 3161-3174.	2.0	57
9	A micro-initiator realized by in-situ synthesis of three-dimensional porous copper azide and its ignition performance. Chemical Engineering Journal, 2017, 326, 1116-1124.	12.7	56
10	The rapid H ₂ release from AlH ₃ dehydrogenation forming porous layer in AlH ₃ /hydroxyl-terminated polybutadiene (HTPB) fuels during combustion. Journal of Hazardous Materials, 2019, 371, 53-61.	12.4	50
11	Characterization of Al/CuO nanoenergetic multilayer films integrated with semiconductor bridge for initiator applications. Journal of Applied Physics, 2013, 113, .	2.5	49
12	Passive Micromixer Platform for Size- and Shape-Controllable Preparation of Ultrafine HNS. Industrial & Engineering Chemistry Research, 2019, 58, 16709-16718.	3.7	42
13	Mechanical Modifications of Paraffin-based Fuels and the Effects on Combustion Performance. Propellants, Explosives, Pyrotechnics, 2017, 42, 1268-1277.	1.6	40
14	Energetic igniters realized by integrating Al/CuO reactive multilayer films with Cr films. Journal of Applied Physics, 2011, 110, .	2.5	32
15	Dielectric structure pyrotechnic initiator realized by integrating Ti/CuO-based reactive multilayer films. Journal of Applied Physics, 2011, 109, 084523.	2.5	31
16	Fabrication and performance characterization of Al/Ni multilayer energetic films. Applied Physics A: Materials Science and Processing, 2014, 114, 459-464.	2.3	30
17	Microfluidic Platform for Preparation and Screening of Narrow Size-Distributed Nanoscale Explosives and Supermixed Composite Explosives. Industrial & Engineering Chemistry Research, 2018, 57, 13191-13204.	3.7	30
18	Metal-interlayer-metal structured initiator containing Al/CuO reactive multilayer films that exhibits improved ignition properties. Sensors and Actuators A: Physical, 2019, 292, 198-204.	4.1	28

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19	Impact of MWCNT/Al on the combustion behavior of hydroxyl ammonium nitrate (HAN)-based electrically controlled solid propellant. <i>Combustion and Flame</i> , 2020, 218, 218-228.	5.2	26
20	Three-dimensionally Ordered Macroporous Structure Enabled Nanothermite Membrane of Mn ₂ O ₃ /Al. <i>Scientific Reports</i> , 2016, 6, 22588.	3.3	25
21	Energetic semiconductor bridge device incorporating Al/MoO _x multilayer nanofilms and negative temperature coefficient thermistor chip. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	24
22	Combustion enhancement of hydroxyl-terminated polybutadiene by doping multiwall carbon nanotubes. <i>Carbon</i> , 2019, 144, 472-480.	10.3	24
23	From nanoparticles to on-chip 3D nanothermite: electro spray deposition of reactive Al/CuO@NC onto semiconductor bridge and its application for rapid ignition. <i>Nanotechnology</i> , 2020, 31, 195712.	2.6	24
24	A Highly Integrated Conjoined Single Shot Switch and Exploding Foil Initiator Chip Based on MEMS Technology. <i>IEEE Electron Device Letters</i> , 2017, 38, 1610-1613.	3.9	22
25	Efficiency relationship between initiation of HNS-IV and nanosecond pulsed laser-driven flyer plates of layered structure. <i>Laser and Particle Beams</i> , 2018, 36, 29-40.	1.0	22
26	Fabrication of high electrostatic safety metastable Al/CuO nanocomposites doped with nitro-functionalized graphene with fast initiation ability and tunable reaction performance. <i>Combustion and Flame</i> , 2021, 233, 111580.	5.2	22
27	Innovative Methods to Enhance the Combustion Properties of Solid Fuels for Hybrid Rocket Propulsion. <i>Aerospace</i> , 2019, 6, 47.	2.2	19
28	In Situ Synthesized MEMS Compatible Energetic Arrays Based on Energetic Coordination Polymer and Nano-Al with Tunable Properties. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 30740-30749.	8.0	19
29	Microfluidic strategy for rapid and high-quality control of crystal morphology of explosives. <i>Reaction Chemistry and Engineering</i> , 2020, 5, 1093-1103.	3.7	19
30	Design, Preparation, and Performance of a Planar Ignitor Inserted With PyroMEMS Safe and Arm Device. <i>Journal of Microelectromechanical Systems</i> , 2018, 27, 1186-1192.	2.5	18
31	Characteristic of energetic semiconductor bridge based on Al/MoO _x energetic multilayer nanofilms with different modulation periods. <i>Journal of Applied Physics</i> , 2017, 121, 113301.	2.5	17
32	Integrating micro-ignitors with Al/Bi ₂ O ₃ /graphene oxide composite energetic films to realize tunable ignition performance. <i>Journal of Applied Physics</i> , 2018, 123, .	2.5	17
33	Energetic Films Realized by Encapsulating Copper Azide in Silicon-Based Carbon Nanotube Arrays with Higher Electrostatic Safety. <i>Micromachines</i> , 2020, 11, 575.	2.9	17
34	Planar Trigger Switch and Its Integrated Chip With Exploding Foil Initiator Based on Low-Temperature Cofired Ceramic. <i>IEEE Transactions on Power Electronics</i> , 2020, 35, 2908-2916.	7.9	16
35	Improvement of silver azide crystal morphology and detonation behavior by fast mixing using a microreaction system with an integrated static micromixer. <i>Reaction Chemistry and Engineering</i> , 2020, 5, 154-162.	3.7	16
36	Experimental and numerical investigations of the effect of charge density and scale on the heat transfer behavior of Al/CuO nano-thermite. <i>Vacuum</i> , 2021, 184, 109878.	3.5	16

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37	Actualization of an efficient throttleable laser propulsion mode. <i>Energy</i> , 2021, 221, 119870.	8.8	16
38	Progress on Laser-Induced Decomposition of Explosives Investigated by Spectroscopic Methods. <i>Applied Spectroscopy Reviews</i> , 2014, 49, 550-563.	6.7	15
39	Research on the Electro-explosive Behaviors and the Ignition Performances of Energetic Igniters. <i>Journal of Energetic Materials</i> , 2018, 36, 1-12.	2.0	15
40	A high energy output and low onset temperature nanothermite based on three-dimensional ordered macroporous nano-NiFe ₂ O ₄ . <i>RSC Advances</i> , 2016, 6, 93330-93334.	3.6	14
41	Nickel acetylacetonate as decomposition catalyst for HTPB-based fuels: Regression rate enhancement effects. <i>Fuel</i> , 2021, 305, 121539.	6.4	14
42	Ignition characteristics of energetic nichrome bridge initiator based on Al/CuO reactive multilayer films under capacitor discharge and constant current conditions. <i>Sensors and Actuators A: Physical</i> , 2020, 313, 112200.	4.1	13
43	An energetic composite formed of wrinkled rGO sheets wrapped around copper azide nanowires with higher electrostatic safety as a green primary explosive. <i>RSC Advances</i> , 2020, 10, 30700-30706.	3.6	13
44	A Shock-Induced Pulsed Power Switch Utilizing Electro-Explosion of Exploding Bridge Wire. <i>IEEE Transactions on Power Electronics</i> , 2020, 35, 10770-10777.	7.9	13
45	An excellent synergy between CL-20 and nanothermites in flaming and propelling with high specific impulse and superior safety to electrostatic discharge. <i>Combustion and Flame</i> , 2022, 240, 112024.	5.2	13
46	Fabrication, characterization, and application in nanoenergetic materials of uncracked nano porous silicon thick films. <i>Applied Surface Science</i> , 2013, 265, 4-9.	6.1	12
47	Microfluidic Synthesis of Size-Controlled and Morphologically Homogeneous Lead Trinitrosorcinat Produced by Segmented Flow. <i>Propellants, Explosives, Pyrotechnics</i> , 2016, 41, 899-905.	1.6	12
48	Experimental and modeling investigation on the self-propagating combustion behavior of Al-MoO ₃ reactive multilayer films. <i>Journal of Applied Physics</i> , 2018, 123, .	2.5	12
49	The Catalytic Effect of CuO-Doped Activated Carbon on Thermal Decomposition and Combustion of AN/Mg/NC Composite. <i>Journal of Physical Chemistry C</i> , 2019, 123, 22941-22948.	3.1	12
50	Exploring the Influences of Conductive Graphite on Hydroxylammonium Nitrate (HAN)-Based Electrically Controlled Solid Propellant. <i>Propellants, Explosives, Pyrotechnics</i> , 2020, 45, 1790-1798.	1.6	12
51	Precisely Controlled Reactive Multilayer Films with Excellent Energy Release Property for Laser-Induced Ignition. <i>Nanoscale Research Letters</i> , 2019, 14, 301.	5.7	12
52	Impulse and electric charge characteristics of chemical propellant under pulsed laser irradiation. <i>Vacuum</i> , 2021, 192, 110419.	3.5	11
53	A Plasma Switch Induced by Electroexplosion of p-n Junction for Mini Exploding Foil Initiator. <i>IEEE Transactions on Plasma Science</i> , 2019, 47, 2710-2716.	1.3	10
54	Dissociation of Cyclotrimethylenetrinitramine Under 1064-nm Laser Irradiation Investigated by Time-of-Flight Mass Spectrometer. <i>Spectroscopy Letters</i> , 2014, 47, 611-615.	1.0	9

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55	Microfluidic Segmented Flow Technology Applied for Synthesis and Shape Control of Lead Styphnate Microfluidic Particles. <i>Propellants, Explosives, Pyrotechnics</i> , 2018, 43, 286-293.	1.6	9
56	Development of a steady-state microthrust measurement stand for microspacecrafts. <i>Measurement: Journal of the International Measurement Confederation</i> , 2021, 178, 109357.	5.0	9
57	Regenerated bacterial cellulose microfluidic column for glycoproteins separation. <i>Carbohydrate Polymers</i> , 2016, 137, 271-276.	10.2	8
58	Launch and impact characteristics of typical multi-layered flyers driven by ns-pulsed laser. <i>Optics and Laser Technology</i> , 2019, 120, 105709.	4.6	8
59	Firing Performance of Microchip Exploding Foil Initiator Triggered by Metal-Oxide-Semiconductor Controlled Thyristor. <i>Micromachines</i> , 2020, 11, 550.	2.9	7
60	Multi-parallel microfluidic recrystallization and characterization of explosives. <i>Energetic Materials Frontiers</i> , 2021, 2, 278-286.	3.2	7
61	Spectroscopic Study of Laser-Induced Cu Plasma With and Without the Confinement of a Substrate. <i>IEEE Transactions on Plasma Science</i> , 2010, 38, 174-180.	1.3	6
62	The catalysis effects of acetylacetonate complexes on polymer matrix of HTPB-based fuels. <i>FirePhysChem</i> , 2021, 1, 205-211.	3.4	5
63	Observations on Detonation Growth of Lead Azide at Microscale. <i>Micromachines</i> , 2022, 13, 451.	2.9	4
64	Burning characteristics and combustion wave model of AP/AN-based laser-controlled solid propellant. <i>Energy</i> , 2022, 253, 124007.	8.8	4
65	The influence of aluminum nanoparticles on the laser ablation characteristics of hydroxylamine nitrate-based liquid propellants. <i>Acta Astronautica</i> , 2022, 197, 169-178.	3.2	4
66	Exploring the Interfacial Reaction of Nano Al/CuO Energetic Films through Thermal Analysis and Ab Initio Molecular Dynamics Simulation. <i>Molecules</i> , 2022, 27, 3586.	3.8	4
67	Thermophysical and Chemical Processes of Burning of Double-Base Solid Propellants under External Irradiation. <i>Propellants, Explosives, Pyrotechnics</i> , 2005, 30, 256-263.	1.6	3
68	Multi-size control of homogeneous explosives by coaxial microfluidics. <i>Reaction Chemistry and Engineering</i> , 2021, 6, 2354-2363.	3.7	3
69	EFFECT OF AZODICARBONAMIDE PARTICLES ON THE REGRESSION RATE OF HYDROXYL-TERMINATED POLYBUTADIENE (HTPB)-BASED FUELS FOR HYBRID ROCKET PROPULSION. <i>International Journal of Energetic Materials and Chemical Propulsion</i> , 2017, 16, 103-114.	0.3	3
70	Nanostructured Energetic Materials and Energetic Chips. , 2016, , 139-162.		2
71	Pulsed voltage breakdown of Al/CuO reactive multilayer films in metal-interlayer-metal structures. <i>Journal of Applied Physics</i> , 2018, 124, .	2.5	2
72	Acceleration characteristics of laser ablation Cu plasma in the electrostatic field. <i>EPJ Applied Physics</i> , 2021, 93, 20802.	0.7	2

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73	Miniaturized Pyrotechnic Systems Meet the Performance Needs While Limiting the Environmental Impact. <i>Micromachines</i> , 2022, 13, 376.	2.9	2
74	Measurements and Analyses of Electro-Exploding Products Generated by Semiconductor Bridge Igniters. <i>IEEE Transactions on Plasma Science</i> , 2017, 45, 2486-2491.	1.3	1
75	Optimization Synthesis of Morphologically Homogeneous and Rod-Like Structure Barium Trinitroresorcinate Produced by Segmented Flow. <i>Journal of Chemical Engineering of Japan</i> , 2018, 51, 524-529.	0.6	1
76	Identification and formation mechanism of the transient ion fragments produced in laser-induced dissociation of 1, 1-diamino-2, 2-dinitroethylene. <i>Laser and Particle Beams</i> , 2018, 36, 308-312.	1.0	1
77	Self-propagating combustion simulation of sputter-deposited nano-energetic multilayer films. <i>Journal of Physics: Conference Series</i> , 2021, 1721, 012003.	0.4	1
78	Burning rate analysis of laser controlled 5-aminotetrazole propellant. <i>Defence Technology</i> , 2021, , .	4.2	1
79	Burning surface formation mechanism of laser-controlled 5-aminotetrazole propellant. <i>Defence Technology</i> , 2023, 25, 48-59.	4.2	1
80	A reconsideration for forming mechanism of optic fiber probe fabricated by static chemical etching. <i>Applied Physics A: Materials Science and Processing</i> , 2016, 122, 1.	2.3	0
81	Acoustic wave generated by focused nanosecond laser pulse at air-solid interface: Experiment and modeling. <i>AIP Advances</i> , 2021, 11, 125108.	1.3	0