

Frank Ko

List of Publications by Year in descending order

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97
papers

4,008
citations

136950

32
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123424

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97
docs citations

97
times ranked

5075
citing authors

#	ARTICLE	IF	CITATIONS
1	Melt-electrospinning part I: processing parameters and geometric properties. <i>Polymer</i> , 2004, 45, 7597-7603.	3.8	357
2	Regeneration of Bombyx mori silk by electrospinning part 1: processing parameters and geometric properties. <i>Polymer</i> , 2003, 44, 5721-5727.	3.8	335
3	Regeneration of Bombyx mori silk by electrospinning. Part 3: characterization of electrospun nonwoven mat. <i>Polymer</i> , 2005, 46, 1625-1634.	3.8	226
4	Carbon Nanotube Reinforced Bombyx mori Silk Nanofibers by the Electrospinning Process. <i>Biomacromolecules</i> , 2006, 7, 208-214.	5.4	218
5	Biomedical applications of nanofibers. <i>Polymers for Advanced Technologies</i> , 2011, 22, 350-365.	3.2	196
6	Ethylenediamine-functionalized Zr-based MOF for efficient removal of heavy metal ions from water. <i>Chemosphere</i> , 2021, 264, 128466.	8.2	179
7	Reinforcement and rupture behavior of carbon nanotubes/polymer nanofibers. <i>Applied Physics Letters</i> , 2004, 85, 1775-1777.	3.3	152
8	Regeneration of Bombyx mori silk by electrospinning. Part 2. Process optimization and empirical modeling using response surface methodology. <i>Polymer</i> , 2004, 45, 3701-3708.	3.8	143
9	Electrospinning of Technical Lignins for the Production of Fibrous Networks. <i>Journal of Wood Chemistry and Technology</i> , 2010, 30, 315-329.	1.7	133
10	Preparation and Characterization of Interconnected, Kraft Lignin-based Carbon Fibrous Materials by Electrospinning. <i>Macromolecular Materials and Engineering</i> , 2014, 299, 540-551.	3.6	122
11	Novel Flexible Wearable Sensor Materials and Signal Processing for Vital Sign and Human Activity Monitoring. <i>Sensors</i> , 2017, 17, 1622.	3.8	81
12	Highly Stretchable, Sparse, Metallized Nanofiber Webs as Thin, Transferrable Transparent Conductors. <i>Advanced Energy Materials</i> , 2013, 3, 1332-1337.	19.5	76
13	Preparation and biodegradation of electrospun PLLA/keratin nonwoven fibrous membrane. <i>Polymer Degradation and Stability</i> , 2009, 94, 1800-1807.	5.8	72
14	Post-spinning modification of electrospun nanofiber nanocomposite from Bombyx mori silk and carbon nanotubes. <i>Polymer</i> , 2009, 50, 1918-1924.	3.8	70
15	Analysis of multiaxial warp-knit preforms for composite reinforcement. <i>Composites Science and Technology</i> , 1996, 56, 253-260.	7.8	63
16	Electromagnetic properties of electrospun Fe ₃ O ₄ /carbon composite nanofibers. <i>Polymer</i> , 2011, 52, 1645-1653.	3.8	63
17	Electrospray biodegradable microcapsules loaded with curcumin for drug delivery systems with high bioactivity. <i>RSC Advances</i> , 2017, 7, 1724-1734.	3.6	61
18	Correlation of Elongational Fluid Properties to Fiber Diameter in Electrospinning of Softwood Kraft Lignin Solutions. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 2697-2705.	3.7	53

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19	Facile synthesis of flexible electrode based on cotton/polypyrrole/multi-walled carbon nanotube composite for supercapacitors. <i>Cellulose</i> , 2018, 25, 4079-4091.	4.9	50
20	Enhancement of the mechanical properties of electrospun lignin-based nanofibers by heat treatment. <i>Journal of Materials Science</i> , 2017, 52, 9602-9614.	3.7	49
21	Postelectrospinning modifications for alginate nanofiber-based wound dressings. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2014, 102, 508-515.	3.4	47
22	Skipping Oxidative Thermal Stabilization for Lignin-Based Carbon Nanofibers. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 6434-6444.	6.7	47
23	Fe ₃ O ₄ @PAA@UiO-66-NH ₂ magnetic nanocomposite for selective adsorption of Quercetin. <i>Chemosphere</i> , 2021, 275, 130087.	8.2	47
24	Feature Article: Melt Electrospinning of Polymers: A Review. <i>Polymer News</i> , 2005, 30, 170-178.	0.1	46
25	Enzymatic synthesis of ionic responsive lignin nanofibres through surface poly(N-isopropylacrylamide) immobilization. <i>Green Chemistry</i> , 2014, 16, 3890-3898.	9.0	45
26	Electro-mechanical properties of knitted wearable sensors: Part 2 – Parametric study and experimental verification. <i>Textile Research Journal</i> , 2014, 84, 200-213.	2.2	43
27	The role of oxygen vacancies on Pt/NiInO ₂ catalyst in improving formaldehyde oxidation at ambient condition. <i>Chemical Engineering Journal</i> , 2020, 395, 125131.	12.7	39
28	Enhancement of charge transport in interconnected lignin-derived carbon fibrous network for flexible battery-supercapacitor hybrid device. <i>Chemical Engineering Journal</i> , 2021, 409, 128214.	12.7	37
29	Electromechanical properties of knitted wearable sensors: part 1 – theory. <i>Textile Research Journal</i> , 2014, 84, 3-15.	2.2	36
30	Enhanced efficiency in flexible dye-sensitized solar cells by a novel bilayer photoanode made of carbon nanotubes incorporated TiO ₂ nanorods and branched TiO ₂ nanotubes. <i>Solar Energy Materials and Solar Cells</i> , 2016, 147, 134-143.	6.2	36
31	Kynurenine Modulates MMP-1 and Type I Collagen Expression Via Aryl Hydrocarbon Receptor Activation in Dermal Fibroblasts. <i>Journal of Cellular Physiology</i> , 2016, 231, 2749-2760.	4.1	35
32	Modeling Uniaxial Tensile Properties of Multiaxial Warp Knitted Fabrics. <i>Textile Research Journal</i> , 1998, 68, 828-834.	2.2	34
33	Characteristics of Elastomeric Nanofiber Membranes Produced by Electrospinning. <i>Journal of Textile Engineering</i> , 2007, 53, 137-142.	0.2	32
34	Flexural properties of experimental nanofiber reinforced composite are affected by resin composition and nanofiber/resin ratio. <i>Dental Materials</i> , 2015, 31, 1132-1141.	3.5	32
35	Characterizing and Modeling Bending Properties of Multiaxial Warp Knitted Fabrics. <i>Textile Research Journal</i> , 1999, 69, 691-697.	2.2	30
36	3D NiO Nanowall Hole-Transporting Layer for the Passivation of Interfacial Contact in Inverted Perovskite Solar Cells. <i>ChemSusChem</i> , 2020, 13, 1006-1012.	6.8	30

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37	Novel NiO Nanoforest Architecture for Efficient Inverted Mesoporous Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2019, 11, 44308-44314.	8.0	27
38	Bioactive Nanofibres for Wound Healing Applications. Journal of Fiber Bioengineering and Informatics, 2011, 4, 1-14.	0.2	27
39	Ultra-filtration membranes based on electrospun poly(vinylidene fluoride) (PVDF) fibrous composite membrane scaffolds. RSC Advances, 2013, 3, 11614.	3.6	26
40	Highly flexible TiO ₂ /C nanofibrous film for flexible dye-sensitized solar cells as a platinum- and transparent conducting oxide-free flexible counter electrode. Electrochimica Acta, 2017, 255, 256-265.	5.2	26
41	Conversion of hydrophilic SiOC nanofibrous membrane to robust hydrophobic materials by introducing palladium. Applied Surface Science, 2017, 425, 750-757.	6.1	25
42	Simple fabrication of a highly conductive and passivated PEDOT:PSS film via cryo-controlled quasi-congealing spin-coating for flexible perovskite solar cells. Journal of Materials Chemistry C, 2019, 7, 10247-10256.	5.5	24
43	Structure-property relationship of regenerated spider silk protein nano/microfibrous scaffold fabricated by electrospinning. Journal of Biomedical Materials Research - Part A, 2014, 102, 3828-3837.	4.0	23
44	An analysis of the tensile properties of nanofiber mats. Polymer, 2015, 73, 62-67.	3.8	23
45	Electrospun carbon nanofiber catalyst layers for polymer electrolyte membrane fuel cells: Structure and performance. Journal of Power Sources, 2018, 392, 239-250.	7.8	23
46	Electrospun Sandwich-Structure Composite Membranes for Wound Dressing Scaffolds with High Antioxidant and Antibacterial Activity. Macromolecular Materials and Engineering, 2018, 303, 1700270.	3.6	20
47	Antibacterial Properties of Nanosilver PLLA Fibrous Membranes. Journal of Nanomaterials, 2009, 2009, 1-5.	2.7	19
48	Synthesis of Noble Monometal and Bimetal-Modified Lignin Nanofibers and Carbon Nanofibers Through Surface-Grafted Poly(2-(Dimethylamino)Ethyl Methacrylate) Brushes. Macromolecular Materials and Engineering, 2015, 300, 836-847.	3.6	19
49	Electrospun carbon nanofiber catalyst layers for polymer electrolyte membrane fuel cells: fabrication and optimization. Journal of Materials Science, 2018, 53, 11633-11647.	3.7	19
50	Influence of Poly(ethylene oxide) (PEO) Percent and Lignin Type on the Properties of Lignin/PEO Blend Filament. Macromolecular Materials and Engineering, 2015, 300, 1023-1032.	3.6	18
51	Effect of iron oxide nanoparticle size on electromagnetic properties of composite nanofibers. Journal of Composite Materials, 2018, 52, 1723-1736.	2.4	18
52	Breathable Dry Silver/Silver Chloride Electronic Textile Electrodes for Electrodermal Activity Monitoring. Biosensors, 2018, 8, 79.	4.7	18
53	Capacitance performance boost of cellulose-derived carbon nanofibers via carbon and silver nanoparticles. Cellulose, 2019, 26, 2499-2512.	4.9	18
54	Polyacrylonitrile-Reinforced Composite Gel Polymer Electrolytes for Stable Potassium Metal Anodes. Small, 2022, 18, e2107186.	10.0	18

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55	Study on synthesis of ZnO nanorods and its UV-blocking properties on cotton fabrics coated with the ZnO quantum dot. <i>Journal of Nanoparticle Research</i> , 2014, 16, 1.	1.9	16
56	Effect of sonication treatment on electrospinnability of high-viscosity PAN solution and mechanical performance of microfiber mat. <i>Iranian Polymer Journal (English Edition)</i> , 2014, 23, 947-953.	2.4	15
57	A novel bilayer photoanode made of carbon nanotubes incorporated TiO ₂ nanorods and Mg ²⁺ doped TiO ₂ nanorods for flexible dye-sensitized solar cells. <i>Thin Solid Films</i> , 2018, 646, 44-52.	1.8	14
58	A knitted wearable flexible sensor for monitoring breathing condition. <i>Journal of Engineered Fibers and Fabrics</i> , 2020, 15, 155892502093035.	1.0	14
59	Fabrication and Characterization of Lignin/Dendrimer Electrospun Blended Fiber Mats. <i>Molecules</i> , 2021, 26, 518.	3.8	14
60	Antibiofilm and immunomodulatory resorbable nanofibrous filing for dental pulp regenerative procedures. <i>Bioactive Materials</i> , 2022, 16, 173-186.	15.6	13
61	Process, Structure, and Properties of Electrospun Carbon Nanotube-Reinforced Nanocomposite Yarns. <i>Research Letters in Materials Science</i> , 2009, 2009, 1-5.	0.2	12
62	Experimental Investigation of Compression Properties of Composites with Printed Braiding Structure. <i>Materials</i> , 2018, 11, 1767.	2.9	11
63	Experimental composites of polyacrylonitrile-electrospun nanofibers containing nanocrystal cellulose. <i>Dental Materials</i> , 2019, 35, e286-e297.	3.5	11
64	Open hole tension and compression behavior of 3D braided composites. <i>Polymer Composites</i> , 2020, 41, 2455-2465.	4.6	11
65	Sustainable production of oxygen-rich hierarchically porous carbon network from corn straw lignin and silk degumming wastewater for high-performance electrochemical energy storage. <i>Renewable Energy</i> , 2022, 191, 141-150.	8.9	11
66	Highly piezoresistive compliant nanofibrous sensors for tactile and epidermal electronic applications. <i>Journal of Materials Research</i> , 2015, 30, 121-129.	2.6	10
67	Hybrid PTFE-glass hierarchical braided/epoxy composites with self-lubricating and high tribological performance. <i>Journal of Industrial Textiles</i> , 2022, 51, 4720S-4739S.	2.4	10
68	Fabrication and characterization of poly(ϵ -caprolactone)-poly(L-glutamic acid) nanofiber. <i>Journal of Applied Polymer Science</i> , 2011, 122, 150-158.	2.6	9
69	Minimalist Design of Efficient, Stable Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 12460-12466.	8.0	9
70	Electrospinning of Carbon Nanotube Reinforced Nanocomposite Fibrils and Yarns. <i>Materials Research Society Symposia Proceedings</i> , 2003, 791, 1.	0.1	8
71	Effects of Flexible Dry Electrode Design on Electrodermal Activity Stimulus Response Detection. <i>IEEE Transactions on Biomedical Engineering</i> , 2017, 64, 2979-2987.	4.2	8
72	Dynamic mechanical relaxations of electrospun poly(acrylonitrile-co-methyl acrylate) nanofibrous yarn. <i>Textile Research Journal</i> , 2017, 87, 2193-2203.	2.2	8

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73	Experimental study on compression properties and failure mechanism of 3D MWK carbon/epoxy composites at elevated temperatures. <i>Polymer Composites</i> , 2018, 39, E1987.	4.6	8
74	Design of NiO _x /Carbon Heterostructure Interlayer to Improve Hole Extraction Efficiency of Inverted Perovskite Solar Cells. <i>Advanced Materials Interfaces</i> , 2021, 8, 2100862.	3.7	8
75	Branched open-ended TiO ₂ nanotubes for improved efficiency of flexible dye-sensitized solar cells. <i>Journal of Alloys and Compounds</i> , 2017, 724, 1124-1133.	5.5	7
76	Synergy of surface sodium and hydroxyl on NaTi ₂ HO ₅ nanotubes accelerating the Pt-dominated ambient HCHO oxidation. <i>Journal of Hazardous Materials</i> , 2022, 421, 126769.	12.4	7
77	Regeneration of Bombyx Mori Silk by Electrospinning: A Comparative Study of the Biocompatibility of Natural and Synthetic Polymers for Tissue Engineering Applications. <i>Journal of Biobased Materials and Bioenergy</i> , 2007, 1, 274-281.	0.3	7
78	Electronic textiles for electrocardiogram monitoring: A review on the structure–property and performance evaluation from fiber to fabric. <i>Textile Research Journal</i> , 2023, 93, 878-910.	2.2	7
79	Performance and Signal Quality Analysis of Electrocardiogram Textile Electrodes for Smart Apparel Applications. <i>Frontiers in Electronics</i> , 2021, 2, .	3.2	6
80	Study on microstructure and tribological properties of hierarchical 3D braid applicable in heavy operating tribology conditions. <i>Polymer Composites</i> , 2022, 43, 3290-3312.	4.6	6
81	Nanocrystalline cellulose as a reinforcing agent for electrospun polyacrylonitrile (PAN) nanofibers. <i>Journal of Oral Biosciences</i> , 2019, 61, 37-42.	2.2	5
82	The micro/macro mechanical approach of reinforced braid composite used in tribology. <i>Journal of Composite Materials</i> , 2021, 55, 3813-3825.	2.4	5
83	Poly(Lactide)-Modified Lignin Nanofibers: Investigating the Role of Polymer Tacticity on Fiber Properties and Filtration Efficiency. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 2772-2783.	6.7	5
84	Investigation of the mechanical properties of lignin nanofibrous structures using statistical modeling. <i>Textile Research Journal</i> , 2018, 88, 1943-1953.	2.2	4
85	Nanofibre Based Biomaterials – Bioactive Nanofibres for Wound Healing Applications. , 2012, , .		3
86	Influence of the solvent and nonsolvent composition on the electrospinning of a cellulose acetate ternary system. <i>Journal of Applied Polymer Science</i> , 2015, 132, .	2.6	3
87	Nanofibers for ligament and tendon tissue regeneration. , 2015, , 91-118.		3
88	Roll-to-roll electrochemical fabrication of non-polarizable silver/silver chloride-coated nylon yarn for biological signal monitoring. <i>Textile Research Journal</i> , 2019, 89, 3591-3600.	2.2	3
89	Fatigue Behavior of 3D Braided Composites Containing an Open-Hole. <i>Polymers</i> , 2020, 12, 2147.	4.5	3
90	Carbon Nanotube Reinforced Bombyx mori Nanofiber Composites by the Electrospinning Process. <i>Materials Research Society Symposia Proceedings</i> , 2004, 844, 1.	0.1	2

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91	Signal Quality Analysis of Electrocardiogram Textile Electrodes for Smart Apparel Applications. , 2019, , .		2
92	On the tribology of complex 2D/3D composites bearing. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2022, 236, 1296-1310.	1.8	2
93	Cytotoxicity and Cell Adhesion of PLLA/keratin Composite Fibrous Membranes. IFMBE Proceedings, 2009, , 1492-1495.	0.3	1
94	Functional piezoelectric yarn: Toward optimization of zinc oxide nanowires growth. Journal of Materials Research, 2020, 35, 3091-3105.	2.6	1
95	Toughened Complex Composite Structures. Materials and Processing Report, 1988, 2, 1-2.	0.0	0
96	Analytical modelling of dry-jet wet spinning. Thermal Science, 2017, 21, 1807-1812.	1.1	0
97	Polyacrylonitrileâ€Reinforced Composite Gel Polymer Electrolytes for Stable Potassium Metal Anodes (Small 8/2022). Small, 2022, 18, .	10.0	0