

# Bingang Xu

## List of Publications by Year in descending order

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107  
papers

3,703  
citations

136740

32  
h-index

161609

54  
g-index

121  
all docs

121  
docs citations

121  
times ranked

3376  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fiber-shaped stretchable triboelectric nanogenerator with a novel synergistic structure of opposite Poisson's ratios. <i>Chemical Engineering Journal</i> , 2022, 427, 131698.	6.6	35
2	A Polycation-Modified Nanofillers Tailored Polymer Electrolytes Fiber for Versatile Biomechanical Energy Harvesting and Full-Range Personal Healthcare Sensing. <i>Advanced Functional Materials</i> , 2022, 32, 2106731.	7.8	33
3	Scalable core-spun coating yarn-based triboelectric nanogenerators with hierarchical structure for wearable energy harvesting and sensing via continuous manufacturing. <i>Nano Energy</i> , 2022, 91, 106672.	8.2	49
4	Engraved pattern spacer triboelectric nanogenerators for mechanical energy harvesting. <i>Nano Energy</i> , 2022, 92, 106782.	8.2	16
5	Fabric-rebound triboelectric nanogenerators with loops and layered structures for energy harvesting and intelligent wireless monitoring of human motions. <i>Nano Energy</i> , 2022, 93, 106807.	8.2	28
6	Additive Manufacturing of Two-Dimensional Conductive Metal-Organic Framework with Multidimensional Hybrid Architectures for High-Performance Energy Storage. <i>Nano Letters</i> , 2022, 22, 1198-1206.	4.5	21
7	Multi-Component Crosslinked Hydrogel Electrolyte toward Dendrite-Free Aqueous Zn Ion Batteries with High Temperature Adaptability. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	85
8	Surface microstructural engineering of silicone elastomers for high performance adhesive surface-enabled mechanical energy harvesters. <i>Journal of Materials Chemistry A</i> , 2022, 10, 9643-9654.	5.2	5
9	Robust nitrogen/selenium engineered MXene/ZnSe hierarchical multifunctional interfaces for dendrite-free zinc-metal batteries. <i>Energy Storage Materials</i> , 2022, 49, 122-134.	9.5	57
10	Insights into Zn anode surface chemistry for dendrite-free Zn ion batteries. <i>Journal of Materials Chemistry A</i> , 2022, 10, 11288-11297.	5.2	13
11	Surface microstructural engineering of continuous fibers as one-dimensional multifunctional fiber materials for wearable electronic applications. <i>Chemical Engineering Journal</i> , 2022, 446, 137192.	6.6	21
12	Flexible in-plane zinc-ion hybrid capacitors with synergistic electrochemical behaviors for self-powered energy systems. <i>Journal of Materials Chemistry A</i> , 2022, 10, 14011-14019.	5.2	9
13	Toward 3D double-electrode textile triboelectric nanogenerators for wearable biomechanical energy harvesting and sensing. <i>Chemical Engineering Journal</i> , 2022, 450, 137491.	6.6	15
14	Bio-inspired design on EGCG-selective membrane: An anchoring/imprinting strategy based on bi-interactions. <i>Journal of Membrane Science</i> , 2022, 658, 120750.	4.1	16
15	MXene-based materials for advanced nanogenerators. <i>Nano Energy</i> , 2022, 101, 107556.	8.2	19
16	Mathematical modeling of linearly-elastic non-prestrained cables based on a local reference frame. <i>Applied Mathematical Modelling</i> , 2021, 91, 695-708.	2.2	1
17	Breathable, washable and wearable woven-structured triboelectric nanogenerators utilizing electrospun nanofibers for biomechanical energy harvesting and self-powered sensing. <i>Nano Energy</i> , 2021, 80, 105549.	8.2	153
18	Solution-Processed Transparent Conducting Electrodes for Flexible Organic Solar Cells with 16.61% Efficiency. <i>Nano-Micro Letters</i> , 2021, 13, 44.	14.4	71

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19	3D Conformal Surface Engineering of Continuous Fibers with Porous Microstructures for 1D Advanced Functional Materials. <i>Macromolecular Materials and Engineering</i> , 2021, 306, 2000699.	1.7	4
20	Wearable technologies enable high-performance textile supercapacitors with flexible, breathable and wearable characteristics for future energy storage. <i>Energy Storage Materials</i> , 2021, 37, 94-122.	9.5	80
21	Organogel electrode based continuous fiber with large-scale production for stretchable triboelectric nanogenerator textiles. <i>Nano Energy</i> , 2021, 84, 105867.	8.2	39
22	Interfacial Polarization and Dual Charge Transfer Induced High Permittivity of Carbon Dots-Based Composite as Humidity-Resistant Tribomaterial for Efficient Biomechanical Energy Harvesting. <i>Advanced Energy Materials</i> , 2021, 11, 2101294.	10.2	31
23	Surface porous microstructured fibers with customized functionalities for 1D functional materials. <i>Composites Part B: Engineering</i> , 2021, 223, 109112.	5.9	11
24	Series to parallel structure of electrode fiber: an effective method to remarkably reduce inner resistance of triboelectric nanogenerator textiles. <i>Journal of Materials Chemistry A</i> , 2021, 9, 12331-12339.	5.2	24
25	Conductive Composite Fiber with Customizable Functionalities for Energy Harvesting and Electronic Textiles. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 49927-49935.	4.0	24
26	3D Printing for Solid-State Energy Storage. <i>Small Methods</i> , 2021, 5, e2100877.	4.6	24
27	Organogel electrode enables highly transparent and stretchable triboelectric nanogenerators of high power density for robust and reliable energy harvesting. <i>Nano Energy</i> , 2020, 78, 105373.	8.2	31
28	Liquid-Filling Polydimethylsiloxane Composites with Enhanced Triboelectric Performance for Flexible Nanogenerators. <i>Macromolecular Materials and Engineering</i> , 2020, 305, 2000275.	1.7	13
29	Towards 3D knitted-fabric derived supercapacitors with full structural and functional integrity of fiber and electroactive materials. <i>Journal of Power Sources</i> , 2020, 473, 228559.	4.0	21
30	Robust Deposition of Silver Nanoparticles on Paper Assisted by Polydopamine for Green and Flexible Electrodes. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 12842-12851.	3.2	37
31	Self-Assembly of Porous Microstructured Polydimethylsiloxane Films for Wearable Triboelectric Nanogenerators. <i>Macromolecular Materials and Engineering</i> , 2020, 305, 2000276.	1.7	13
32	Liquid doping materials as micro-carrier of functional molecules for functionalization of triboelectric materials and flexible triboelectric nanogenerators for energy harvesting and gesture detection. <i>Nano Energy</i> , 2020, 74, 104856.	8.2	26
33	Three-Dimensional Conformal Porous Microstructural Engineering of Textile Substrates with Customized Functions of Brick Materials and Inherent Advantages of Textiles. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 17967-17978.	4.0	19
34	An Adhesive Surface Enables High-Performance Mechanical Energy Harvesting with Unique Frequency-Insensitive and Pressure-Enhanced Output Characteristics. <i>Advanced Materials</i> , 2020, 32, e1907948.	11.1	25
35	Hierarchically architected polydopamine modified BaTiO <sub>3</sub> @P(VDF-TrFE) nanocomposite fiber mats for flexible piezoelectric nanogenerators and self-powered sensors. <i>Nano Energy</i> , 2020, 70, 104516.	8.2	221
36	Interfacial modification boosted permittivity and triboelectric performance of liquid doping composites for high-performance flexible triboelectric nanogenerators. <i>Nano Energy</i> , 2020, 78, 105374.	8.2	25

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37	Toward Flexible and Wearable Embroidered Supercapacitors from Cobalt Phosphides-Decorated Conductive Fibers. <i>Nano-Micro Letters</i> , 2019, 11, 89.	14.4	38
38	Towards truly wearable energy harvesters with full structural integrity of fiber materials. <i>Nano Energy</i> , 2019, 58, 365-374.	8.2	69
39	3D Patternable Supercapacitors from Hierarchically Architected Porous Fiber Composites for Wearable and Waterproof Energy Storage. <i>Small</i> , 2019, 15, e1901313.	5.2	26
40	High-efficiency robust organic solar cells using transfer-printed PEDOT:PSS electrodes through interface bonding engineering. <i>Materials Chemistry Frontiers</i> , 2019, 3, 901-908.	3.2	12
41	Graphene-based in-planar supercapacitors by a novel laser-scribing, in-situ reduction and transfer-printed method on flexible substrates. <i>Journal of Power Sources</i> , 2019, 420, 82-87.	4.0	33
42	A highly durable textile-based sensor as a human-worn material interface for long-term multiple mechanical deformation sensing. <i>Journal of Materials Chemistry C</i> , 2019, 7, 14651-14663.	2.7	32
43	Design of High-Performance Wearable Energy and Sensor Electronics from Fiber Materials. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 2120-2129.	4.0	52
44	Design of Novel Wearable, Stretchable, and Waterproof Cable-Type Supercapacitors Based on High-Performance Nickel Cobalt Sulfide-Coated Etching-Annealed Yarn Electrodes. <i>Small</i> , 2018, 14, e1704373.	5.2	59
45	A two-scale attention model for intelligent evaluation of yarn surface qualities with computer vision. <i>Journal of the Textile Institute</i> , 2018, 109, 798-812.	1.0	5
46	Wearable strain sensing textile based on one-dimensional stretchable and weavable yarn sensors. <i>Nano Research</i> , 2018, 11, 5799-5811.	5.8	99
47	Eye-tracking-aided digital system for strabismus diagnosis. <i>Healthcare Technology Letters</i> , 2018, 5, 1-6.	1.9	31
48	Variation of false twist on spinning process stability and resultant yarn properties in a modified ring spinning frame. <i>Textile Research Journal</i> , 2018, 88, 1876-1892.	1.1	10
49	Highly sensitive, durable and stretchable plastic strain sensors using sandwich structures of PEDOT:PSS and an elastomer. <i>Materials Chemistry Frontiers</i> , 2018, 2, 355-361.	3.2	58
50	Three-Dimensionally Conformal Porous Polymeric Microstructures of Fabrics for Electrothermal Textiles with Enhanced Thermal Management. <i>Polymers</i> , 2018, 10, 748.	2.0	8
51	Novel high-performance asymmetric supercapacitors based on nickel-cobalt composite and PPy for flexible and wearable energy storage. <i>Journal of Power Sources</i> , 2018, 402, 91-98.	4.0	48
52	All-Solution-Processed Metal-Oxide-Free Flexible Organic Solar Cells with Over 10% Efficiency. <i>Advanced Materials</i> , 2018, 30, e1800075.	11.1	165
53	Breath Figure Micromolding Approach for Regulating the Microstructures of Polymeric Films for Triboelectric Nanogenerators. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 4988-4997.	4.0	62
54	Highly Conductive Stretchable All-Plastic Electrodes Using a Novel Dipping-Embedded Transfer Method for High-Performance Wearable Sensors and Semitransparent Organic Solar Cells. <i>Advanced Electronic Materials</i> , 2017, 3, 1600471.	2.6	62

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55	Electromechanical properties of a yarn strain sensor with graphene-sheath/polyurethane-core. Carbon, 2017, 118, 686-698.	5.4	113
56	Numerical Study of Taylor Cone Dynamics in Electrospinning of Nanofibers. Key Engineering Materials, 2017, 730, 510-515.	0.4	2
57	Three-Dimensionally Conformal Porous Microstructured Fabrics via Breath Figures: A Nature-Inspired Approach for Novel Surface Modification of Textiles. Scientific Reports, 2017, 7, 2354.	1.6	13
58	Fabrication of one-dimensional Bi <sub>2</sub> O <sub>3</sub> –Bi <sub>14</sub> MoO <sub>24</sub> heterojunction photocatalysts with high interface quality. CrystEngComm, 2017, 19, 237-245.	1.3	20
59	Vibroacoustic modeling of an elastic beam in low subsonic flows with mean velocities. European Journal of Mechanics, A/Solids, 2017, 66, 322-328.	2.1	1
60	Br-Doped Bi <sub>2</sub> O <sub>2</sub> CO <sub>3</sub> exposed (001) crystal facets with enhanced photocatalytic activity. CrystEngComm, 2017, 19, 5001-5007.	1.3	36
61	Synthesis of one-dimensional Bi <sub>2</sub> O <sub>3</sub> -Bi <sub>2</sub> O <sub>2.33</sub> heterojunctions with high interface quality for enhanced visible light photocatalysis in degradation of high-concentration phenol and MO dyes. Applied Catalysis B: Environmental, 2017, 203, 946-954.	10.8	132
62	Dynamic analysis of a cantilever beam with a multiple degrees of freedom system. Noise Control Engineering Journal, 2017, 65, 103-109.	0.2	0
63	Eye-tracking Aided Digital Training System for Strabismus Therapy. Journal of Advances in Information Technology, 2017, , 57-62.	2.6	3
64	Mathematical Modeling of Yarn Dynamics in a Generalized Twisting System. Scientific Reports, 2016, 6, 24432.	1.6	18
65	Transfer-Printed PEDOT:PSS Electrodes Using Mild Acids for High Conductivity and Improved Stability with Application to Flexible Organic Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 14029-14036.	4.0	145
66	Iron phthalocyanine nanorods for ethanol sensing. Micro and Nano Letters, 2016, 11, 348-350.	0.6	10
67	Binary breath figures for straightforward and controllable self-assembly of microspherical caps. Physical Chemistry Chemical Physics, 2016, 18, 13629-13637.	1.3	18
68	A simple and industrially scalable approach to prepare Co(OH) <sub>2</sub> hexagonal nanoflake. Materials Letters, 2016, 164, 432-435.	1.3	5
69	Coralloid and hierarchical Co <sub>3</sub> O <sub>4</sub> nanostructures used as supercapacitors with good cycling stability. Journal of Solid State Electrochemistry, 2016, 20, 1303-1309.	1.2	22
70	Optimization Design of Transparent Poly(3,4-ethylenedioxythiophene):Poly(styrenesulfonate) Electrodes for Highly Efficient and Flexible Indium Tin Oxide-Free Organic Solar Cells. Journal of Nanoelectronics and Optoelectronics, 2016, 11, 745-750.	0.1	0
71	Novel highly sensitive and wearable pressure sensors from conductive three-dimensional fabric structures. Smart Materials and Structures, 2015, 24, 125022.	1.8	34
72	An intelligent computer method for automatic mosaic and segmentation of tracer fiber images for yarn structure analysis. Textile Research Journal, 2015, 85, 733-750.	1.1	9

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73	Aramid-Assisted Acid Spinning of Continuous Multi-Walled Carbon Nanotube Fibers for Twisted, Robust, and Multifunctional Yarns. <i>Macromolecular Materials and Engineering</i> , 2015, 300, 954-959.	1.7	4
74	Asphalt-assisted assembly of breath figures: a robust templating strategy for general fabrication of ordered porous polymer films. <i>RSC Advances</i> , 2015, 5, 14341-14344.	1.7	12
75	ZnO nanorod/nickel phthalocyanine hierarchical hetero-nanostructures with superior visible light photocatalytic properties assisted by $H_2O$ . <i>RSC Advances</i> , 2015, 5, 87233-87240.	1.7	25
76	Honeycomb Microstructured Silicon Oxycarbide Sheets from Silicon-Containing Graft Copolymer Films. <i>Plasma Processes and Polymers</i> , 2014, 11, 1001-1009.	1.6	15
77	Novel Honeycomb-Microstructured Asphalt Composite Coatings for Sustainable Photocatalytic Application. <i>Advanced Materials Research</i> , 2014, 905, 310-313.	0.3	0
78	A theoretical model of maximum hairiness of staple ring-spun yarns. <i>Textile Research Journal</i> , 2014, 84, 1121-1137.	1.1	6
79	Relative Saliency Model over Multiple Images with an Application to Yarn Surface Evaluation. <i>IEEE Transactions on Cybernetics</i> , 2014, 44, 1249-1258.	6.2	10
80	Structural analysis of finer cotton yarns produced by conventional and modified ring spinning system. <i>Fibers and Polymers</i> , 2014, 15, 396-404.	1.1	7
81	Performance of cotton single yarns and knitted fabrics produced by a 2-step spinning method. <i>Fibers and Polymers</i> , 2014, 15, 882-890.	1.1	5
82	An elastic analysis of a honeycomb structure with negative Poisson's ratio. <i>Smart Materials and Structures</i> , 2013, 22, 084006.	1.8	18
83	Dynamic modeling and evaluation for constituent fibers in fabrication of twisted flexible yarns with consideration of fiber mass and viscoelasticity. <i>Journal of Materials Science</i> , 2013, 48, 1090-1099.	1.7	2
84	Study of an auxetic structure made of tubes and corrugated sheets. <i>Physica Status Solidi (B): Basic Research</i> , 2013, 250, 1996-2001.	0.7	19
85	A comparative study of finer conventional and modified cotton yarns and their resultant woven fabrics. <i>Fibers and Polymers</i> , 2013, 14, 1899-1905.	1.1	4
86	An experimental study of improving fabric appearance of denim by using low torque singles ring spun yarns. <i>Textile Research Journal</i> , 2013, 83, 1371-1385.	1.1	13
87	Systematic investigation and optimization of fine cotton yarns produced in a modified ring spinning system using statistical methods. <i>Textile Research Journal</i> , 2013, 83, 238-248.	1.1	29
88	Mathematical formulation of knitted fabric spirality using genetic programming. <i>Textile Research Journal</i> , 2012, 82, 667-676.	1.1	6
89	Dynamic measurement and modelling of flexible yarn dynamic behaviour on a moving cylindrical solid structure. <i>Measurement Science and Technology</i> , 2012, 23, 115605.	1.4	10
90	Intelligent fault inference for rotating flexible rotors using Bayesian belief network. <i>Expert Systems With Applications</i> , 2012, 39, 816-822.	4.4	52

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91	Intelligent characterization and evaluation of yarn surface appearance using saliency map analysis, wavelet transform and fuzzy ARTMAP neural network. Expert Systems With Applications, 2012, 39, 4201-4212.	4.4	33
92	Simulating the motion of a flexible fiber in 3D tangentially injected swirling airflow in a straight pipe—Effects of some parameters. International Journal of Heat and Mass Transfer, 2011, 54, 4570-4579.	2.5	20
93	Mathematical modeling and numerical simulation of yarn behavior in a modified ring spinning system. Applied Mathematical Modelling, 2011, 35, 139-151.	2.2	26
94	An investigation of methodology and apparatus to assess twist liveliness of spun yarns. Fibers and Polymers, 2011, 12, 679-685.	1.1	6
95	Effect of the geometric parameters on a flexible fiber motion in a tangentially injected divergent swirling tube flow. International Journal of Engineering Science, 2011, 49, 1033-1046.	2.7	9
96	Digital technology for yarn structure and appearance analysis. , 2011, , 3-22.		0
97	Theoretical study on the bending rigidity of filament yarns with an elliptical cross-section using energy method. I. Theoretical modeling. Fibers and Polymers, 2010, 11, 883-890.	1.1	3
98	A comparative study of cotton knitted fabrics and garments produced by the modified low twist and conventional ring yarns. Fibers and Polymers, 2010, 11, 899-904.	1.1	13
99	Theoretical study on the bending rigidity of filament yarns with an elliptical cross-section using energy method. II. Numerical evaluation. Fibers and Polymers, 2010, 11, 1062-1066.	1.1	2
100	Theoretical Study on the Geometric and Dynamic Performance of Ring Spinning Triangle with Finite Element Method. , 2010, , .		0
101	A continuous measurement system for yarn structures by an optical method. Measurement Science and Technology, 2010, 21, 115706.	1.4	9
102	BAYESIAN NETWORK FRAMEWORK FOR ROTOR FAULT DIAGNOSIS. Jixie Gongcheng Xuebao/Chinese Journal of Mechanical Engineering, 2004, 40, 66.	0.7	3
103	Investigation of Yarn Twist Propagation in Rotor Spinning. , 2002, , .		1
104	A new practical modal method for rotor balancing. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2001, 215, 179-189.	1.1	18
105	Partially Blind Source Separation of the Diagnostic Signals with Prior Knowledge. , 2001, , 177-184.		2
106	THE OPTIMIZATION TECHNIQUE-BASED BALANCING OF FLEXIBLE ROTORS WITHOUT TEST RUNS. Journal of Sound and Vibration, 2000, 238, 877-892.	2.1	42
107	Wrapper Fibers on Low-Twist Worsted Yarns. Key Engineering Materials, 0, 671, 497-502.	0.4	2