Toru Shimada

List of Publications by Year
in descending order

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72	538	687363 13	794594 19
papers	citations	h-index	g-index

73	73	73	258
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Solid propulsion for space applications: An updated roadmap. Acta Astronautica, 2010, 66, 201-219.	3.2	77
2	Flow Inside a Solid Rocket Motor with Relation to Nozzle Inlet Ablation. AIAA Journal, 2007, 45, 1324-1332.	2.6	25
3	Active debris multi-removal mission concept based on hybrid propulsion. Acta Astronautica, 2014, 103, 26-35.	3.2	24
4	Performance and Regression Rate Characteristics of 5-kN Swirling-Oxidizer-Flow-Type Hybrid Rocket Engine. Journal of Propulsion and Power, 2017, 33, 891-901.	2.2	23
5	Liquid Films Instability Analysis of Liquefying Hybrid Rocket Fuels Under Supercritical Conditions. AIAA Journal, 2015, 53, 1578-1589.	2.6	19
6	Visualization and Emission Spectra of Flames in Combustion Chamber of Swirling-Oxidizer-Flow-Type Hybrid Rocket Engines. Journal of Thermal Science and Technology, 2011, 6, 268-277.	1.1	17
7	Polymer Combustion as a Basis for Hybrid Propulsion: A Comprehensive Review and New Numerical Approaches. Energies, 2011, 4, 1779-1839.	3.1	17
8	Numerical Simulations of Combustive Flows in a Swirling-Oxidizer-Flow-Type Hybrid Rocket. , 2014, , .		16
9	Hybrid Rocket Firing Experiments at Various Axialâ€“Tangential Oxidizer-Flow-Rate Ratios. Journal of Propulsion and Power, 2019, 35, 94-108.	2.2	16
10	A test of equivalence of the variableâ€hardâ€sphere and inverseâ€powerâ€law models in the directâ€simulation Monte Carlo method. Physics of Fluids A, Fluid Dynamics, 1991, 3, 1835-1837.	1.6	15
11	Multi-Stage Hybrid Rocket Conceptual Design for Micro-Satellites Launch using Genetic Algorithm. Transactions of the Japan Society for Aeronautical and Space Sciences, 2012, 55, 229-236.	0.7	15
12	X-ray visualization measurement of slurry flow in solid propellant casting. Flow Measurement and Instrumentation, 2007, 18, 235-240.	2.0	14
13	Experimental Investigation on Microwave Interference in Full-Scale Solid Rocket Exhaust. Journal of Spacecraft and Rockets, 2010, 47, 627-633.	1.9	14
14	Diversity of design knowledge for launch vehicle in view of fuels on hybrid rocket engine. Journal of Advanced Mechanical Design, Systems and Manufacturing, 2014, 8, JAMDSM0023-JAMDSM0023.	0.7	14
15	Conceptual Design of Single-Stage Launch Vehicle with Hybrid Rocket Engine for Scientific Observation Using Design Informatics. Journal of Space Engineering, 2013, 6, 15-27.	0.8	13
16	Computational fluid dynamics and frequency-dependent finite-difference time-domain method coupling for the interaction between microwaves and plasma in rocket plumes. Physics of Plasmas, 2012, 19, .	1.9	12
17	Reconstructed Ballistic Data Versus Wax Regression-Rate Intrusive Measurement in a Hybrid Rocket. Journal of Spacecraft and Rockets, 2020, 57, 1295-1308.	1.9	12
18	Numerical Parametric Analysis of Combustion Instability in Axial-Injected Hybrid Rocket Motors. Journal of Propulsion and Power, 2018, 34, 1542-1552.	2.2	11

#	Article	IF	Citations
19	Theoretical Investigation on Feedback Control of Hybrid Rocket Engines. Aerospace, 2019, 6, 65.	2.2	11
20	Conceptual Design of Single-stage Rocket Using Hybrid Rocket byMeans of Genetic Algorithm. Procedia Engineering, 2015, 99, 198-207.	1.2	9
21	Performance of Mixture-Ratio-Controlled Hybrid Rockets for Nominal Fuel Regression. Journal of Propulsion and Power, 2020, 36, 400-414.	2.2	9
22	Evaluation of Ablation and Longitudinal Vortices in Solid Rocket Motor by Computational Fluid Dynamics. , 2006, , .		8
23	Stability Analysis of Solid Rocket Motor Combustion by Computational Fluid Dynamics. AIAA Journal, 2008, 46, 947-957.	2.6	8
24	Extinctionâ€“reignition superiority in a single-stage sounding hybrid rocket. Aerospace Science and Technology, 2016, 58, 437-444.	4.8	8
25	An Introduction to Energetic Materials for Propulsion. Springer Aerospace Technology, 2017, , 3-59.	0.3	8
26	Flight Performance Simulations of Vertical Launched Sounding Rockets Using Altering-Intensity Swirling-Oxidizer-Flow-Type Hybrid Motors. , 2015, , .		7
27	Design Methodology of a Hybrid Rocket-Powered Launch Vehicle for Suborbital Flight. Journal of Aerospace Engineering, 2017, 30, .	1.4	7
28	A theoretical study on throttle ranges of O/F controllable hybrid rocket propulsion systems. Journal of Fluid Science and Technology, 2018, 13, JFST0031-JFST0031.	0.6	7
29	Visualization of Flames in Combustion Chamber of Hybrid Rocket Engine with Multi-Section Swirl Injection Method. , 2014, , .		6
30	Hybrid Propulsion Technology Development in Japan for Economic Space Launch. Springer Aerospace Technology, 2017, , 545-575.	0.3	6
31	Essentially Non-explosive Propulsion Paving a Way for Fail-Safe Space Transportation. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2018, 16, 1-8.	0.2	6
32	Numerical Investigation of Roll Torque Induced by Solid Rocket Motor Internal Flow. Journal of Propulsion and Power, 2009, 25, 1300-1310.	2.2	5
33	Burning rate anomaly of composite propellant grains. Combustion, Explosion and Shock Waves, 2013, 49, 583-592.	0.8	5
34	A Study on Performance Improvement of Paraffin Fueled Hybrid Rocket Engines with Multi-Section Swirl Injection Method. , 2013, , .		5
35	Static Burning Tests on a Bread Board Model of Altering-intensity Swirling-Oxidizer-Flow-Type Hybrid Rocket Engine. , 2016, , .		5
36	A Study of Hybrid Rockets with Multi-Section Swirl Injection Method. , 2012, , .		4

#	Article	IF	Citations
37	Effects of Multi-Section Swirl Injection Method on Fuel Regression Rate of High Density Polyethylene Fueled Hybrid Rocket Engine. , 2013, , .		4
38	Quasi 1-D Numerical Analysis of Combustion Instability in Hybrid Rocket Motor Incorporating Boundary Layer Lags. , 2016, , .		4
39	Effects of O/F Shifts on Flight Performances of Vertically Launched Hybrid Sounding Rockets. , 2017, , .		4
40	Performance of Mixture-Ratio-Controlled Hybrid Rockets Under Uncertainties in Fuel Regression. Journal of Propulsion and Power, 2021, 37, 86-99.	2.2	4
41	EXPERIMENTAL STUDY ON MIDWEB ANOMALY OF COMPOSITE PROPELLANT GRAINS. International Journal of Energetic Materials and Chemical Propulsion, 2009, 8, 147-158.	0.3	4
42	Advanced Computer Science on Internal Ballistics of Solid Rocket Motors. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2010, 8, Pa_29-Pa_37.	0.2	3
43	Conceptual design: Dependence of parameterization on design performance of three-stage hybrid rocket. Journal of Fluid Science and Technology, 2014, 9, JFST0071-JFST0071.	0.6	3
44	Multidisciplinary Design Exploration for Sounding Launch Vehicle using Hybrid Rocket Engine in View of Ballistic Performance. International Journal of Turbo and Jet Engines, 2015, 32, .	0.7	3
45	Simple control of oxidizer flux for efficient extinctionâ€“reignition on a single-stage hybrid rocket. Aerospace Science and Technology, 2017, 71, 109-118.	4.8	3
46	Comparison of Chemical Propulsion Solutions for Large Space Debris Active Removal. Springer Aerospace Technology, 2017, , 985-1011.	0.3	3
47	COMBUSTION MECHANISM OF TETRA-OL GLYCIDYL AZIDE POLYMER AND ITS APPLICATION TO HYBRID ROCKETS. International Journal of Energetic Materials and Chemical Propulsion, 2009, 8, 555-570.	0.3	3
48	Special Issue â€œHybrid Rocket (Volume II)â€• Aerospace, 2022, 9, 233.	2.2	3
49	Correlation of Midweb Anomaly with Microstructure of Composite Propellant Containing High Amount of Aluminum. , 2011, , .		2
50	Solid-Fuel Regression Rate for Standard-Flow Hybrid Rocket Motors. Journal of Thermal Science and Technology, 2012, 7, 387-398.	1.1	2
51	Combined Analysis of Reactive Flow and Heat Transfer for Hybrid Rocket Design Engineering. , 2014, , .		2
52	Prediction of Space and Time Distribution of Wax-based Fuel Regression Rate in a Hybrid Rocket. , 2020, , .		2
53	CHARACTERISTICS OF CHEMICALLY MODIFIED AND NANOCOMPOSITE POLYMERS AS NOVEL FUELS FOR HYBRID ROCKET PROPULSION. International Journal of Energetic Materials and Chemical Propulsion, 2012, 11, 549-566.	0.3	2
54	Flow visualization of slurry fluid using two-directional X-ray photograph. Journal of the Visualization Society of Japan, 2006, 26, 197-198.	0.0	2

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55	Numerical Investigation of Roll Torque Induced by Solid Rocket Motor Internal Flow. , 2008, , .		1
56	Validation with experiments on simplified numerical prediction of hybrid rocket internal ballistics. , 2012, , .		1
57	Low-Frequency Feed-System-Coupled Combustion Instability in Hybrid Rocket Motors. Journal of Thermal Science and Technology, 2013, 8, 380-394.	1.1	1
58	Large Eddy Simulation of Swirling Combustion Flow with Wall Fuel Blowing modeled for Hybrid Rocket Engines. , 2013, , .		1
59	Numerical analysis of multi-parallelized swirling flow inside a circular pipe. Journal of Mechanical Science and Technology, 2015, 29, 951-962.	1.5	1
60	Design optimization of launch vehicle concept using cluster hybrid rocket engine for future space transportation. Journal of Fluid Science and Technology, 2016, 11, JFST0003-JFST0003.	0.6	1
61	Effective Operations of Extinction-Reignition with Simple Control of Oxidizer Flux on a Single-Stage Sounding Hybrid Rocket. , 2017, , .		1
62	Correlation of Midweb Anomaly with Microstructure of Composite Propellant. , 2010, , .		0
63	On assessment of numerical methods for diffusion-combustion flow with fast chemistry. , 2012, , .		0
64	Model of Hybrid Rocket Combustion in Classical Hybrid Rocket Motors. , 2013, , .		0
65	Evolutionary algorithm applied to ballistic launch vehicle design using hybrid rocket engine evaluated by enhanced flight simulation. , 2015, , .		0
66	Ascendancy of Extinction-Reignition on Single-Stage Hybrid Sounding Rocket in View of Fuels. , 2016, , .		0
67	Evolutions in Ballistic Data Reconstruction Techniques for Hybrid Rockets. , 2021, , .		0
68	A LINEAR STABILITY ANALYSIS OF OSCILLATORY COMBUSTION INDUCED BY COMBUSTION TIME DELAYS OF LIQUID OXIDIZER IN HYBRID ROCKET MOTORS. International Journal of Energetic Materials and Chemical Propulsion, 2014, 13, 83-96.	0.3	0
69	Structurization of Design Space for Launch Vehicle with Hybrid Rocket Engine Using Stratum-Type Association Analysis. Proceedings in Adaptation, Learning and Optimization, 2015, , 509-521.	1.6	0
70	EFFECT OF OXIDIZER PARTICLE ORIENTATION ON BURNING RATES OF COMPOSITE PROPELLANTS. International Journal of Energetic Materials and Chemical Propulsion, 2016, 15, 285-304.	0.3	0
71	Elucidation of Influence of Fuels on Hybrid Rocket Using Visualization of Design-Space Structure. Computational Methods in Applied Sciences (Springer), 2019, , 473-488.	0.3	0
72	Genetic Algorithm Applied to Design Knowledge Discovery of Launch Vehicle Using Clustered Hybrid Rocket. Computational Methods in Applied Sciences (Springer), 2019, , 519-535.	0.3	0