

# Jianbing Xu

## List of Publications by Year in descending order

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61  
papers

1,520  
citations

331670

21  
h-index

345221

36  
g-index

61  
all docs

61  
docs citations

61  
times ranked

783  
citing authors

#	ARTICLE	IF	CITATIONS
1	Influence of Al/CuO reactive multilayer films additives on exploding foil initiator. Journal of Applied Physics, 2011, 110, .	2.5	101
2	Tuning the Ignition Performance of a Microchip Initiator by Integrating Various Al/MoO <sub>3</sub> Reactive Multilayer Films on a Semiconductor Bridge. ACS Applied Materials & Interfaces, 2017, 9, 5580-5589.	8.0	79
3	Facile formation of nitrocellulose-coated Al/Bi <sub>2</sub> O <sub>3</sub> nanothermites with excellent energy output and improved electrostatic discharge safety. Materials and Design, 2018, 143, 93-103.	7.0	74
4	Recent Developments in Spectroscopic Techniques for the Detection of Explosives. Materials, 2018, 11, 1364.	2.9	67
5	Effect of Bubble Behavior on the Morphology of Foamed Porous Copper Prepared via Electrodeposition. Journal of the Electrochemical Society, 2013, 160, D441-D445.	2.9	65
6	In situ preparation of explosive embedded CuO/Al/CL20 nanoenergetic composite with enhanced reactivity. Chemical Engineering Journal, 2018, 354, 885-895.	12.7	62
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 <sub>2</sub> release from AlH <sub>3</sub> dehydrogenation forming porous layer in AlH <sub>3</sub> /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	Controlling the energetic characteristics of micro energy storage device by in situ deposition Al/MoO <sub>3</sub> nanolaminates with varying internal structure. Chemical Engineering Journal, 2019, 373, 345-354.	12.7	41
13	Fabrication of energetic aluminum core/hydrophobic shell nanofibers via coaxial electrospinning. Chemical Engineering Journal, 2022, 427, 132001.	12.7	41
14	Mechanical Modifications of Paraffin-based Fuels and the Effects on Combustion Performance. Propellants, Explosives, Pyrotechnics, 2017, 42, 1268-1277.	1.6	40
15	Facile production of NaIO <sub>4</sub> -encapsulated nanoAl microsphere as green primary explosive and its thermodynamic research. Chemical Engineering Journal, 2019, 360, 778-787.	12.7	33
16	Dielectric structure pyrotechnic initiator realized by integrating Ti/CuO-based reactive multilayer films. Journal of Applied Physics, 2011, 109, 084523.	2.5	31
17	Fabrication and performance characterization of Al/Ni multilayer energetic films. Applied Physics A: Materials Science and Processing, 2014, 114, 459-464.	2.3	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	An investigation into the fabrication and combustion performance of porous silicon nanoenergetic array chips. <i>Nanotechnology</i> , 2012, 23, 435701.	2.6	26
20	Energetic semiconductor bridge device incorporating Al/MoO <sub>x</sub> multilayer nanofilms and negative temperature coefficient thermistor chip. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	24
21	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
22	A micro initiator realized by integrating KNO <sub>3</sub> @CNTs nanoenergetic materials with a Cu microbridge. <i>Chemical Engineering Journal</i> , 2012, 211-212, 31-36.	12.7	23
23	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
24	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
25	Optimisation of modulation period of TiO <sub>2</sub> /Al reactive multilayer films for laser-driven flyer plates. <i>Chemical Engineering Journal</i> , 2019, 360, 1071-1081.	12.7	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 &amp; Interfaces</i> , 2020, 12, 30740-30749.	8.0	19
29	Characteristic of energetic semiconductor bridge based on Al/MoO <sub>x</sub> energetic multilayer nanofilms with different modulation periods. <i>Journal of Applied Physics</i> , 2017, 121, 113301.	2.5	17
30	Integrating micro-igniters with Al/Bi <sub>2</sub> O <sub>3</sub> /graphene oxide composite energetic films to realize tunable ignition performance. <i>Journal of Applied Physics</i> , 2018, 123, .	2.5	17
31	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
32	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
33	Effect of nanostructured foamed porous copper on the thermal decomposition of ammonium perchlorate. <i>Thermochimica Acta</i> , 2013, 568, 161-164.	2.7	15
34	Deposition and characterization of highly energetic Al/MoO <sub>x</sub> multilayer nano-films. <i>EPJ Applied Physics</i> , 2013, 64, 30301.	0.7	15
35	Progress on Laser-Induced Decomposition of Explosives Investigated by Spectroscopic Methods. <i>Applied Spectroscopy Reviews</i> , 2014, 49, 550-563.	6.7	15
36	Design and optimization of micro-semiconductor bridge used for solid propellant microthrusters array. <i>EPJ Applied Physics</i> , 2016, 74, 30103.	0.7	14

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37	Characteristics of energetic semiconductor bridge initiator based on different stoichiometric ratios of Al/MoO <sub>3</sub> reactive multilayer films under capacitor discharge conditions. <i>Sensors and Actuators A: Physical</i> , 2019, 296, 241-248.	4.1	14
38	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
39	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
40	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
41	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
42	Microfluidic Synthesis of Size-Controlled and Morphologically Homogeneous Lead Trinitroresorcinate Produced by Segmented Flow. <i>Propellants, Explosives, Pyrotechnics</i> , 2016, 41, 899-905.	1.6	12
43	Experimental and modeling investigation on the self-propagating combustion behavior of Al-MoO <sub>3</sub> reactive multilayer films. <i>Journal of Applied Physics</i> , 2018, 123, .	2.5	12
44	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
45	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
46	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
47	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
48	Electro-explosion performance of KNO <sub>3</sub> -filled carbon nanotubes initiator. <i>Journal of Applied Physics</i> , 2014, 115, 174901.	2.5	9
49	Micro-Segmented Flow Technology Applied for Synthesis and Shape Control of Lead Styphnate Micro-Particles. <i>Propellants, Explosives, Pyrotechnics</i> , 2018, 43, 286-293.	1.6	9
50	Probing the reaction mechanism of Al/CuO nanocomposites doped with ammonium perchlorate. <i>Nanotechnology</i> , 2020, 31, 255401.	2.6	8
51	Fabrication and properties of MEMS compatible energetic arrays based on carbon-based copper azide. <i>Applied Surface Science</i> , 2022, 577, 150643.	6.1	8
52	Recovering copper ions from wastewater with chitosan to synthesize lead-free primary explosives. <i>Journal of Alloys and Compounds</i> , 2022, 914, 165252.	5.5	8
53	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
54	Characteristics of micro energetic semiconductor bridge initiator by depositing Al/MoO <sub>3</sub> reactive multilayered films on micro bridge with different bridge size. <i>Sensors and Actuators A: Physical</i> , 2022, 336, 113406.	4.1	6

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55	Laser ignition of a laser-thermal differential composite system based on non-uniform absorption. Chemical Engineering Journal, 2021, 421, 127869.	12.7	5
56	Observations on Detonation Growth of Lead Azide at Microscale. Micromachines, 2022, 13, 451.	2.9	4
57	Exploring the Interfacial Reaction of Nano Al/CuO Energetic Films through Thermal Analysis and Ab Initio Molecular Dynamics Simulation. Molecules, 2022, 27, 3586.	3.8	4
58	Multi-size control of homogeneous explosives by coaxial microfluidics. Reaction Chemistry and Engineering, 2021, 6, 2354-2363.	3.7	3
59	Pulsed voltage breakdown of Al/CuO reactive multilayer films in metal-interlayer-metal structures. Journal of Applied Physics, 2018, 124, .	2.5	2
60	Optimization Synthesis of Morphologically Homogeneous and Rod-Like Structure Barium Trinitroresorcinate Produced by Segmented Flow. Journal of Chemical Engineering of Japan, 2018, 51, 524-529.	0.6	1
61	Identification and formation mechanism of the transient ion fragments produced in laser-induced dissociation of 1, 1-diamino-2, 2-dinitroethylene. Laser and Particle Beams, 2018, 36, 308-312.	1.0	1