

Zhi-Jiang Jin

List of Publications by Year in descending order

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118
papers

2,096
citations

236612

25
h-index

329751

37
g-index

120
all docs

120
docs citations

120
times ranked

937
citing authors

#	ARTICLE	IF	CITATIONS
1	A numerical investigation of the flow of nanofluids through a micro Tesla valve. Journal of Zhejiang University: Science A, 2019, 20, 50-60.	1.3	81
2	CFD analysis on the dynamic flow characteristics of the pilot-control globe valve. Energy Conversion and Management, 2014, 87, 220-226.	4.4	79
3	Actuation Mechanism of Microvalves: A Review. Micromachines, 2020, 11, 172.	1.4	75
4	A numerical study of hydrogen leakage and diffusion in a hydrogen refueling station. International Journal of Hydrogen Energy, 2020, 45, 14428-14439.	3.8	65
5	Mach number and energy loss analysis inside multi-stage Tesla valves for hydrogen decompression. Energy, 2019, 179, 647-654.	4.5	61
6	Hydrogen decompression analysis by multi-stage Tesla valves for hydrogen fuel cell. International Journal of Hydrogen Energy, 2019, 44, 13666-13674.	3.8	61
7	Numerical analysis of flow and temperature characteristics in a high multi-stage pressure reducing valve for hydrogen refueling station. International Journal of Hydrogen Energy, 2016, 41, 5559-5570.	3.8	53
8	A comprehensive review on liquid-liquid two-phase flow in microchannel: flow pattern and mass transfer. Microfluidics and Nanofluidics, 2019, 23, 1.	1.0	49
9	Effect of valve core shapes on cavitation flow through a sleeve regulating valve. Journal of Zhejiang University: Science A, 2020, 21, 1-14.	1.3	49
10	Parametric study on Tesla valve with reverse flow for hydrogen decompression. International Journal of Hydrogen Energy, 2018, 43, 8888-8896.	3.8	48
11	Effects of pitch and corrugation depth on heat transfer characteristics in six-start spirally corrugated tube. International Journal of Heat and Mass Transfer, 2017, 108, 1011-1025.	2.5	46
12	On elastic-plastic collapse of subsea pipelines under external hydrostatic pressure and denting force. Applied Ocean Research, 2016, 58, 305-321.	1.8	40
13	Numerical simulation and structure improvement of double throttling in a high parameter pressure reducing valve. Journal of Zhejiang University: Science A, 2013, 14, 137-146.	1.3	38
14	Turbulent compressible flow analysis on multi-stage high pressure reducing valve. Flow Measurement and Instrumentation, 2018, 61, 26-37.	1.0	38
15	Parametric analysis on throttling components of multi-stage high pressure reducing valve. Applied Thermal Engineering, 2018, 128, 1238-1248.	3.0	36
16	A Parametric Study of Hydrodynamic Cavitation Inside Globe Valves. Journal of Fluids Engineering, Transactions of the ASME, 2018, 140, .	0.8	35
17	Pressure analysis on two-step high pressure reducing system for hydrogen fuel cell electric vehicle. International Journal of Hydrogen Energy, 2017, 42, 11541-11552.	3.8	33
18	Thermodynamic analysis of siphon flash evaporation desalination system using ocean thermal energy. Energy Conversion and Management, 2017, 136, 66-77.	4.4	32

#	ARTICLE	IF	CITATIONS
19	A comprehensive review of cavitation in valves: mechanical heart valves and control valves. <i>Bio-Design and Manufacturing</i> , 2019, 2, 119-136.	3.9	31
20	On instability failure of corroded rings under external hydrostatic pressure. <i>Engineering Failure Analysis</i> , 2015, 55, 39-54.	1.8	30
21	Effect of the Y/T on the burst pressure for corroded pipelines with high strength. <i>Journal of Petroleum Science and Engineering</i> , 2017, 157, 760-766.	2.1	30
22	Flow rate analysis of compressible superheated steam through pressure reducing valves. <i>Energy</i> , 2017, 135, 650-658.	4.5	30
23	Numerical analysis of flow and cavitation characteristics in a pilot-control globe valve with different valve core displacements. <i>Journal of Zhejiang University: Science A</i> , 2016, 17, 54-64.	1.3	29
24	CFD analysis on flow resistance characteristics of six-start spirally corrugated tube. <i>International Journal of Heat and Mass Transfer</i> , 2016, 103, 1198-1207.	2.5	28
25	A numerical study of unintended hydrogen release in a hydrogen refueling station. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 20142-20152.	3.8	28
26	Mach number analysis on multi-stage perforated plates in high pressure reducing valve. <i>Energy Conversion and Management</i> , 2016, 119, 81-90.	4.4	26
27	On buckling of non-uniform shallow arch under a central concentrated load. <i>International Journal of Mechanical Sciences</i> , 2017, 133, 330-343.	3.6	26
28	Experimental and numerical analysis of spring stiffness on flow and valve core movement in pilot control globe valve. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 17192-17201.	3.8	26
29	Parametric Study on Fluid Dynamics of Pilot-Control Angle Globe Valve. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2018, 140, .	0.8	25
30	Aerodynamics analysis of superheated steam flow through multi-stage perforated plates. <i>International Journal of Heat and Mass Transfer</i> , 2019, 141, 48-57.	2.5	25
31	Valve core shapes analysis on flux through control valves in nuclear power plants. <i>Nuclear Engineering and Technology</i> , 2020, 52, 2173-2182.	1.1	25
32	Experimental Research on the Power Consumption of a Coaxial Mixer in a Fluid with High Viscosity. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 6862-6867.	1.8	24
33	Transmission loss analysis of thick perforated plates for valve contained pipelines. <i>Energy Conversion and Management</i> , 2016, 109, 86-93.	4.4	24
34	Double circular arc model based on average shear stress yield criterion and its application in the corroded pipe burst. <i>Journal of Petroleum Science and Engineering</i> , 2017, 149, 515-521.	2.1	23
35	Effect of wind condition on unintended hydrogen release in a hydrogen refueling station. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 5537-5547.	3.8	23
36	Numerical Simulation of Flow-Induced Noise in High Pressure Reducing Valve. <i>PLoS ONE</i> , 2015, 10, e0129050.	1.1	22

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37	The glass transition temperature of poly(phenylene sulfide) with various crystallinities. <i>Polymer International</i> , 2013, 62, 449-453.	1.6	21
38	Power consumption and flow field characteristics of a coaxial mixer with a double inner impeller. <i>Chinese Journal of Chemical Engineering</i> , 2015, 23, 1-6.	1.7	21
39	Numerical study on gas dispersion characteristics of a coaxial mixer with viscous fluids. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2016, 66, 54-61.	2.7	21
40	Thermohydraulic performance evaluation of multi-start spirally corrugated tubes. <i>International Journal of Heat and Mass Transfer</i> , 2020, 156, 119876.	2.5	21
41	Mixing efficiency and pressure drop analysis of liquid-liquid two phases flow in serpentine microchannels. <i>Journal of Flow Chemistry</i> , 2019, 9, 187-197.	1.2	20
42	Slug Formation Analysis of Liquid-Liquid Two-Phase Flow in T-Junction Microchannels. <i>Journal of Thermal Science and Engineering Applications</i> , 2019, 11, .	0.8	20
43	Pressure Drop and Cavitation Analysis on Sleeve Regulating Valve. <i>Processes</i> , 2019, 7, 829.	1.3	20
44	Effects of orifice on pressure difference in pilot-control globe valve by experimental and numerical methods. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 18562-18570.	3.8	19
45	Parametric analysis on multi-stage high pressure reducing valve for hydrogen decompression. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 31263-31274.	3.8	19
46	Effect of surface modifications of carbon black (CB) on the properties of CB/polyurethane foams. <i>Journal of Materials Science</i> , 2010, 45, 1065-1073.	1.7	18
47	Pressure Drop Analysis of Pilot-Control Globe Valve With Different Structural Parameters. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2017, 139, .	0.8	18
48	Experimental study on gas-liquid dispersion and mass transfer in shear-thinning system with coaxial mixer. <i>Chinese Journal of Chemical Engineering</i> , 2018, 26, 1785-1791.	1.7	17
49	Mixing Efficiency Analysis on Droplet Formation Process in Microchannels by Numerical Methods. <i>Processes</i> , 2019, 7, 33.	1.3	17
50	Fluid dynamic analysis of liquefied natural gas flow through a cryogenic ball valve in liquefied natural gas receiving stations. <i>Energy</i> , 2021, 226, 120376.	4.5	17
51	Throttling components effect on aerodynamic performance of superheated steam flow in multi-stage high pressure reducing valve. <i>Energy</i> , 2021, 230, 120769.	4.5	17
52	Cavitating Flow through a Micro-Orifice. <i>Micromachines</i> , 2019, 10, 191.	1.4	16
53	Experimental study on micromixing characteristics of novel large-double-blade impeller. <i>Chemical Engineering Science</i> , 2015, 123, 641-647.	1.9	15
54	Thermo-mechanical stress and fatigue damage analysis on multi-stage high pressure reducing valve. <i>Annals of Nuclear Energy</i> , 2017, 110, 753-767.	0.9	15

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55	Numerical Investigation of Methodologies for Cavitation Suppression Inside Globe Valves. Applied Sciences (Switzerland), 2020, 10, 5541.	1.3	15
56	Computational fluid dynamics analysis on orifice structure inside valve core of pilot-control angle globe valve. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2018, 232, 2419-2429.	1.1	14
57	Numerical Investigation and Estimating Correlation of Micromixing Performance of Coaxial Mixers. Industrial & Engineering Chemistry Research, 2019, 58, 22376-22388.	1.8	14
58	Effects of throttling window on flow rate through feed-water valves. ISA Transactions, 2020, 104, 393-405.	3.1	14
59	Collapse of Corroded Pipelines under Combined Tension and External Pressure. PLoS ONE, 2016, 11, e0154314.	1.1	14
60	Limit bending moment for pipes with two circumferential flaws under combined internal pressure and bending. International Journal of Mechanical Sciences, 2016, 106, 319-330.	3.6	13
61	On collapse of non-uniform shallow arch under uniform radial pressure. Engineering Structures, 2018, 160, 419-438.	2.6	13
62	A three-dimensional analytical solution for sandwich pipe systems under linearly varying external pressures. Ocean Engineering, 2016, 124, 298-305.	1.9	12
63	Collapse behavior of non-uniform shallow arch under a concentrated load for fixed and pinned boundary conditions. International Journal of Mechanical Sciences, 2018, 137, 46-67.	3.6	12
64	Research on Heat Transfer Performance of Coaxial Mixer with Inner Combined Impeller. Industrial & Engineering Chemistry Research, 2013, 52, 17285-17293.	1.8	11
65	A geometric study on shell side heat transfer and flow resistance of a six-start spirally corrugated tube. Numerical Heat Transfer; Part A: Applications, 2018, 73, 565-582.	1.2	11
66	Transient Study of Flow and Cavitation Inside a Bileaflet Mechanical Heart Valve. Applied Sciences (Switzerland), 2020, 10, 2548.	1.3	11
67	Integrity assessment of the pipelines containing an isolated corrosion pit. Engineering Failure Analysis, 2020, 113, 104539.	1.8	11
68	Instability of imperfect non-uniform shallow arch under uniform radial pressure for pinned and fixed boundary conditions. Thin-Walled Structures, 2018, 132, 217-236.	2.7	10
69	Effects of a Dynamic Injection Flow Rate on Slug Generation in a Cross-Junction Square Microchannel. Processes, 2019, 7, 765.	1.3	10
70	Symmetric snap-through and equal potential energy load of non-uniform shallow arch under a concentrated load considering imperfection effect. International Journal of Mechanical Sciences, 2018, 146-147, 152-179.	3.6	9
71	Heat Transfer Study of a Hybrid Smooth and Spirally Corrugated Tube. Heat Transfer Engineering, 2021, 42, 242-250.	1.2	9
72	Plastic limit load analysis for pressure pipe with incomplete welding defects based on the extended Net Section Collapse Criteria. Journal of Zhejiang University: Science A, 2010, 11, 440-448.	1.3	8

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73	Experimental study on the mixing and dispersing of floating particles in viscous system. Canadian Journal of Chemical Engineering, 2016, 94, 2013-2022.	0.9	8
74	Heat transfer analysis on dimple geometries and arrangements in dimple jacketed heat exchanger. International Journal of Numerical Methods for Heat and Fluid Flow, 2019, 29, 2775-2791.	1.6	8
75	The influence of feeding location on the micromixing performance of novel large-double-blade impeller. Journal of the Taiwan Institute of Chemical Engineers, 2015, 52, 65-71.	2.7	7
76	On collapse failure analysis of subsea corroded sandwich pipelines under external pressure. , 2016, , .		7
77	Dynamic Burst Pressure of Cylindrical Explosion Containment Vessels. Journal of Pressure Vessel Technology, Transactions of the ASME, 2019, 141, .	0.4	7
78	Pilot Pipe and Damping Orifice Arrangements Analysis of a Pilot-Control Globe Valve. Journal of Fluids Engineering, Transactions of the ASME, 2020, 142, .	0.8	7
79	Modelling and experiments on ocean thermal energy for desalination. International Journal of Sustainable Energy, 2015, 34, 103-112.	1.3	6
80	Micromixing simulation of novel large-double-blade impeller. Journal of the Taiwan Institute of Chemical Engineers, 2016, 66, 62-69.	2.7	6
81	Fluid-Structure Interaction Analysis on Membrane Behavior of a Microfluidic Passive Valve. Membranes, 2020, 10, 300.	1.4	6
82	A numerical study of heat transfer effects and aerodynamic noise reduction in superheated steam flow passing a temperature and pressure regulation valve. Numerical Heat Transfer; Part A: Applications, 2020, 77, 873-889.	1.2	6
83	On the effect of long corrosion defect and axial tension on the burst pressure of subsea pipelines. Applied Ocean Research, 2021, 111, 102637.	1.8	6
84	Thermo-mechanical stress analysis of feed-water valves in nuclear power plants. Nuclear Engineering and Technology, 2022, 54, 849-859.	1.1	6
85	Transient analysis on pressure stabilization of spring linked two-stage perforated plates. Flow Measurement and Instrumentation, 2020, 72, 101692.	1.0	5
86	The flow and cavitation characteristics of cage-type control valves. Engineering Applications of Computational Fluid Mechanics, 2021, 15, 951-963.	1.5	5
87	Numerical Simulation of Heat Transfer in Finned Tube of Heat Recovery Unit Using Fluid-Solid Coupled Method. Advances in Mechanical Engineering, 2015, 7, 127815.	0.8	4
88	Field synergy analysis of six starts spiral corrugated tube under high Reynolds number. Journal of Physics: Conference Series, 2016, 745, 032070.	0.3	4
89	Experimental analysis on filter press and energy consumption performance of diaphragm press drying device in chemical post-processing integrated equipment. Case Studies in Thermal Engineering, 2016, 7, 92-102.	2.8	4
90	On the response of postbuckling of rings with strain hardening under external pressure. International Journal of Solids and Structures, 2019, 167, 127-141.	1.3	4

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91	Analysis of Fouling in Six-Start Spirally Corrugated Tubes. Heat Transfer Engineering, 2020, 41, 1885-1900.	1.2	4
92	Cavitation Suppression of Bileaflet Mechanical Heart Valves. Cardiovascular Engineering and Technology, 2020, 11, 783-794.	0.7	4
93	Experimental investigation on micromixing characteristics of coaxial mixers in viscous system. Canadian Journal of Chemical Engineering, 2020, 98, 1815-1824.	0.9	4
94	A parametric study on unbalanced moment of piston type valve core. Journal of Zhejiang University: Science A, 2021, 22, 265-276.	1.3	4
95	Modal and structural analysis on a main feed water regulating valve under different loading conditions. Annals of Nuclear Energy, 2021, 159, 108309.	0.9	4
96	Seal contact performance analysis of soft seals on high-pressure hydrogen charge valves. Journal of Zhejiang University: Science A, 2022, 23, 247-256.	1.3	4
97	Numerical Study on Flow Characteristics in High Multi-Stage Pressure Reducing Valve. , 2017, , .		3
98	Static and dynamic symmetric snap-through of non-uniform shallow arch under a pair of end moments considering critical slowing-down effect. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2019, 233, 5735-5762.	1.1	3
99	Effects of Sleeve Parameters on Cavitation Control Performance in Steam Trap Valves. Journal of Fluids Engineering, Transactions of the ASME, 2022, 144, .	0.8	3
100	Dynamic response analysis of pilot control globe valve focusing on opening and closing time of pilot valve. Journal of Physics: Conference Series, 2016, 745, 032046.	0.3	2
101	Numerical Study of the Microflow Characteristics in a V-ball Valve. Micromachines, 2021, 12, 155.	1.4	2
102	CFD ANALYSIS ON PRESSURE DROP OF DIMPLE JACKETED HEAT EXCHANGER IN CHEMICAL POST-PROCESSING INTEGRATED EQUIPMENT. , 2015, , .		2
103	The effects of orifice plate on the aerodynamic noise in high pressure reducing valve. Proceedings of Meetings on Acoustics, 2014, , .	0.3	1
104	The Influence of Impeller Combination on the Gas-Liquid Dispersion Performance of a Coaxial Mixer in Viscous Fluids. International Journal of Chemical Reactor Engineering, 2017, 15, .	0.6	1
105	The Hydraulic Cavitation Affected by Nanoparticles in Nanofluids. Computation, 2018, 6, 44.	1.0	1
106	Research laboratory for Smart Control Valves at Zhejiang University. Journal of Zhejiang University: Science A, 2019, 20, 229-232.	1.3	1
107	Transient Simulation on Unbalanced Torque of Piston Type Valve Cores During Dynamic Motion. , 2019, , .		1
108	Experimental Research on a Process for the Recycling of Yellow Phosphorous Tail Gas to Produce Formic Acid. Aerosol and Air Quality Research, 2014, 14, 1466-1476.	0.9	1

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109	Flow Regulation Performance Analysis of Microfluidic Passive Valve for High Throughput Liquid Delivery. <i>Micromachines</i> , 2022, 13, 687.	1.4	1
110	On the collapse failure of dented pipes under bending moment and external pressure. , 2016, , .		0
111	Collapse of dented subsea pipelines under external pressure. , 2016, , .		0
112	Numerical Study on Pressure Difference of Valve Core in Vertical Pilot-Control Globe Valve. , 2017, , .		0
113	Heat transfer study on a hybrid smooth and spirally corrugated tube. <i>MATEC Web of Conferences</i> , 2018, 240, 01038.	0.1	0
114	Effects of nanoparticles on hydraulic cavitation. <i>MATEC Web of Conferences</i> , 2018, 240, 03004.	0.1	0
115	Transient Simulation on Dynamic Motion of Mobile Perforated Plate in Two Stage Spring Linked Perforated Plates. , 2018, , .		0
116	Numerical simulation of fatigue life prediction of pressure vessel based on cyclic J-integral. <i>Jixie Gongcheng Xuebao/Chinese Journal of Mechanical Engineering</i> , 2007, 43, 191.	0.7	0
117	Research on Safety Assessment Method for Pressure Pipe With Incomplete Welding Defects Under Complicated Loadings. , 2010, , .		0
118	Effect of sleeve orifices on flow performance and hydrodynamic noise in two-stage sleeve control valve. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 0, , 095440622210800.	1.1	0