

Shichao Niu

List of Publications by Year in Descending Order

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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 | A bioinspired triboelectric nanogenerator for all state energy harvester and self-powered rotating monitor. <i>Nano Energy</i> , 2022 , 91, 106637 | 17.1 | 5 |
| 89 | 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 |
| 88 | Bioinspired, Omnidirectional and Hypersensitive Flexible Strain Sensors.. <i>Advanced Materials</i> , 2022 , e220823 | 10.23 | 5 |
| 87 | Interfacial reinforced carbon fiber composites inspired by biological interlocking structure.. <i>IScience</i> , 2022 , 25, 104066 | 6.1 | 0 |
| 86 | 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 |
| 85 | Reconfigurable Fiber Triboelectric Nanogenerator for Self-Powered Defect Detection.. <i>ACS Nano</i> , 2022 , | 16.7 | 2 |
| 84 | Cross-Scale Biological Models of Species for Future Biomimetic Composite Design: A Review. <i>Coatings</i> , 2021 , 11, 1297 | 2.9 | 2 |
| 83 | 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 |
| 82 | Bio-Inspired Soft Grippers Based on Impactive Gripping. <i>Advanced Science</i> , 2021 , 8, 2002017 | 13.6 | 13 |
| 81 | 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 |
| 80 | Smart Bionic Surfaces with Switchable Wettability and Applications. <i>Journal of Bionic Engineering</i> , 2021 , 18, 473-500 | 2.7 | 2 |
| 79 | Large-Scale Bio-Inspired Flexible Antireflective Film with Scale-Insensitivity Arrays. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 23103-23112 | 9.5 | 9 |
| 78 | Dynamically oleophobic epoxy coating with surface enriched in silicone. <i>Progress in Organic Coatings</i> , 2021 , 154, 106170 | 4.8 | 3 |
| 77 | Near-infrared light triggered photodynamic and nitric oxide synergistic antibacterial nanocomposite membrane. <i>Chemical Engineering Journal</i> , 2021 , 417, 128049 | 14.7 | 23 |
| 76 | 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 |
| 75 | Synchronous oil/water separation and wastewater treatment on a copper-oxide-coated mesh.. <i>RSC Advances</i> , 2021 , 11, 17740-17745 | 3.7 | 3 |
| 74 | Biomimetic Slippery PDMS Film with Papillae-Like Microstructures for Antifogging and Self-Cleaning. <i>Coatings</i> , 2021 , 11, 238 | 2.9 | 2 |

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| 73 | Toward the Burgeoning Optical Sensors with Ultra-Precision Hierarchical Structures Inspired by Butterflies. <i>Advanced Materials Interfaces</i> , 2021 , 8, 2100142 | 4.6 | 1 |
| 72 | 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 |
| 71 | Aerodynamics-assisted, efficient and scalable kirigami fog collectors. <i>Nature Communications</i> , 2021 , 12, 5484 | 17.4 | 10 |
| 70 | Coupled Superhydrophilic PMMA Film with Inverted Pyramid Microstructures for Antireflection and Antifogging Properties. <i>Coatings</i> , 2021 , 11, 1107 | 2.9 | 0 |
| 69 | A Selective-Response Bioinspired Strain Sensor Using Viscoelastic Material as Middle Layer. <i>ACS Nano</i> , 2021 , | 16.7 | 3 |
| 68 | Study on mechanical properties of multi-structure dactyl-inspired sandwich honeycomb with basalt fiber. <i>Composite Structures</i> , 2020 , 247, 112467 | 5.3 | 8 |
| 67 | Underwater writable and heat-insulated paper with robust fluorine-free superhydrophobic coatings. <i>Nanoscale</i> , 2020 , 12, 8536-8545 | 7.7 | 13 |
| 66 | 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 |
| 65 | 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 |
| 64 | 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 |
| 63 | 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 |
| 62 | Rapid Fabrication of Bio-inspired Antireflection Film Replicating From Cicada Wings. <i>Journal of Bionic Engineering</i> , 2020 , 17, 34-44 | 2.7 | 8 |
| 61 | 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 |
| 60 | 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 |
| 59 | Advanced bio-inspired structural materials: Local properties determine overall performance. <i>Materials Today</i> , 2020 , 41, 177-199 | 21.8 | 18 |
| 58 | Crack-based and Hair-like Sensors Inspired from Arthropods: A Review. <i>Journal of Bionic Engineering</i> , 2020 , 17, 867-898 | 2.7 | 7 |
| 57 | 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 |
| 56 | Ascendant bioinspired antireflective materials: Opportunities and challenges coexist. <i>Progress in Materials Science</i> , 2019 , 103, 1-68 | 42.2 | 46 |

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| 55 | 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 |
| 54 | Preparation of PAN-based carbon fiber/Co ₃ O ₄ composite and potential application in structural lithium-ion battery anodes. <i>Ionics</i> , 2019 , 25, 5333-5340 | 2.7 | 13 |
| 53 | Near-infrared triggered antibacterial nanocomposite membrane containing upconversion nanoparticles. <i>Materials Science and Engineering C</i> , 2019 , 103, 109797 | 8.3 | 16 |
| 52 | 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 |
| 51 | 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 |
| 50 | 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 |
| 49 | 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 |
| 48 | A facile antifogging/frost-resistant coating with self-healing ability. <i>Chemical Engineering Journal</i> , 2019 , 378, 122173 | 14.7 | 22 |
| 47 | Flexible and highly sensitive pressure sensors based on microcrack arrays inspired by scorpions.. <i>RSC Advances</i> , 2019 , 9, 22740-22748 | 3.7 | 6 |
| 46 | Phragmites Communis Leaves with Anisotropy, Superhydrophobicity and Self-Cleaning Effect and Biomimetic Polydimethylsiloxane (PDMS) Replicas. <i>Coatings</i> , 2019 , 9, 541 | 2.9 | 4 |
| 45 | 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 |
| 44 | Flourishing Bioinspired Antifogging Materials with Superwettability: Progresses and Challenges. <i>Advanced Materials</i> , 2018 , 30, e1704652 | 24 | 110 |
| 43 | A bio-inspired concept to improve crack resistance of gray cast iron. <i>Materials Letters</i> , 2018 , 216, 203-206 | 3 | 1 |
| 42 | Towards high thermal stability of optical sensing materials with bio-inspired nanostructure. <i>Materials Letters</i> , 2018 , 221, 26-30 | 3.3 | 8 |
| 41 | Bio-inspired antifogging PDMS coupled micro-pillared superhydrophobic arrays and SiO ₂ coatings.. <i>RSC Advances</i> , 2018 , 8, 26497-26505 | 3.7 | 11 |
| 40 | 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 |
| 39 | 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 |
| 38 | Artificial Hair-Like Sensors Inspired from Nature: A Review. <i>Journal of Bionic Engineering</i> , 2018 , 15, 409-434 | 3.4 | 38 |

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| 37 | High-performance flexible strain sensor with bio-inspired crack arrays. <i>Nanoscale</i> , 2018 , 10, 15178-15186 | 7.7 | 69 |
| 36 | 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 |
| 35 | 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 |
| 34 | 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 |
| 33 | Superfast and high-sensitivity printable strain sensors with bioinspired micron-scale cracks. <i>Nanoscale</i> , 2017 , 9, 1166-1173 | 7.7 | 74 |
| 32 | Fine Structure of Scorpion Pectines for Odor Capture. <i>Journal of Bionic Engineering</i> , 2017 , 14, 589-599 | 2.7 | 2 |
| 31 | Bionic anti-adhesive electrode coupled with maize leaf microstructures and TiO ₂ coating. <i>RSC Advances</i> , 2017 , 7, 45287-45293 | 3.7 | 11 |
| 30 | 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 |
| 29 | Energy-Efficient Oil-Water Separation of Biomimetic Copper Membrane with Multiscale Hierarchical Dendritic Structures. <i>Small</i> , 2017 , 13, 1701121 | 11 | 38 |
| 28 | The Ingenious Structure of Scorpion Armor Inspires Sand-Resistant Surfaces. <i>Tribology Letters</i> , 2017 , 65, 1 | 2.8 | 9 |
| 27 | Bioinspired Omnidirectional Self-Stable Reflectors with Multiscale Hierarchical Structures. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 29285-29294 | 9.5 | 9 |
| 26 | 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 |
| 25 | Excellent Color Sensitivity of Butterfly Wing Scales to Liquid Mediums. <i>Journal of Bionic Engineering</i> , 2016 , 13, 355-363 | 2.7 | 6 |
| 24 | 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 |
| 23 | 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 |
| 22 | Antireflective surface inspired from biology: A review. <i>Biosurface and Biotribology</i> , 2016 , 2, 137-150 | 1 | 58 |
| 21 | Biomimetic multifunctional surfaces inspired from animals. <i>Advances in Colloid and Interface Science</i> , 2016 , 234, 27-50 | 14.3 | 95 |
| 20 | 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 |

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| 19 | Angle-dependent discoloration structures in wing scales of Morpho menelaus butterfly. <i>Science China Technological Sciences</i> , 2016 , 59, 749-755 | 3.5 | 8 |
| 18 | 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 |
| 17 | Excellent Structure-Based Multifunction of Morpho Butterfly Wings: A Review. <i>Journal of Bionic Engineering</i> , 2015 , 12, 170-189 | 2.7 | 91 |
| 16 | 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 |
| 15 | An Ingenious Super Light Trapping Surface Templated from Butterfly Wing Scales. <i>Nanoscale Research Letters</i> , 2015 , 10, 1052 | 5 | 15 |
| 14 | An Efficient Bionic Anti-Erosion Functional Surface Inspired by Desert Scorpion Carapace. <i>Tribology Transactions</i> , 2015 , 58, 357-364 | 1.8 | 18 |
| 13 | High light absorption properties and optical structures in butterfly Heliophorus ila Lvcaenidae wing scales. <i>RSC Advances</i> , 2015 , 5, 46011-46016 | 3.7 | 9 |
| 12 | Antifogging properties and mechanism of micron structure in Ephemera pictiventris McLachlan compound eyes. <i>Science Bulletin</i> , 2014 , 59, 2039-2044 | | 6 |
| 11 | Unparalleled sensitivity of photonic structures in butterfly wings. <i>RSC Advances</i> , 2014 , 4, 45214-45219 | 3.7 | 22 |
| 10 | An ingenious replica templated from the light trapping structure in butterfly wing scales. <i>Nanoscale</i> , 2013 , 5, 8500-6 | 7.7 | 29 |
| 9 | Erosion-Resistant Surfaces Inspired by Tamarisk. <i>Journal of Bionic Engineering</i> , 2013 , 10, 479-487 | 2.7 | 36 |
| 8 | Light Trapping Effect in Wing Scales of Butterfly Papilio peranthus and Its Simulations. <i>Journal of Bionic Engineering</i> , 2013 , 10, 162-169 | 2.7 | 21 |
| 7 | 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 |
| 6 | Preparation of bionic nanostructures from butterfly wings and their low reflectivity of ultraviolet. <i>Applied Physics Letters</i> , 2013 , 102, 233702 | 3.4 | 18 |
| 5 | Active anti-erosion protection strategy in tamarisk (Tamarix aphylla). <i>Scientific Reports</i> , 2013 , 3, 3429 | 4.9 | 15 |
| 4 | Light trapping structures in wing scales of butterfly Trogonoptera brookiana. <i>Nanoscale</i> , 2012 , 4, 2879-83.7 | 3.7 | 47 |
| 3 | Replication of Papilio maackii butterfly scale structural color using a magnetron sputtering method. <i>Science Bulletin</i> , 2012 , 57, 4525-4528 | | 5 |
| 2 | Nanowires in Flexible Sensors: Structure is Becoming a Key in Controlling the Sensing Performance. <i>Advanced Materials Technologies</i> , 2012 , 2200163 | 6.8 | |

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| 1 | Bioinspired Strategies for Excellent Mechanical Properties of Composites. <i>Journal of Bionic Engineering</i> , | 2.7 | 2 |
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