Shi-Yang Tang

List of Publications by Year
in descending order

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Version: 2024-02-01

		81743	76769
101	5,895	39	74
papers	citations	h-index	g-index

106	106	106	4796
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Liquid metals as soft electromechanical actuators. Materials Advances, 2022, 3, 173-185.	2.6	32
2	Superelongation of Liquid Metal. Advanced Science, 2022, 9, e2105289.	5.6	19
3	Engineering Polymers via Understanding the Effect of Anchoring Groups for Highly Stable Liquid Metal Nanoparticles. ACS Applied Nano Materials, 2022, 5, 5959-5971.	2.4	24
4	Equipping New SMA Artificial Muscles With Controllable MRF Exoskeletons for Robotic Manipulators and Grippers. IEEE/ASME Transactions on Mechatronics, 2022, 27, 4585-4596.	3.7	6
5	Variable stiffness wires based on magnetorheological liquid metals. International Journal of Smart and Nano Materials, 2022, 13, 232-243.	2.0	9
6	Microfluidic flow cytometry for blood-based biomarker analysis. Analyst, The, 2022, 147, 2895-2917.	1.7	13
7	Power-Level Electrical Switch Enabled by a Liquid-Metal Bridge. ACS Applied Electronic Materials, 2022, 4, 2859-2868.	2.0	2
8	Gallium-Based Liquid Metal Particles for Therapeutics. Trends in Biotechnology, 2021, 39, 624-640.	4.9	85
9	A Robot Boat Powered by Liquid Metal Engines. Advanced Materials Technologies, 2021, 6, .	3.0	14
10	Liquid metal motor. IScience, 2021, 24, 101911.	1.9	27
11	Light-controlled versatile manipulation of liquid metal droplets: a gateway to future liquid robots. Materials Horizons, 2021, 8, 3063-3071.	6.4	27
12	Amalgamationâ€Assisted Control of Profile of Liquid Metal for the Fabrication of Microfluidic Mixer and Wearable Pressure Sensor. Advanced Materials Interfaces, 2021, 8, 2100038.	1.9	17
13	Hybridâ€Filler Stretchable Conductive Composites: From Fabrication to Application. Small Science, 2021, 1, 2000080.	5.8	80
14	Liquid Metal Enabled Biodevices. Advanced Intelligent Systems, 2021, 3, 2000275.	3.3	40
15	Amalgamationâ€Assisted Lithography: Amalgamationâ€Assisted Control of Profile of Liquid Metal for the Fabrication of Microfluidic Mixer and Wearable Pressure Sensor (Adv. Mater. Interfaces 10/2021). Advanced Materials Interfaces, 2021, 8, 2170058.	1.9	1
16	Modular and Self-Contained Microfluidic Analytical Platforms Enabled by Magnetorheological Elastomer Microactuators. Micromachines, 2021, 12, 604.	1.4	5
17	Mechanical Strain-Enabled Reconstitution of Dynamic Environment in Organ-on-a-Chip Platforms: A Review. Micromachines, 2021, 12, 765.	1.4	12
18	Reversible Underwater Adhesion for Soft Robotic Feet by Leveraging Electrochemically Tunable Liquid Metal Interfaces. ACS Applied Materials & Interfaces, 2021, 13, 37904-37914.	4.0	24

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19	Gallium Liquid Metal: The Devil's Elixir. Annual Review of Materials Research, 2021, 51, 381-408.	4.3	130
20	Liquid Metal Particles and Polymers: A Softâ€“Soft System with Exciting Properties. Accounts of Materials Research, 2021, 2, 966-978.	5.9	34
21	Liquid Metal Hybrid Composites with High-Sensitivity and Large Dynamic Range Enabled by Micro- and Macrostructure Engineering. ACS Applied Polymer Materials, 2021, 3, 5302-5315.	2.0	22
22	Highly stretchable and sensitive strain sensor based on liquid metal composite for wearable sign language communication device. Smart Materials and Structures, 2021, 30, 115005.	1.8	11
23	A Liquid Metal Artificial Muscle. Advanced Materials, 2021, 33, e2103062.	11.1	82
24	Exploiting machine learning for bestowing intelligence to microfluidics. Biosensors and Bioelectronics, 2021, 194, 113666.	5.3	31
25	Focusing of sub-micrometer particles in microfluidic devices. Lab on A Chip, 2020, 20, 35-53.	3.1	77
26	Biomedical Applications of Liquid Metal Nanoparticles: A Critical Review. Biosensors, 2020, 10, 196.	2.3	59
27	Modular and Integrated Systems for Nanoparticle and Microparticle Synthesisâ€”A Review. Biosensors, 2020, 10, 165.	2.3	17
28	Programmable Digital Liquid Metal Droplets in Reconfigurable Magnetic Fields. ACS Applied Materials & Interfaces, 2020, 12, 37670-37679.	4.0	44
29	Modular off-chip emulsion generator enabled by a revolving needle. Lab on A Chip, 2020, 20, 4592-4599.	3.1	11
30	Oscillation and self-propulsion of Leidenfrost droplets enclosed in cylindrical cavities. Soft Matter, 2020, 16, 8854-8860.	1.2	5
31	Sulfoxideâ€Containing Polymerâ€Coated Nanoparticles Demonstrate Minimal Protein Fouling and Improved Blood Circulation. Advanced Science, 2020, 7, 2000406.	5.6	43
32	Nucleation and Growth of Polyaniline Nanofibers onto Liquid Metal Nanoparticles. Chemistry of Materials, 2020, 32, 4808-4819.	3.2	75
33	Dynamic Temperature Control System for the Optimized Production of Liquid Metal Nanoparticles. ACS Applied Nano Materials, 2020, 3, 6905-6914.	2.4	38
34	Liquid Metal Composites with Anisotropic and Unconventional Piezoconductivity. Matter, 2020, 3, 824-841.	5.0	77
35	Particle-Based Porous Materials for the Rapid and Spontaneous Diffusion of Liquid Metals. ACS Applied Materials & Interfaces, 2020, 12, 11163-11170.	4.0	17
36	Liquid metal droplet robot. Applied Materials Today, 2020, 19, 100597.	2.3	57

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37	Modeling and Motion Control of a Liquid Metal Droplet in a Fluidic Channel. IEEE/ASME Transactions on Mechatronics, 2020, 25, 942-950.	3.7	18
38	Blood Triglyceride Monitoring With Smartphone as Electrochemical Analyzer for Cardiovascular Disease Prevention. IEEE Journal of Biomedical and Health Informatics, 2019, 23, 66-71.	3.9	22
39	Sheathless separation of microalgae from bacteria using a simple straight channel based on viscoelastic microfluidics. Lab on A Chip, 2019, 19, 2811-2821.	3.1	42
40	Magneticallyâ€•and Electricallyâ€Controllable Functional Liquid Metal Droplets. Advanced Materials Technologies, 2019, 4, 1800694.	3.0	60
41	Phase Separation in Liquid Metal Nanoparticles. Matter, 2019, 1, 192-204.	5.0	110
42	High-throughput production of uniformly sized liquid metal microdroplets using submerged electrodispersion. Applied Physics Letters, 2019, 114, 154101.	1.5	12
43	Liquid metal-filled magnetorheological elastomer with positive piezoconductivity. Nature Communications, 2019, 10, 1300.	5.8	267
44	Rotation of Liquid Metal Droplets Solely Driven by the Action of Magnetic Fields. Applied Sciences (Switzerland), 2019, 9, 1421.	1.3	5
45	Automatic Morphology Control of Liquid Metal using a Combined Electrochemical and Feedback Control Approach. Micromachines, 2019, 10, 209.	1.4	10
46	Dean-flow-coupled elasto-inertial particle and cell focusing in symmetric serpentine microchannels. Microfluidics and Nanofluidics, 2019, 23, 1.	1.0	33
47	High-Throughput, Off-Chip Microdroplet Generator Enabled by a Spinning Conical Frustum. Analytical Chemistry, 2019, 91, 3725-3732.	3.2	27
48	A Controllable Untethered Vehicle Driven by Electrically Actuated Liquid Metal Droplets. IEEE Transactions on Industrial Informatics, 2019, 15, 2535-2543.	7.2	22
49	Top sheath flow-assisted secondary flow particle manipulation in microchannels with the slanted groove structure. Microfluidics and Nanofluidics, 2019, 23, 1.	1.0	6
50	Functional Liquid Metal Nanoparticles Produced by Liquidâ€Based Nebulization. Advanced Materials Technologies, 2019, 4, 1800420.	3.0	78
51	Enhanced particle self-ordering in a double-layer channel. Biomedical Microdevices, 2018, 20, 23.	1.4	2
52	Microfluidic Mass Production of Stabilized and Stealthy Liquid Metal Nanoparticles. Small, 2018, 14, e1800118.	5.2	117
53	Tunable particle separation in a hybrid dielectrophoresis (DEP)- inertial microfluidic device. Sensors and Actuators B: Chemical, 2018, 267, 14-25.	4.0	99
54	Liquid metal-based amalgamation-assisted lithography for fabrication of complex channels with diverse structures and configurations. Lab on A Chip, 2018, 18, 785-792.	3.1	28

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55	Versatile Microfluidic Platforms Enabled by Novel Magnetorheological Elastomer Microactuators. Advanced Functional Materials, 2018, 28, 1705484.	7.8	71
56	A rapid, maskless 3D prototyping for fabrication of capillary circuits: Toward urinary protein detection. Electrophoresis, 2018, 39, 957-964.	1.3	6
57	Recent progress of particle migration in viscoelastic fluids. Lab on A Chip, 2018, 18, 551-567.	3.1	186
58	Simple, lowâ€cost fabrication of semiâ€circular channel using the surface tension of solder paste and its application to microfluidic valves. Electrophoresis, 2018, 39, 1460-1465.	1.3	0
59	A portable, hand-powered microfluidic device for sorting of biological particles. Microfluidics and Nanofluidics, 2018, 22, 1.	1.0	28
60	Sonication-enabled rapid production of stable liquid metal nanoparticles grafted with poly(1-octadecene-alt-maleic anhydride) in aqueous solutions. Nanoscale, 2018, 10, 19871-19878.	2.8	98
61	A Wheeled Robot Driven by a Liquidâ€Metal Droplet. Advanced Materials, 2018, 30, e1805039.	11.1	109
62	Unconventional locomotion of liquid metal droplets driven by magnetic fields. Soft Matter, 2018, 14, 7113-7118.	1.2	54
63	Enhancement of laminar convective heat transfer using microparticle suspensions. Heat and Mass Transfer, 2017, 53, 169-176.	1.2	4
64	Liquid metal enabled microfluidics. Lab on A Chip, 2017, 17, 974-993.	3.1	354
65	Hybrid Dielectric-loaded Nanoridge Plasmonic Waveguide for Low-Loss Light Transmission at the Subwavelength Scale. Scientific Reports, 2017, 7, 40479.	1.6	26
66	Lateral trapezoid microfluidic platform for investigating mechanotransduction of cells to spatial shear stress gradients. Sensors and Actuators B: Chemical, 2017, 251, 963-975.	4.0	16
67	Acoustofluidic waveguides for localized control of acoustic wavefront in microfluidics. Microfluidics and Nanofluidics, 2017, 21, 1.	1.0	25
68	Printed droplet microfluidics for on demand dispensing of picoliter droplets and cells. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 8728-8733.	3.3	151
69	Onâ€Chip Production of Sizeâ€Controllable Liquid Metal Microdroplets Using Acoustic Waves. Small, 2016, 12, 3861-3869.	5.2	84
70	Concurrent shear stress and chemical stimulation of mechano-sensitive cells by discontinuous dielectrophoresis. Biomicrofluidics, 2016, 10, 024117.	1.2	9
71	Acoustofluidic coating of particles and cells. Lab on A Chip, 2016, 16, 4366-4372.	3.1	27
72	Liquidâ€Metal Microdroplets Formed Dynamically with Electrical Control of Size and Rate. Advanced Materials, 2016, 28, 604-609.	11.1	116

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73	An Integrated Liquid Cooling System Based on Galinstan Liquid Metal Droplets. ACS Applied Materials & Interfaces, 2016, 8, 2173-2180.	4.0	109
74	Discontinuous Dielectrophoresis - A Technique for Investigating the Response of Loosely Adherent Cells to High Shear Stress. , 2016, , .		0
75	Analysing calcium signalling of cells under high shear flows using discontinuous dielectrophoresis. Scientific Reports, 2015, 5, 11973.	1.6	18
76	Creation of Liquid Metal 3D Microstructures Using Dielectrophoresis. Advanced Functional Materials, 2015, 25, 4445-4452.	7.8	81
77	Liquid Metal/Metal Oxide Frameworks with Incorporated Ga₂O₃ for Photocatalysis. ACS Applied Materials & Interfaces, 2015, 7, 1943-1948.	4.0	138
78	Controlled Rotation and Vibration of Patterned Cell Clusters Using Dielectrophoresis. Analytical Chemistry, 2015, 87, 2389-2395.	3.2	24
79	Using dielectrophoresis to study the dynamic response of single budding yeast cells to Lyticase. Analytical and Bioanalytical Chemistry, 2015, 407, 3437-3448.	1.9	15
80	Steering liquid metal flow in microchannels using low voltages. Lab on A Chip, 2015, 15, 3905-3911.	3.1	64
81	Continuous transfer of liquid metal droplets across a fluidâ€“fluid interface within an integrated microfluidic chip. Lab on A Chip, 2015, 15, 2476-2485.	3.1	43
82	High Resolution Scanning Electron Microscopy of Cells Using Dielectrophoresis. PLoS ONE, 2014, 9, e104109.	1.1	27
83	A hydrodynamic microchip for formation of continuous cell chains. Applied Physics Letters, 2014, 104, 203701.	1.5	3
84	Influence of semiconducting properties of nanoparticle coating on the electrochemical actuation of liquid metal marble. Applied Physics Letters, 2014, 105, .	1.5	25
85	Microfluidic platforms for biomarker analysis. Lab on A Chip, 2014, 14, 1496-1514.	3.1	116
86	Liquid Metal/Metal Oxide Frameworks. Advanced Functional Materials, 2014, 24, 3799-3807.	7.8	191
87	Ion-Driven Photoluminescence Modulation of Quasi-Two-Dimensional MoS₂ Nanoflakes for Applications in Biological Systems. Nano Letters, 2014, 14, 857-863.	4.5	245
88	Microfluidic Platforms for the Investigation of Intercellular Signalling Mechanisms. Small, 2014, 10, 4810-4826.	5.2	38
89	Liquid Metal Actuator for Inducing Chaotic Advection. Advanced Functional Materials, 2014, 24, 5851-5858.	7.8	173
90	Liquid metal enabled pump. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 3304-3309.	3.3	299

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91	Photochemically induced motion of liquid metal marbles. Applied Physics Letters, 2013, 103, .	1.5	133
92	In situ SERS probing of nano-silver coated individual yeast cells. Biosensors and Bioelectronics, 2013, 49, 536-541.	5.3	52
93	Modifying Dielectrophoretic Response of Nonviable Yeast Cells by Ionic Surfactant Treatment. Analytical Chemistry, 2013, 85, 6364-6371.	3.2	19
94	Electrochemically induced actuation of liquid metal marbles. Nanoscale, 2013, 5, 5949.	2.8	205
95	Reorientation of microfluidic channel enables versatile dielectrophoretic platforms for cell manipulations. Electrophoresis, 2013, 34, 1407-1414.	1.3	8
96	Liquid Metal Marbles. Advanced Functional Materials, 2013, 23, 144-152.	7.8	249
97	10.1063/1.4826923.1. , 2013, , .		0
98	Enhanced electrochemical heavy metal ion sensor using liquid metal marbles - towards on-chip application. , 2012, , .		2
99	Asymmetric Synthesis of (+)â€(11R,12S)â€Mefloquine Hydrochloride. Chinese Journal of Chemistry, 2008, 26, 1272-1276.	2.6	26
100	Liquid Metal Motor. SSRN Electronic Journal, 0, , .	0.4	0
101	Liquid Metal Composites with Anisotropic and Unconventional Piezoconductivity. SSRN Electronic Journal, 0, , .	0.4	0