Yanjie Wang

List of Publications by Year
in descending order

66 papers	869 citations	394286 19 h-index	526166 27 g-index
67 all docs	67 docs citations	67 times ranked	531 citing authors

#	Article	IF	Citations
1	Underwater Source Localization Using an Artificial Lateral Line System With Pressure and Flow Velocity Sensor Fusion. IEEE/ASME Transactions on Mechatronics, 2022, 27, 245-255.	3.7	21
2	Inflatable Particle-Jammed Robotic Gripper Based on Integration of Positive Pressure and Partial Filling. Soft Robotics, 2022, 9, 309-323.	4.6	19
3	Ionic Flexible Sensors: Mechanisms, Materials, Structures, and Applications. Advanced Functional Materials, 2022, 32, .	7.8	79
4	Superior cycle life of TiZrFeMnCrV high entropy alloy for hydrogen storage. Scripta Materialia, 2022, 212, 114548.	2.6	24
5	Structural Design and Position Tracking of the Reconfigurable SCARA Robot by the Pre-Filter AFE PID Controller. Applied Sciences (Switzerland), 2022, 12, 1626.	1.3	0
6	Effect of doping polyethylene oxide on the properties of Nafion-IPMC actuators. Functional Materials Letters, 2022, 15, .	0.7	2
7	Performance Enhancement of Ionic Polymer-Metal Composite Actuators with Polyethylene Oxide. Polymers, 2022, 14, 80.	2.0	9
8	The effects of contact area on pressure sensing of ionic polymer metal composite sensor with a soft substrate. Smart Materials and Structures, 2022, 31, 065013.	1.8	6
9	Modeling the Damage and Self-healing Behaviors of Plasticized PVC Gels. Acta Mechanica Solida Sinica, 2021, 34, 466-476.	1.0	3
10	A novel strategy to enhance the generating power of ionic polymer metal composites through magnetoelectricity. Smart Materials and Structures, 2021, 30, 065013.	1.8	4
11	Direct Writing Corrugated PVC Gel Artificial Muscle via Multi-Material Printing Processes. Polymers, 2021, 13, 2734.	2.0	2
12	Hierarchical Structure Fabrication of IPMC Strain Sensor With High Sensitivity. Frontiers in Materials, 2021, 8, .	1.2	3
13	Experimental investigation on the physical parameters of ionic polymer metal composites sensors for humidity perception. Sensors and Actuators B: Chemical, 2021, 345, 130421.	4.0	18
14	Design and Motion Analysis of a Pneumatic Soft Active Structure to Imitate Neck Muscle. Lecture Notes in Computer Science, 2021, , 539-551.	1.0	0
15	Manufacturing a soft actuator/sensor integrated structure via multi-material direct writing processes technology. Polymer Testing, 2021, 104, 107382.	2.3	2
16	Prolonged Working Time in Air of Ionic Polymer-Metal Composite Actuators with Polyethylene Oxide[*]. , 2021, , .		0
17	Adjustable electro-active performances of IPMCs based on carboxylated carbon nanotube/Nafion. , 2021, , .		0
18	Modeling analysis of ionic polymer-metal composites sensors with various sizes. , 2021, , .		0

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19	Rapid preparation of a Nafion/Ag NW composite film and its humidity sensing effect. RSC Advances, 2020, 10, 27447-27455.	1.7	9
20	Analysis on the Impact Factors for the Pulling Force of the McKibben Pneumatic Artificial Muscle by a FEM Model. Journal of Robotics, 2020, 2020, 1-11.	0.6	6
21	Reconfigurable Design and Structure Optimization of SCARA. Lecture Notes in Computer Science, 2019, , 672-679.	1.0	1
22	A Compact Review of IPMC as Soft Actuator and Sensor: Current Trends, Challenges, and Potential Solutions From Our Recent Work. Frontiers in Robotics and AI, 2019, 6, 129.	2.0	34
23	Controllable and durable ionic electroactive polymer actuator based on nanoporous carbon nanotube film electrode. Smart Materials and Structures, 2019, 28, 085032.	1.8	15
24	The Effects of Dimensions on the Deformation Sensing Performance of Ionic Polymer-Metal Composites. Sensors, 2019, 19, 2104.	2.1	21
25	Electrochromic iontronic devices based on nanoscale cell membrane-inspired hydrated ion channels in Nafion solid polyelectrolyte. Europhysics Letters, 2019, 128, 68001.	0.7	1
26	High-performance ionic polymerâ€“metal composite actuators fabricated with microneedle roughening. Smart Materials and Structures, 2019, 28, 015007.	1.8	13
27	Sensing Properties and Physical Model of Ionic Polymer. , 2019, , 503-545.		0
28	Tunable actuation behavior of ionic polymer metal composite utilizing carboxylated carbon nanotube-doped Nafion matrix. RSC Advances, 2018, 8, 3090-3094.	1.7	20
29	A moisture and electric coupling stimulated ionic polymer-metal composite actuator with controllable deformation behavior. Smart Materials and Structures, 2018, 27, 02LT01.	1.8	8
30	Design and Fabrication of an IPMC Actuated Micro-Pump With Inner Petal-Shaped Diaphragm. , 2018, , .		2
31	Printing single-walled carbon nanotube/Nafion composites by direct writing techniques. Materials and Design, 2018, 155, 125-133.	3.3	33
32	Active Tube-Shaped Actuator with Embedded Square Rod-Shaped Ionic Polymer-Metal Composites for Robotic-Assisted Manipulation. Applied Bionics and Biomechanics, 2018, 2018, 1-12.	0.5	7
33	Stimuli-Responsive Smart Polymers and Structures: Characteristics and Applications. International Journal of Polymer Science, 2018, 2018, 1-2.	1.2	1
34	Rough interface in IPMC: modeling and its influence analysis. Smart Materials and Structures, 2018, 27, 075055.	1.8	12
35	Moisture and electric coupling stimulated ionic polymer actuator with superior deformation behavior. , 2018, , .		0
36	Fabrication and characterization of IPMC actuated wing for flapping motion of butterfly. , 2018, , .		1

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37	Formation and Characterization of Dendritic Interfacial Electrodes inside an Ionomer. ACS Applied Materials & Interfaces, 2017, 9, 30258-30262.	4.0	41
38	Improved manufacturing technology for producing porous Nafion for high-performance ionic polymerâ€"metal composite actuators. Smart Materials and Structures, 2016, 25, 075043.	1.8	10
39	An easily fabricated high performance ionic polymer based sensor network. Applied Physics Letters, 2016, 109, .	1.5	20
40	Application-oriented simplification of actuation mechanism and physical model for ionic polymer-metal composites. Journal of Applied Physics, 2016, 120, .	1.1	15
41	Enhanced electromechanical response of Ionic Polymer-Metal Composite (IPMC) actuators by various Nafion roughening levels. , 2016, , .		1
42	Preparation and characterization of sulfonated carbon nanotube/Nafion IPMC actuators. , 2016, , .		3
43	Large deformation ionic polymer-metal composites actuators based on porous Nafion membranes. , 2016, , .		0
44	Preparation and characterization of water-soluble carbon nanotube reinforced Nafion membranes and so-based ionic polymer metal composite actuators. Smart Materials and Structures, 2016, 25, 095006.	1.8	31
45	Effects of surface roughening of Nafion 117 on the mechanical and physicochemical properties of ionic polymerâ€"metal composite (IPMC) actuators. Smart Materials and Structures, 2016, 25, 085012.	1.8	25
46	Investigation on static and dynamic performance of a hinge configuration with integrated dielectric elastomers. Journal of Applied Polymer Science, 2015, 132, .	1.3	0
47	A General Visco-Hyperelastic Model for Dielectric Elastomers and Its Efficient Simulation Based on Complex Frequency Representation. International Journal of Applied Mechanics, 2015, 07, 1550011.	1.3	8
48	Experimental investigation on electromechanical deformation of dielectric elastomers under different temperatures. Theoretical and Applied Mechanics Letters, 2015, 5, 155-159.	1.3	7
49	Aided manufacturing techniques and applications in optics and manipulation for ionic polymer-metal composites as soft sensors and actuators. Journal of Polymer Engineering, 2015, 35, 611-626.	0.6	12
50	A multi-segment soft actuator for biomedical applications based on IPMCs. , 2015, , .		0
51	Modeling of the dynamic characteristic of viscoelastic dielectric elastomer actuators subject to different conditions of mechanical load. Journal of Applied Physics, 2015, 117, .	1.1	40
52	Electromechanical performance of ionic polymer-metal composite under electrode constraint. Journal of Reinforced Plastics and Composites, 2015, 34, 1136-1143.	1.6	2
53	Thermal and strain-stiffening effects on the electromechanical breakdown strength of dielectric elastomers. Applied Physics Letters, 2015, 107, .	1.5	23
54	Viscoelastic creep elimination in dielectric elastomer actuation by preprogrammed voltage. Applied Physics Letters, 2014, 105, .	1.5	36

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55	Comparative experimental investigation on the actuation mechanisms of ionic polymerâ€"metal composites with different backbones and water contents. Journal of Applied Physics, 2014, 115, 124903.	1.1	33
56	Effects of surface roughening on the mass transport and mechanical properties of ionic polymer-metal composite. Journal of Applied Physics, 2014, 115, .	1.1	17
57	Comparison of plasma treatment and sandblast preprocessing for IPMC actuator. , 2014, , .		0
58	Effects of preparation steps on the physical parameters and electromechanical properties of IPMC actuators. Smart Materials and Structures, 2014, 23, 125015.	1.8	29
59	Design and fabrication of an IPMC-embedded tube for minimally invasive surgery applications. Proceedings of SPIE, 2014, , .	0.8	5
60	Effect of Dehydration on the Mechanical and Physicochemical Properties of Gold- and Palladium -Ionomeric Polymer-Metal Composite (IPMC) Actuators. Electrochimica Acta, 2014, 129, 450-458.	2.6	68
61	Influence of additives on the properties of casting nafion membranes and SOâ€based ionic polymerâ€"Metal composite actuators. Polymer Engineering and Science, 2014, 54, 818-830.	1.5	21
62	Water content criterion for relaxation deformation of Nafion based ionic polymer metal composites doped with alkali cations. Applied Physics Letters, 2014, 105, .	1.5	36
63	Manufacturing process for patterned IPMC actuator with millimeter thickness. , 2013, , .		2
64	Design and optimization of small-sized actuators for driving optical lens with different shapes based on IPMCs. Proceedings of SPIE, 2012, , .	0.8	2
65	The Effects of Casting and Blending on Properties of Ionomer and the Electromechanical Responses of Ionic Polymer Metal Composite Actuators. , 0, , .		0
66	Ionic Polymer Actuators: Principle, Fabrication and Applications. , 0, , .		6