David LukÃ¡Å¡

List of Publications by Year
in descending order

77 papers	1,810 citations	279798 23 h-index	289244 40 g-index
77 all docs	77 docs citations	77 times ranked	2227 citing authors

#	Article	IF	Citations
1	Composite yarns with antibacterial nanofibrous sheaths produced by collectorless alternatingâ€current electrospinning for suture applications. Journal of Applied Polymer Science, 2022, 139, .	2.6	7
2	Alternating current electrospinning: The impacts of various high-voltage signal shapes and frequencies on the spinnability and productivity of polycaprolactone nanofibers. Materials and Design, 2022, 213, 110308.	7.0	51
3	Improved spinnability of PA 6 solutions using AC electrospinning. Materials Letters, 2021, 283, 128761.	2.6	11
4	Double-layered Nanofibrous Patch for Prevention of Anastomotic Leakage and Peritoneal Adhesions, Experimental Study. In Vivo, 2021, 35, 731-741.	1.3	7
5	The Mass Production of Lignin Fibres by Means of Needleless Electrospinning. Journal of Polymers and the Environment, 2021, 29, 2164-2173.	5.0	12
6	A novel approach to studying the kinetics of release of Alaptide from Poly-Îµ-caprolactone nanofibers. Journal of Drug Delivery Science and Technology, 2021, 63, 102492.	3.0	1
7	Novel lipophosphonoxin-loaded polycaprolactone electrospun nanofiber dressing reduces Staphylococcus aureus induced wound infection in mice. Scientific Reports, 2021, 11, 17688.	3.3	13
8	Degradation of polycaprolactone electrospun materials - methods of analysis. , 2021, , .		0
9	Drawn aligned polymer microfibres for tissue engineering. Journal of Industrial Textiles, 2020, 50, 263-277.	2.4	3
10	Ectopic thyroid with benign and malignant findings: A case series. International Journal of Surgery Case Reports, 2020, 66, 33-38.	0.6	8
11	Plasma treatment effects on bulk properties of polycaprolactone nanofibrous mats fabricated by uncommon AC electrospinning: A comparative study. Surface and Coatings Technology, 2020, 399, 126203.	4.8	27
12	Experimental fortification of intestinal anastomoses with nanofibrous materials in a large animal model. Scientific Reports, 2020, 10, 1134.	3.3	14
13	Structure and mechanical properties of nanofibrous ZrO2 derived from alternating field electrospun precursors. Ceramics International, 2019, 45, 18672-18682.	4.8	19
14	Fabrication of dual-functional composite yarns with a nanofibrous envelope using high throughput AC needleless and collectorless electrospinning. Scientific Reports, 2019, 9, 1801.	3.3	36
15	The post-morphological analysis of electrospun vascular grafts following mechanical testing. Journal of Polymer Engineering, 2018, 38, 525-535.	1.4	2
16	Generating standardized image data for testing and calibrating quantification of volumes, surfaces, lengths, and object counts in fibrous and porous materials using Xâ€ray microtomography. Microscopy Research and Technique, 2018, 81, 551-568.	2.2	23
17	The combination of nanofibrous and microfibrous materials for enhancement of cell infiltration and in vivo bone tissue formation. Biomedical Materials (Bristol), 2018, 13, 025004.	3.3	21
18	Effect of nanocrystalline cellulose addition on needleless alternating current electrospinning and properties of nanofibrous polyacrylonitrile meshes. Journal of Applied Polymer Science, 2018, 135, 45772.	2.6	19

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19	Composite 3D printed scaffold with structured electrospun nanofibers promotes chondrocyte adhesion and infiltration. Cell Adhesion and Migration, 2018, 12, 271-285.	2.7	36
20	Needleless emulsion electrospinning for the regulated delivery of susceptible proteins. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, 583-597.	2.7	17
21	Electrospun vascular grafts fabricated from poly(L -lactide-co- Îµ -caprolactone) used as a bypass for the rabbit carotid artery. Biomedical Materials (Bristol), 2018, 13, 065009.	3.3	13
22	The effect of ethylene oxide sterilization on electrospun vascular grafts made from biodegradable polyesters. Materials Science and Engineering C, 2018, 92, 132-142.	7.3	45
23	Needleless coaxial electrospinning: A novel approach to mass production of coaxial nanofibers. International Journal of Pharmaceutics, 2017, 516, 293-300.	5.2	57
24	Mechanical investigation of bilayer vascular grafts electrospun from aliphatic polyesters. Polymers for Advanced Technologies, 2017, 28, 201-213.	3.2	11
25	Production of yarns composed of oriented nanofibers for ophthalmological implants. IOP Conference Series: Materials Science and Engineering, 2017, 254, 062011.	0.6	0
26	Composite fibrous glaucoma drainage implant. IOP Conference Series: Materials Science and Engineering, 2017, 254, 062006.	0.6	0
27	Crystallinity of Electrospun and Centrifugal Spun Polycaprolactone Fibers: A Comparative Study. Journal of Nanomaterials, 2017, 2017, 1-9.	2.7	34
28	Design of Polycaprolactone Vascular Grafts. Journal of Industrial Textiles, 2016, 45, 813-833.	2.4	32
29	Poly(Îµ-Caprolactone) Nanofibers for Biomedical Scaffolds by High-Rate Alternating Current Electrospinning. MRS Advances, 2016, 1, 1289-1294.	0.9	2
30	Nanofibrous alumina structures fabricated using high-yield alternating current electrospinning. Ceramics International, 2016, 42, 17154-17161.	4.8	23
31	Surgical treatment of patients with colorectal cancer atÂtheÂUniversity Hospital KrÃ¡lovskÃ© Vinohrady, Prague. European Surgery - Acta Chirurgica Austriaca, 2016, 48, 147-148.	0.7	0
32	Rapid fabrication of poly(Îµâ€caprolactone) nanofibers using needleless alternating current electrospinning. Journal of Applied Polymer Science, 2016, 133, .	2.6	32
33	Mathematical modeling of a whipping instability of an electrically charged liquid jet. Applied Mathematical Modelling, 2016, 40, 9565-9583.	4.2	21
34	Protrusion of the Rod Electrode in the Electrospinning Process. Journal of Nanotechnology, 2015, 2015, 1-8.	3.4	2
35	The combination of meltblown and electrospinning for bone tissue engineering. Materials Letters, 2015, 143, 172-176.	2.6	35
36	Ribbon-like and spontaneously folded structures of tungsten oxide nanofibers fabricated via electrospinning. RSC Advances, 2015, 5, 69534-69542.	3.6	13

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37	A census of quadratic post-critically finite rational functions defined over. LMS Journal of Computation and Mathematics, 2014, 17, 314-329.	0.9	8
38	Effective AC needleless and collectorless electrospinning for yarn production. Physical Chemistry Chemical Physics, 2014, 16, 26816-26822.	2.8	74
39	Correlation among the BRAF Gene Mutation Status, Clinicopathological Features of Primary Tumour, and Lymph Node Metastasizing of Papillary Thyroid Carcinoma. Experimental and Clinical Endocrinology and Diabetes, 2014, 122, 268-272.	1.2	4
40	Image analysis of jet structure on electrospinning from free liquid surface. Applied Physics Letters, 2014, 104, 243114.	3.3	8
41	Study of polycaprolactone wet electrospinning process. EXPRESS Polymer Letters, 2014, 8, 554-564.	2.1	43
42	A mathematical model of external electrostatic field of a special collector for electrospinning of nanofibers. Journal of Electrostatics, 2014, 72, 161-165.	1.9	10
43	Time-regulated drug delivery system based on coaxially incorporated platelet Î±-granules for biomedical use. Nanomedicine, 2013, 8, 1137-1154.	3.3	25
44	Elastic threeâ€dimensional poly (Îµâ€caprolactone) nanofibre scaffold enhances migration, proliferation and osteogenic differentiation of mesenchymal stem cells. Cell Proliferation, 2013, 46, 23-37.	5.3	73
45	Nanofiber Manufacture, Properties, and Applications. Journal of Nanomaterials, 2013, 2013, 1-1.	2.7	5
46	The epidemiology of thyroid cancer in the Czech Republic in comparison with other countries. Biomedical Papers of the Medical Faculty of the University Palacký, Olomouc, Czechoslovakia, 2013, 157, 266-275.	0.6	27
47	Thin-Layer Hydroxyapatite Deposition on a Nanofiber Surface Stimulates Mesenchymal Stem Cell Proliferation and Their Differentiation into Osteoblasts. Journal of Biomedicine and Biotechnology, 2012, 2012, 1-10.	3.0	27
48	Core/Shell Nanofibers with Embedded Liposomes as a Drug Delivery System. Biomacromolecules, 2012, 13, 952-962.	5.4	212
49	Laboratory synthesis of carbon nanostructured materials using natural gas. Materials Letters, 2012, 79, 35-38.	2.6	3
50	A simple drug anchoring microfiber scaffold for chondrocyte seeding and proliferation. Journal of Materials Science: Materials in Medicine, 2012, 23, 555-563.	3.6	27
51	Nanoporous artificial proboscis for probing minute amount of liquids. Nanoscale, 2011, 3, 4685.	5.6	38
52	Raster image correlation spectroscopy as a novel tool to study interactions of macromolecules with nanofiber scaffolds. Acta Biomaterialia, 2011, 7, 4195-4203.	8.3	17
53	Laryngotracheal stenosis in critically ill patients. Acta Oto-Laryngologica, 2011, 131, 91-95.	0.9	6
54	Auto-model based computer simulation of Plateauâ€“Rayleigh instability of mixtures of immiscible liquids. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 2164-2176.	2.6	9

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55	Electrospinning jets as X-ray sources at atmospheric conditions. Europhysics Letters, 2010, 92, 47002.	2.0	1
56	Physical principles of electrospinning (Electrospinning as a nano-scale technology of the twenty-first) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	2.0	121
57	Self-organization of jets in electrospinning from free liquid surface: A generalized approach. Journal of Applied Physics, 2008, 103, .	2.5	208
58	The Effect of Gas Adsorption on Carbon Nanotubes Properties. Journal of Computational and Theoretical Nanoscience, 2006, 3, 664-669.	0.4	35
59	Morphological transitions of capillary rise in a bundle of two and three solid parallel cylinders. Physica A: Statistical Mechanics and Its Applications, 2006, 371, 226-248.	2.6	12
60	Understanding the three-dimensional structure of fibrous materials using stereology. , 2006, , 42-101.		1
61	Computer simulation of moisture transport in fibrous materials. , 2006, , 469-541.		1
62	The cellular automata lattice gas approach for fluid flows in porous media. , 2006, , 357-401.		1
63	Modeling Liquid Transport in Fibrous Structures: An Multi-Scale Approach. Journal of Computational and Theoretical Nanoscience, 2006, 3, 506-512.	0.4	2
64	Effect of LiCl on the stability length of electrospinning jet by PAN polymer solution. Materials Letters, 2005, 59, 3102-3105.	2.6	21
65	Stochastic modelling of tear behaviour of coated fabrics. Modelling and Simulation in Materials Science and Engineering, 2004, 12, 293-309.	2.0	28
66	Computer Simulation of 3-D Liquid Transport in Fibrous Materials. Simulation, 2004, 80, 547-557.	1.8	14
67	Wetting of a fiber bundle in fibrous structures. Polymer Composites, 2003, 24, 314-322.	4.6	23
68	Wetting between parallel fibres; column-unduloid and column disintegration transitions. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2003, 217, 273-277.	1.8	8
69	A Stochastic Approach on the Tear Behavior of Coated Fabrics With Interphase. , 2003, , 39.		1
70	Ocular Lens NAD Kinase: Partial Purification and Metabolic Implications. Biochemical and Biophysical Research Communications, 1998, 247, 154-158.	2.1	3
71	Computer Simulation of Liquid Wetting Dynamics in Fiber Structures Using the Ising Model. Journal of the Textile Institute, 1997, 88, 149-161.	1.9	26
72	A Two-dimensional Model of the Mechanical Properties of Textiles. Journal of the Textile Institute, 1993, 84, 1-15.	1.9	19

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73	Computer modelling of geotextiles related to mechanical properties evaluated by micromechanoscopy. Geotextiles and Geomembranes, 1991, 10, 115-124.	4.6	3
74	Phase transition from a4He plasma to stable8Be matter. Zeitschrift FÃ¼r Physik A, 1991, 339, 419-420.	0.9	6
75	Computer Simulation of a Fluid Flow through the Declined Porous Structure. Advanced Materials Research, 0, 746, 271-276.	0.3	1
76	Design of Coaxial Needleless Electrospinning Electrode with Respect to the Distribution of Electric Field. Applied Mechanics and Materials, 0, 693, 394-399.	0.2	12
77	Nanofibrous Filters for Respirators. Advanced Materials Research, 0, 1119, 126-131.	0.3	0