Bingang Xu

List of Publications by Year
in descending order

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	Hierarchically architected polydopamine modified BaTiO3@P(VDF-TrFE) nanocomposite fiber mats for flexible piezoelectric nanogenerators and self-powered sensors. Nano Energy, 2020, 70, 104516.	8.2	221
2	All‐Solution‐Processed Metal‐Oxide‐Free Flexible Organic Solar Cells with Over 10% Efficiency. Advanced Materials, 2018, 30, e1800075.	11.1	165
3	Breathable, washable and wearable woven-structured triboelectric nanogenerators utilizing electrospun nanofibers for biomechanical energy harvesting and self-powered sensing. Nano Energy, 2021, 80, 105549.	8.2	153
4	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
5	Synthesis of one-dimensional Bi2O3-Bi2O2.33 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
6	Electromechanical properties of a yarn strain sensor with graphene-sheath/polyurethane-core. Carbon, 2017, 118, 686-698.	5.4	113
7	Wearable strain sensing textile based on one-dimensional stretchable and weavable yarn sensors. Nano Research, 2018, 11, 5799-5811.	5.8	99
8	Multi‐Component Crosslinked Hydrogel Electrolyte toward Dendrite‐Free Aqueous Zn Ion Batteries with High Temperature Adaptability. Advanced Functional Materials, 2022, 32, .	7.8	85
9	Wearable technologies enable high-performance textile supercapacitors with flexible, breathable and wearable characteristics for future energy storage. Energy Storage Materials, 2021, 37, 94-122.	9.5	80
10	Solution-Processed Transparent Conducting Electrodes for Flexible Organic Solar Cells with 16.61% Efficiency. Nano-Micro Letters, 2021, 13, 44.	14.4	71
11	Towards truly wearable energy harvesters with full structural integrity of fiber materials. Nano Energy, 2019, 58, 365-374.	8.2	69
12	Breath Figure Micromolding Approach for Regulating the Microstructures of Polymeric Films for Triboelectric Nanogenerators. ACS Applied Materials & Interfaces, 2017, 9, 4988-4997.	4.0	62
13	Highly Conductive Stretchable All‐Plastic Electrodes Using a Novel Dipping‐Embedded Transfer Method for High‐Performance Wearable Sensors and Semitransparent Organic Solar Cells. Advanced Electronic Materials, 2017, 3, 1600471.	2.6	62
14	Design of Novel Wearable, Stretchable, and Waterproof Cable‐Type Supercapacitors Based on High‐Performance Nickel Cobalt Sulfide‐Coated Etching‐Annealed Yarn Electrodes. Small, 2018, 14, e1704373.	5.2	59
15	Highly sensitive, durable and stretchable plastic strain sensors using sandwich structures of PEDOT:PSS and an elastomer. Materials Chemistry Frontiers, 2018, 2, 355-361.	3.2	58
16	Robust nitrogen/selenium engineered MXene/ZnSe hierarchical multifunctional interfaces for dendrite-free zinc-metal batteries. Energy Storage Materials, 2022, 49, 122-134.	9.5	57
17	Intelligent fault inference for rotating flexible rotors using Bayesian belief network. Expert Systems With Applications, 2012, 39, 816-822.	4.4	52
18	Design of High-Performance Wearable Energy and Sensor Electronics from Fiber Materials. ACS Applied Materials & Interfaces, 2019, 11, 2120-2129.	4.0	52

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19	Scalable core–spun coating yarn-based triboelectric nanogenerators with hierarchical structure for wearable energy harvesting and sensing via continuous manufacturing. Nano Energy, 2022, 91, 106672.	8.2	49
20	Novel high-performance asymmetric supercapacitors based on nickel-cobalt composite and PPy for flexible and wearable energy storage. Journal of Power Sources, 2018, 402, 91-98.	4.0	48
21	THE OPTIMIZATION TECHNIQUE-BASED BALANCING OF FLEXIBLE ROTORS WITHOUT TEST RUNS. Journal of Sound and Vibration, 2000, 238, 877-892.	2.1	42
22	Organogel electrode based continuous fiber with large-scale production for stretchable triboelectric nanogenerator textiles. Nano Energy, 2021, 84, 105867.	8.2	39
23	Toward Flexible and Wearable Embroidered Supercapacitors from Cobalt Phosphides-Decorated Conductive Fibers. Nano-Micro Letters, 2019, 11, 89.	14.4	38
24	Robust Deposition of Silver Nanoparticles on Paper Assisted by Polydopamine for Green and Flexible Electrodes. ACS Sustainable Chemistry and Engineering, 2020, 8, 12842-12851.	3.2	37
25	Br-Doped $Bi_2O_2CO_3$ exposed (001) crystal facets with enhanced photocatalytic activity. CrystEngComm, 2017, 19, 5001-5007.	1.3	36
26	Fiber-shaped stretchable triboelectric nanogenerator with a novel synergistic structure of opposite Poisson's ratios. Chemical Engineering Journal, 2022, 427, 131698.	6.6	35
27	Novel highly sensitive and wearable pressure sensors from conductive three-dimensional fabric structures. Smart Materials and Structures, 2015, 24, 125022.	1.8	34
28	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
29	Graphene-based in-planar supercapacitors by a novel laser-scribing, in-situ reduction and transfer-printed method on flexible substrates. Journal of Power Sources, 2019, 420, 82-87.	4.0	33
30	A Polycation–Modified Nanofillers Tailored Polymer Electrolytes Fiber for Versatile Biomechanical Energy Harvesting and Full–Range Personal Healthcare Sensing. Advanced Functional Materials, 2022, 32, 2106731.	7.8	33
31	A highly durable textile-based sensor as a human-worn material interface for long-term multiple mechanical deformation sensing. Journal of Materials Chemistry C, 2019, 7, 14651-14663.	2.7	32
32	Eye–tracking–aided digital system for strabismus diagnosis. Healthcare Technology Letters, 2018, 5, 1-6.	1.9	31
33	Organogel electrode enables highly transparent and stretchable triboelectric nanogenerators of high power density for robust and reliable energy harvesting. Nano Energy, 2020, 78, 105373.	8.2	31
34	Interfacial Polarization and Dual Charge Transfer Induced High Permittivity of Carbon Dots–Based Composite as Humidity–Resistant Tribomaterial for Efficient Biomechanical Energy Harvesting. Advanced Energy Materials, 2021, 11, 2101294.	10.2	31
35	Systematic investigation and optimization of fine cotton yarns produced in a modified ring spinning system using statistical methods. Textile Reseach Journal, 2013, 83, 238-248.	1.1	29
36	Fabric-rebound triboelectric nanogenerators with loops and layered structures for energy harvesting and intelligent wireless monitoring of human motions. Nano Energy, 2022, 93, 106807.	8.2	28

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37	Mathematical modeling and numerical simulation of yarn behavior in a modified ring spinning system. Applied Mathematical Modelling, 2011, 35, 139-151.	2.2	26
38	3D Patternable Supercapacitors from Hierarchically Architected Porous Fiber Composites for Wearable and Waterproof Energy Storage. Small, 2019, 15, e1901313.	5.2	26
39	Liquid doping materials as micro-carrier of functional molecules for functionalization of triboelectric materials and flexible triboelectric nanogenerators for energy harvesting and gesture detection. Nano Energy, 2020, 74, 104856.	8.2	26
40	ZnO nanorod/nickel phthalocyanine hierarchical hetero-nanostructures with superior visible light photocatalytic properties assisted by H_2O_2. RSC Advances, 2015, 5, 87233-87240.	1.7	25
41	An Adhesive Surface Enables High‐Performance Mechanical Energy Harvesting with Unique Frequency‐Insensitive and Pressure‐Enhanced Output Characteristics. Advanced Materials, 2020, 32, e1907948.	11.1	25
42	Interfacial modification boosted permittivity and triboelectric performance of liquid doping composites for high-performance flexible triboelectric nanogenerators. Nano Energy, 2020, 78, 105374.	8.2	25
43	Series to parallel structure of electrode fiber: an effective method to remarkably reduce inner resistance of triboelectric nanogenerator textiles. Journal of Materials Chemistry A, 2021, 9, 12331-12339.	5.2	24
44	Conductive Composite Fiber with Customizable Functionalities for Energy Harvesting and Electronic Textiles. ACS Applied Materials & Interfaces, 2021, 13, 49927-49935.	4.0	24
45	3D Printing for Solid‐State Energy Storage. Small Methods, 2021, 5, e2100877.	4.6	24
46	Coralloid and hierarchical Co3O4 nanostructures used as supercapacitors with good cycling stability. Journal of Solid State Electrochemistry, 2016, 20, 1303-1309.	1.2	22
47	Towards 3D knitted-fabric derived supercapacitors with full structural and functional integrity of fiber and electroactive materials. Journal of Power Sources, 2020, 473, 228559.	4.0	21
48	Additive Manufacturing of Two-Dimensional Conductive Metal‐Organic Framework with Multidimensional Hybrid Architectures for High-Performance Energy Storage. Nano Letters, 2022, 22, 1198-1206.	4.5	21
49	Surface microstructural engineering of continuous fibers as one-dimensional multifunctional fiber materials for wearable electronic applications. Chemical Engineering Journal, 2022, 446, 137192.	6.6	21
50	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
51	Fabrication of one-dimensional Bi_2O_3‐$Bi_{14}MoO_{24}$ heterojunction photocatalysts with high interface quality. CrystEngComm, 2017, 19, 237-245.	1.3	20
52	Study of an auxetic structure made of tubes and corrugated sheets. Physica Status Solidi (B): Basic Research, 2013, 250, 1996-2001.	0.7	19
53	Three-Dimensional Conformal Porous Microstructural Engineering of Textile Substrates with Customized Functions of Brick Materials and Inherent Advantages of Textiles. ACS Applied Materials & Interfaces, 2020, 12, 17967-17978.	4.0	19
54	MXene-based materials for advanced nanogenerators. Nano Energy, 2022, 101, 107556.	8.2	19

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55	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
56	An elastic analysis of a honeycomb structure with negative Poisson's ratio. Smart Materials and Structures, 2013, 22, 084006.	1.8	18
57	Mathematical Modeling of Yarn Dynamics in a Generalized Twisting System. Scientific Reports, 2016, 6, 24432.	1.6	18
58	Binary breath figures for straightforward and controllable self-assembly of microspherical caps. Physical Chemistry Chemical Physics, 2016, 18, 13629-13637.	1.3	18
59	Engraved pattern spacer triboelectric nanogenerators for mechanical energy harvesting. Nano Energy, 2022, 92, 106782.	8.2	16
60	Bio-inspired design on EGCG-selective membrane: An anchoring/imprinting strategy based on bi-interactions. Journal of Membrane Science, 2022, 658, 120750.	4.1	16
61	Honeycomb Microstructured Silicon Oxycarbide Sheets from Silicon—Containing Graft Copolymer Films. Plasma Processes and Polymers, 2014, 11, 1001-1009.	1.6	15
62	Toward 3D double-electrode textile triboelectric nanogenerators for wearable biomechanical energy harvesting and sensing. Chemical Engineering Journal, 2022, 450, 137491.	6.6	15
63	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
64	An experimental study of improving fabric appearance of denim by using low torque singles ring spun yarns. Textile Reseach Journal, 2013, 83, 1371-1385.	1.1	13
65	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
66	Liquid—Filling Polydimethylsiloxane Composites with Enhanced Triboelectric Performance for Flexible Nanogenerators. Macromolecular Materials and Engineering, 2020, 305, 2000275.	1.7	13
67	Self—Assembly of Porous Microstructured Polydimethylsiloxane Films for Wearable Triboelectric Nanogenerators. Macromolecular Materials and Engineering, 2020, 305, 2000276.	1.7	13
68	Insights into Zn anode surface chemistry for dendrite-free Zn ion batteries. Journal of Materials Chemistry A, 2022, 10, 11288-11297.	5.2	13
69	Asphalt-assisted assembly of breath figures: a robust templating strategy for general fabrication of ordered porous polymer films. RSC Advances, 2015, 5, 14341-14344.	1.7	12
70	High-efficiency robust organic solar cells using transfer-printed PEDOT:PSS electrodes through interface bonding engineering. Materials Chemistry Frontiers, 2019, 3, 901-908.	3.2	12
71	Surface porous microstructured fibers with customized functionalities for 1D functional materials. Composites Part B: Engineering, 2021, 223, 109112.	5.9	11
72	Dynamic measurement and modelling of flexible yarn dynamic behaviour on a moving cylindrical solid structure. Measurement Science and Technology, 2012, 23, 115605.	1.4	10

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73	Relative Saliency Model over Multiple Images with an Application to Yarn Surface Evaluation. IEEE Transactions on Cybernetics, 2014, 44, 1249-1258.	6.2	10
74	Iron phthalocyanine nanorods for ethanol sensing. Micro and Nano Letters, 2016, 11, 348-350.	0.6	10
75	Variation of false twist on spinning process stability and resultant yarn properties in a modified ring spinning frame. Textile Reseach Journal, 2018, 88, 1876-1892.	1.1	10
76	A continuous measurement system for yarn structures by an optical method. Measurement Science and Technology, 2010, 21, 115706.	1.4	9
77	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
78	An intelligent computer method for automatic mosaic and segmentation of tracer fiber images for yarn structure analysis. Textile Reseach Journal, 2015, 85, 733-750.	1.1	9
79	Flexible in-plane zinc-ion hybrid capacitors with synergistic electrochemical behaviors for self-powered energy systems. Journal of Materials Chemistry A, 2022, 10, 14011-14019.	5.2	9
80	Three-Dimensionally Conformal Porous Polymeric Microstructures of Fabrics for Electrothermal Textiles with Enhanced Thermal Management. Polymers, 2018, 10, 748.	2.0	8
81	Structural analysis of finer cotton yarns produced by conventional and modified ring spinning system. Fibers and Polymers, 2014, 15, 396-404.	1.1	7
82	An investigation of methodology and apparatus to assess twist liveliness of spun yarns. Fibers and Polymers, 2011, 12, 679-685.	1.1	6
83	Mathematical formulation of knitted fabric spirality using genetic programming. Textile Reseach Journal, 2012, 82, 667-676.	1.1	6
84	A theoretical model of maximum hairiness of staple ring-spun yarns. Textile Reseach Journal, 2014, 84, 1121-1137.	1.1	6
85	Performance of cotton single yarns and knitted fabrics produced by a 2-step spinning method. Fibers and Polymers, 2014, 15, 882-890.	1.1	5
86	A simple and industrially scalable approach to prepare $Co(OH)_2$ hexagonal nanoflake. Materials Letters, 2016, 164, 432-435.	1.3	5
87	A two-scale attention model for intelligent evaluation of yarn surface qualities with computer vision. Journal of the Textile Institute, 2018, 109, 798-812.	1.0	5
88	Surface microstructural engineering of silicone elastomers for high performance adhesive surface-enabled mechanical energy harvesters. Journal of Materials Chemistry A, 2022, 10, 9643-9654.	5.2	5
89	A comparative study of finer conventional and modified cotton yarns and their resultant woven fabrics. Fibers and Polymers, 2013, 14, 1899-1905.	1.1	4
90	Aramidâ€Assisted Acid Spinning of Continuous Multiâ€Walled Carbon Nanotube Fibers for Twisted, Robust, and Multifunctional Yarns. Macromolecular Materials and Engineering, 2015, 300, 954-959.	1.7	4

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91	3D Conformal Surface Engineering of Continuous Fibers with Porous Microstructures for 1D Advanced Functional Materials. Macromolecular Materials and Engineering, 2021, 306, 2000699.	1.7	4
92	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
93	BAYESIAN NETWORK FRAMEWORK FOR ROTOR FAULT DIAGNOSIS. Jixie Gongcheng Xuebao/Chinese Journal of Mechanical Engineering, 2004, 40, 66.	0.7	3
94	Eye-tracking Aided Digital Training System for Strabismus Therapy. Journal of Advances in Information Technology, 2017, , 57-62.	2.6	3
95	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
96	Dynamic modeling and evaluation for constituent fibers in fabrication of twisted flexible yarns with consideration of fiber mass and viscoelasticity. Journal of Materials Science, 2013, 48, 1090-1099.	1.7	2
97	Wrapper Fibers on Low-Twist Worsted Yarns. Key Engineering Materials, 0, 671, 497-502.	0.4	2
98	Numerical Study of Taylor Cone Dynamics in Electrospinning of Nanofibers. Key Engineering Materials, 2017, 730, 510-515.	0.4	2
99	Partially Blind Source Separation of the Diagnostic Signals with Prior Knowledge. , 2001, , 177-184.		2
100	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
101	Mathematical modeling of linearly-elastic non-prestrained cables based on a local reference frame. Applied Mathematical Modelling, 2021, 91, 695-708.	2.2	1
102	Investigation of Yarn Twist Propagation in Rotor Spinning. , 2002, , .		1
103	Theoretical Study on the Geometric and Dynamic Performance of Ring Spinning Triangle with Finite Element Method. , 2010, , .		0
104	Digital technology for yarn structure and appearance analysis. , 2011, , 3-22.		0
105	Novel Honeycomb-Microstructured Asphalt Composite Coatings for Sustainable Photocatalytic Application. Advanced Materials Research, 2014, 905, 310-313.	0.3	0
106	Dynamic analysis of a cantilever beam with a multiple degrees of freedom system. Noise Control Engineering Journal, 2017, 65, 103-109.	0.2	0
107	Optimization Design of Transparent Poly(3,4-ethylenedioxythiophene):Poly(styrenesulfonate) Electrodes for Highly Efficient and Flexible Indium Tin Oxideâ€"Free Organic Solar Cells. Journal of Nanoelectronics and Optoelectronics, 2016, 11, 745-750.	0.1	0