

Shichao Niu

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

90
papers

1,693
citations

22
h-index

37
g-index

97
ext. papers

2,273
ext. citations

7.2
avg, IF

5.07
L-index

#	Paper	IF	Citations
90	Flourishing Bioinspired Antifogging Materials with Superwettability: Progresses and Challenges. <i>Advanced Materials</i> , 2018 , 30, e1704652	24	110
89	Biomimetic multifunctional surfaces inspired from animals. <i>Advances in Colloid and Interface Science</i> , 2016 , 234, 27-50	14.3	95
88	Synergistic Photodynamic and Photothermal Antibacterial Nanocomposite Membrane Triggered by Single NIR Light Source. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 26581-26589	9.5	92
87	Excellent Structure-Based Multifunction of Morpho Butterfly Wings: A Review. <i>Journal of Bionic Engineering</i> , 2015 , 12, 170-189	2.7	91
86	Superfast and high-sensitivity printable strain sensors with bioinspired micron-scale cracks. <i>Nanoscale</i> , 2017 , 9, 1166-1173	7.7	74
85	High-performance flexible strain sensor with bio-inspired crack arrays. <i>Nanoscale</i> , 2018 , 10, 15178-15186	7.7	69
84	Active Antifogging Property of Monolayer SiO ₂ Film with Bioinspired Multiscale Hierarchical Pagoda Structures. <i>ACS Nano</i> , 2016 , 10, 8591-602	16.7	67
83	Antireflective surface inspired from biology: A review. <i>Biosurface and Biotribology</i> , 2016 , 2, 137-150	1	58
82	Light trapping structures in wing scales of butterfly <i>Trogonoptera brookiana</i> . <i>Nanoscale</i> , 2012 , 4, 2879-83	7.7	47
81	Ascendant bioinspired antireflective materials: Opportunities and challenges coexist. <i>Progress in Materials Science</i> , 2019 , 103, 1-68	42.2	46
80	Flexible Self-Cleaning Broadband Antireflective Film Inspired by the Transparent Cicada Wings. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 17019-17027	9.5	40
79	Energy-Efficient Oil-Water Separation of Biomimetic Copper Membrane with Multiscale Hierarchical Dendritic Structures. <i>Small</i> , 2017 , 13, 1701121	11	38
78	Artificial Hair-Like Sensors Inspired from Nature: A Review. <i>Journal of Bionic Engineering</i> , 2018 , 15, 409-434	4	38
77	A High-Transmission, Multiple Antireflective Surface Inspired from Bilayer 3D Ultrafine Hierarchical Structures in Butterfly Wing Scales. <i>Small</i> , 2016 , 12, 713-20	11	37
76	Erosion-Resistant Surfaces Inspired by Tamarisk. <i>Journal of Bionic Engineering</i> , 2013 , 10, 479-487	2.7	36
75	Bio-inspired micro-nano structured surface with structural color and anisotropic wettability on Cu substrate. <i>Applied Surface Science</i> , 2016 , 379, 230-237	6.7	35
74	An ingenious replica templated from the light trapping structure in butterfly wing scales. <i>Nanoscale</i> , 2013 , 5, 8500-6	7.7	29

73	Bioinspired, Superhydrophobic, and Paper-Based Strain Sensors for Wearable and Underwater Applications. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 1967-1978	9.5	26
72	Fire-safe unsaturated polyester resin nanocomposites based on MAX and MXene: a comparative investigation of their properties and mechanism of fire retardancy. <i>Dalton Transactions</i> , 2020 , 49, 5803-5814	4.3	25
71	Near-infrared light triggered photodynamic and nitric oxide synergistic antibacterial nanocomposite membrane. <i>Chemical Engineering Journal</i> , 2021 , 417, 128049	14.7	23
70	Fabrication of the replica templated from butterfly wing scales with complex light trapping structures. <i>Applied Surface Science</i> , 2015 , 355, 290-297	6.7	22
69	Integrated super-hydrophobic and antireflective PDMS bio-templated from nano-conical structures of cicada wings. <i>RSC Advances</i> , 2016 , 6, 108974-108980	3.7	22
68	A facile antifogging/frost-resistant coating with self-healing ability. <i>Chemical Engineering Journal</i> , 2019 , 378, 122173	14.7	22
67	Unparalleled sensitivity of photonic structures in butterfly wings. <i>RSC Advances</i> , 2014 , 4, 45214-45219	3.7	22
66	Light Trapping Effect in Wing Scales of Butterfly <i>Papilio peranthus</i> and Its Simulations. <i>Journal of Bionic Engineering</i> , 2013 , 10, 162-169	2.7	21
65	Long-term durability of superhydrophobic properties of butterfly wing scales after continuous contact with water. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2017 , 518, 139-144	5.1	20
64	Characterization of Multi-scale Morphology and Superhydrophobicity of Water Bamboo Leaves and Biomimetic Polydimethylsiloxane (PDMS) Replicas. <i>Journal of Bionic Engineering</i> , 2015 , 12, 624-633	2.7	20
63	Study on impact resistance behaviors of a novel composite laminate with basalt fiber for helical-sinusoidal bionic structure of dactyl club of mantis shrimp. <i>Composites Part B: Engineering</i> , 2020 , 191, 107976	10	20
62	The effect of the micro-structures on the scorpion surface for improving the anti-erosion performance. <i>Surface and Coatings Technology</i> , 2017 , 313, 143-150	4.4	18
61	Water-trapping and drag-reduction effects of fish <i>Ctenopharyngodon idellus</i> scales and their simulations. <i>Science China Technological Sciences</i> , 2017 , 60, 1111-1117	3.5	18
60	An Efficient Bionic Anti-Erosion Functional Surface Inspired by Desert Scorpion Carapace. <i>Tribology Transactions</i> , 2015 , 58, 357-364	1.8	18
59	Preparation of bionic nanostructures from butterfly wings and their low reflectivity of ultraviolet. <i>Applied Physics Letters</i> , 2013 , 102, 233702	3.4	18
58	Advanced bio-inspired structural materials: Local properties determine overall performance. <i>Materials Today</i> , 2020 , 41, 177-199	21.8	18
57	Carbon fiber@ pore-ZnO composite as anode materials for structural lithium-ion batteries. <i>Journal of Electroanalytical Chemistry</i> , 2019 , 833, 39-46	4.1	18
56	Near-infrared triggered antibacterial nanocomposite membrane containing upconversion nanoparticles. <i>Materials Science and Engineering C</i> , 2019 , 103, 109797	8.3	16

55	Highly Efficient Mechanoelectrical Energy Conversion Based on the Near-Tip Stress Field of an Antifracture Slit Observed in Scorpions. <i>Advanced Functional Materials</i> , 2019 , 29, 1807693	15.6	15
54	An Ingenious Super Light Trapping Surface Templated from Butterfly Wing Scales. <i>Nanoscale Research Letters</i> , 2015 , 10, 1052	5	15
53	Active anti-erosion protection strategy in tamarisk (<i>Tamarix aphylla</i>). <i>Scientific Reports</i> , 2013 , 3, 3429	4.9	15
52	Preparation of PAN-based carbon fiber/Co3O4 composite and potential application in structural lithium-ion battery anodes. <i>Ionics</i> , 2019 , 25, 5333-5340	2.7	13
51	Underwater writable and heat-insulated paper with robust fluorine-free superhydrophobic coatings. <i>Nanoscale</i> , 2020 , 12, 8536-8545	7.7	13
50	Bio-Inspired Soft Grippers Based on Impactive Gripping. <i>Advanced Science</i> , 2021 , 8, 2002017	13.6	13
49	Numerical Analysis of Erosion Caused by Biomimetic Axial Fan Blade. <i>Advances in Materials Science and Engineering</i> , 2013 , 2013, 1-9	1.5	12
48	Bionic anti-adhesive electrode coupled with maize leaf microstructures and TiO2 coating. <i>RSC Advances</i> , 2017 , 7, 45287-45293	3.7	11
47	Bio-inspired antifogging PDMS coupled micro-pillared superhydrophobic arrays and SiO coatings.. <i>RSC Advances</i> , 2018 , 8, 26497-26505	3.7	11
46	Aerodynamics-assisted, efficient and scalable kirigami fog collectors. <i>Nature Communications</i> , 2021 , 12, 5484	17.4	10
45	Preparation of carbon cloth supported Sn thin film for structural lithium-ion battery anodes. <i>Journal of Electroanalytical Chemistry</i> , 2018 , 822, 17-22	4.1	9
44	The Ingenious Structure of Scorpion Armor Inspires Sand-Resistant Surfaces. <i>Tribology Letters</i> , 2017 , 65, 1	2.8	9
43	Bioinspired Omnidirectional Self-Stable Reflectors with Multiscale Hierarchical Structures. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 29285-29294	9.5	9
42	High light absorption properties and optical structures in butterfly <i>Heliophorus ila</i> <i>Lvcaenidae</i> wing scales. <i>RSC Advances</i> , 2015 , 5, 46011-46016	3.7	9
41	Large-Scale Bio-Inspired Flexible Antireflective Film with Scale-Insensitivity Arrays. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 23103-23112	9.5	9
40	Study on mechanical properties of multi-structure dactyl-inspired sandwich honeycomb with basalt fiber. <i>Composite Structures</i> , 2020 , 247, 112467	5.3	8
39	Rapid Fabrication of Bio-inspired Antireflection Film Replicating From Cicada Wings. <i>Journal of Bionic Engineering</i> , 2020 , 17, 34-44	2.7	8
38	Towards high thermal stability of optical sensing materials with bio-inspired nanostructure. <i>Materials Letters</i> , 2018 , 221, 26-30	3.3	8

37	Progress in Bio-inspired Anti-solid Particle Erosion Materials: Learning from Nature but Going beyond Nature. <i>Chinese Journal of Mechanical Engineering (English Edition)</i> , 2020 , 33,	2.5	8
36	Angle-dependent discoloration structures in wing scales of <i>Morpho menelaus</i> butterfly. <i>Science China Technological Sciences</i> , 2016 , 59, 749-755	3.5	8
35	Anti-adhesive property of maize leaf surface related with temperature and humidity. <i>Journal of Bionic Engineering</i> , 2017 , 14, 540-548	2.7	7
34	Crack-based and Hair-like Sensors Inspired from Arthropods: A Review. <i>Journal of Bionic Engineering</i> , 2020 , 17, 867-898	2.7	7
33	Vibrational Receptor of Scorpion (<i>Heterometrus petersii</i>): The Basitarsal Compound Slit Sensilla. <i>Journal of Bionic Engineering</i> , 2019 , 16, 76-87	2.7	6
32	High-aspect-ratio deflection transducers inspired by the ultra-sensitive cantilever configuration of scorpion trichobothria. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 6093-6101	7.1	6
31	Experimental investigation on impact and bending properties of a novel dactyl-inspired sandwich honeycomb with carbon fiber. <i>Construction and Building Materials</i> , 2020 , 253, 119161	6.7	6
30	Excellent Color Sensitivity of Butterfly Wing Scales to Liquid Mediums. <i>Journal of Bionic Engineering</i> , 2016 , 13, 355-363	2.7	6
29	Superfast Liquid Transfer Strategy Through Sliding on a Liquid Membrane Inspired from Scorpion Setae. <i>Advanced Materials Interfaces</i> , 2018 , 5, 1800802	4.6	6
28	Flexible and highly sensitive pressure sensors based on microcrack arrays inspired by scorpions.. <i>RSC Advances</i> , 2019 , 9, 22740-22748	3.7	6
27	Antifogging properties and mechanism of micron structure in <i>Ephemera pictiventris</i> McLachlan compound eyes. <i>Science Bulletin</i> , 2014 , 59, 2039-2044		6
26	Replication of <i>Papilio maackii</i> butterfly scale structural color using a magnetron sputtering method. <i>Science Bulletin</i> , 2012 , 57, 4525-4528		5
25	A bioinspired triboelectric nanogenerator for all state energy harvester and self-powered rotating monitor. <i>Nano Energy</i> , 2022 , 91, 106637	17.1	5
24	Bioinspired, Omnidirectional and Hypersensitive Flexible Strain Sensors.. <i>Advanced Materials</i> , 2022 , e2200823	10.4	5
23	Phragmites Communis Leaves with Anisotropy, Superhydrophobicity and Self-Cleaning Effect and Biomimetic Polydimethylsiloxane (PDMS) Replicas. <i>Coatings</i> , 2019 , 9, 541	2.9	4
22	Broader-Band and Flexible Antireflective Films with the Window-like Structures Inspired by the Backside of Butterfly Wing Scales. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 19450-19459	9.5	4
21	Dynamically oleophobic epoxy coating with surface enriched in silicone. <i>Progress in Organic Coatings</i> , 2021 , 154, 106170	4.8	3
20	Synchronous oil/water separation and wastewater treatment on a copper-oxide-coated mesh.. <i>RSC Advances</i> , 2021 , 11, 17740-17745	3.7	3

19	A Selective-Response Bioinspired Strain Sensor Using Viscoelastic Material as Middle Layer. <i>ACS Nano</i> , 2021 ,	16.7	3
18	Fine Structure of Scorpion Pectines for Odor Capture. <i>Journal of Bionic Engineering</i> , 2017 , 14, 589-599	2.7	2
17	Mechanoelectrical Energy Conversion: Highly Efficient Mechanoelectrical Energy Conversion Based on the Near-Tip Stress Field of an Antifracture Slit Observed in Scorpions (Adv. Funct. Mater. 22/2019). <i>Advanced Functional Materials</i> , 2019 , 29, 1970147	15.6	2
16	An effective model for mechanical properties of nacre-inspired continuous fiber-reinforced laminated composites. <i>Mechanics of Advanced Materials and Structures</i> , 2020 , 1-9	1.8	2
15	Cross-Scale Biological Models of Species for Future Biomimetic Composite Design: A Review. <i>Coatings</i> , 2021 , 11, 1297	2.9	2
14	Smart Bionic Surfaces with Switchable Wettability and Applications. <i>Journal of Bionic Engineering</i> , 2021 , 18, 473-500	2.7	2
13	Biomimetic Slippery PDMS Film with Papillae-Like Microstructures for Antifogging and Self-Cleaning. <i>Coatings</i> , 2021 , 11, 238	2.9	2
12	Reconfigurable Fiber Triboelectric Nanogenerator for Self-Powered Defect Detection.. <i>ACS Nano</i> , 2022 ,	16.7	2
11	Bioinspired Strategies for Excellent Mechanical Properties of Composites. <i>Journal of Bionic Engineering</i> ,	2.7	2
10	Design of a flexible bio-inspired stretch-forming machine for the fabrication of large radius bends parts. <i>International Journal of Advanced Manufacturing Technology</i> , 2020 , 108, 3571-3578	3.2	1
9	A bio-inspired concept to improve crack resistance of gray cast iron. <i>Materials Letters</i> , 2018 , 216, 203-206	3	1
8	Optimum Anti-erosion Structures and Anti-erosion Mechanism for Rotatory Samples Inspired by Scorpion Armor of <i>Parabuthus transvaalicus</i> . <i>Journal of Bionic Engineering</i> , 2021 , 18, 92-102	2.7	1
7	Toward the Burgeoning Optical Sensors with Ultra-Precision Hierarchical Structures Inspired by Butterflies. <i>Advanced Materials Interfaces</i> , 2021 , 8, 2100142	4.6	1
6	Durable and Superhydrophobic Aluminium Alloy with Microscale Hierarchical Structures and Anti-Drag Function Inspired by Diving Bell Spider. <i>Coatings</i> , 2021 , 11, 1146	2.9	1
5	Bending Resistance and Anisotropy of Basalt Fibers Laminate Composite with Bionic Helical Structure. <i>Journal of Bionic Engineering</i> , 2022 , 19, 799	2.7	1
4	Coupled Superhydrophilic PMMA Film with Inverted Pyramid Microstructures for Antireflection and Antifogging Properties. <i>Coatings</i> , 2021 , 11, 1107	2.9	0
3	Interfacial reinforced carbon fiber composites inspired by biological interlocking structure.. <i>IScience</i> , 2022 , 25, 104066	6.1	0
2	A feather-inspired interleaf for enhanced interlaminar fracture toughness of carbon fiber reinforced polymer composites. <i>Composites Part B: Engineering</i> , 2022 , 236, 109827	10	0

- 1 Nanowires in Flexible Sensors: Structure is Becoming a Key in Controlling the Sensing Performance. *Advanced Materials Technologies*,2200163 6.8