Anna Rising

List of Publications by Citations

70 papers	2,655 citations	26 h-index	51 g-index
77 ext. papers	3,201 ext. citations	7.6 avg, IF	5.19 L-index

#	Paper	IF	Citations
70	Self-assembly of spider silk proteins is controlled by a pH-sensitive relay. *Nature*, **2010**, 465, 236-8	50.4	328
69	Toward spinning artificial spider silk. *Nature Chemical Biology*, **2015**, 11, 309-15	11.7	210
68	Spider silk proteins: recent advances in recombinant production, structure-function relationships and biomedical applications. *Cellular and Molecular Life Sciences*, **2011**, 68, 169-84	10.3	144
67	Macroscopic fibers self-assembled from recombinant miniature spider silk proteins. *Biomacromolecules*, **2007**, 8, 1695-701	6.9	144
66	Biomimetic spinning of artificial spider silk from a chimeric minispidroin. *Nature Chemical Biology*, **2017**, 13, 262-264	11.7	143
65	Spider silk proteins--mechanical property and gene sequence. *Zoological Science*, **2005**, 22, 273-81	0.8	124
64	N-terminal nonrepetitive domain common to dragline, flagelliform, and cylindriform spider silk proteins. *Biomacromolecules*, **2006**, 7, 3120-4	6.9	122
63	Structural properties of recombinant nonrepetitive and repetitive parts of major ampullate spidroin 1 from Euprosthenops australis: implications for fiber formation. *Biochemistry*, **2008**, 47, 3407-17	3.2	113
62	Carbonic anhydrase generates CO2 and H+ that drive spider silk formation via opposite effects on the terminal domains. *PLoS Biology*, **2014**, 12, e1001921	9.7	109
61	Sequential pH-driven dimerization and stabilization of the N-terminal domain enables rapid spider silk formation. *Nature Communications*, **2014**, 5, 3254	17.4	96
60	Recombinant spider silk as matrices for cell culture. *Biomaterials*, **2010**, 31, 9575-85	15.6	89
59	Silk Spinning in Silkworms and Spiders. *International Journal of Molecular Sciences*, **2016**, 17,	6.3	78
58	Tissue Response to Subcutaneously Implanted Recombinant Spider Silk: An in Vivo Study. *Materials*, **2009**, 2, 1908-1922	3.5	65
57	Invited review current progress and limitations of spider silk for biomedical applications. *Biopolymers*, **2012**, 97, 468-78	2.2	64
56	pH-dependent dimerization of spider silk N-terminal domain requires relocation of a wedged tryptophan side chain. *Journal of Molecular Biology*, **2012**, 422, 477-87	6.5	61
55	Full-length minor ampullate spidroin gene sequence. *PLoS ONE*, **2012**, 7, e52293	3.7	58
54	Recombinant spider silk matrices for neural stem cell cultures. *Biomaterials*, **2012**, 33, 7712-7	15.6	55

53	Efficient protein production inspired by how spiders make silk. *Nature Communications*, **2017**, 8, 15504	17.4	48
52	A pH-dependent dimer lock in spider silk protein. *Journal of Molecular Biology*, **2010**, 404, 328-36	6.5	47
51	Recombinant spider silk genetically functionalized with affinity domains. *Biomacromolecules*, **2014**, 15, 1696-706	6.9	45
50	Major ampullate spidroins from Euprosthenops australis: multiplicity at protein, mRNA and gene levels. *Insect Molecular Biology*, **2007**, 16, 551-61	3.4	39
49	Morphology and composition of the spider major ampullate gland and dragline silk. *Biomacromolecules*, **2013**, 14, 2945-52	6.9	37
48	Spider silk for xeno-free long-term self-renewal and differentiation of human pluripotent stem cells. *Biomaterials*, **2014**, 35, 8496-502	15.6	34
47	Carbonic anhydrase generates a pH gradient in Bombyx mori silk glands. *Insect Biochemistry and Molecular Biology*, **2015**, 65, 100-6	4.5	30
46	Diversified Structural Basis of a Conserved Molecular Mechanism for pH-Dependent Dimerization in Spider Silk N-Terminal Domains. *ChemBioChem*, **2015**, 16, 1720-4	3.8	29
45	Specific chaperones and regulatory domains in control of amyloid formation. *Journal of Biological Chemistry*, **2015**, 290, 26430-6	5.4	27
44	Controlled assembly: a prerequisite for the use of recombinant spider silk in regenerative medicine?. *Acta Biomaterialia*, **2014**, 10, 1627-31	10.8	24
43	A spidroin-derived solubility tag enables controlled aggregation of a designed amyloid protein. *FEBS Journal*, **2018**, 285, 1873-1885	5.7	22
42	Functionalisation of recombinant spider silk with conjugated polyelectrolytes. *Journal of Materials Chemistry*, **2011**, 21, 2909		18
41	Novel expression of a functional trimeric fragment of human SP-A with efficacy in neutralisation of RSV. *Immunobiology*, **2017**, 222, 111-118	3.4	16
40	Structure-Function Relationship of Artificial Spider Silk Fibers Produced by Straining Flow Spinning. *Biomacromolecules*, **2020**, 21, 2116-2124	6.9	16
39	High-yield Production of Amyloid-β Peptide Enabled by a Customized Spider Silk Domain. *Scientific Reports*, **2020**, 10, 235	4.9	16
38	Mass Spectrometry Reveals the Direct Action of a Chemical Chaperone. *Journal of Physical Chemistry Letters*, **2018**, 9, 4082-4086	6.4	16
37	Transmissible amyloid. *Journal of Internal Medicine*, **2016**, 280, 153-63	10.8	16
36	Doing What Spiders Cannot-A Road Map to Supreme Artificial Silk Fibers. *ACS Nano*, **2021**, 15, 1952-1959	16.7	16

35	Degree of Biomimicry of Artificial Spider Silk Spinning Assessed by NMR Spectroscopy. *Angewandte Chemie - International Edition*, **2017**, 56, 12571-12575	16.4	15
34	Production and Properties of Triple Chimeric Spidroins. *Biomacromolecules*, **2018**, 19, 2825-2833	6.9	14
33	Control of amyloid assembly by autoregulation. *Biochemical Journal*, **2012**, 447, 185-92	3.8	13
32	Mass spectrometry captures structural intermediates in protein fiber self-assembly. *Chemical Communications*, **2017**, 53, 3319-3322	5.8	12
31	Tensile properties of synthetic pyriform spider silk fibers depend on the number of repetitive units as well as the presence of N- and C-terminal domains. *International Journal of Biological Macromolecules*, **2020**, 154, 765-772	7.9	11
30	Synthetic surfactant with a recombinant surfactant protein C analogue improves lung function and attenuates inflammation in a model of acute respiratory distress syndrome in adult rabbits. *Respiratory Research*, **2019**, 20, 245	7.3	10
29	Properties of Biomimetic Artificial Spider Silk Fibers Tuned by PostSpin Bath Incubation. *Molecules*, **2020**, 25,	4.8	8
28	Natural Derived Surfactant Preparation As a Carrier of Polymyxin E for Treatment of Pseudomonas aeruginosa Pneumonia in a Near-Term Rabbit Model. *Journal of Aerosol Medicine and Pulmonary Drug Delivery*, **2019**, 32, 110-118	3.8	8
27	Efficient passage of human pluripotent stem cells on spider silk matrices under xeno-free conditions. *Cellular and Molecular Life Sciences*, **2016**, 73, 1479-88	10.3	6
26	Evaluation of Functionalized Spider Silk Matrices: Choice of Cell Types and Controls are Important for Detecting Specific Effects. *Frontiers in Bioengineering and Biotechnology*, **2014**, 2, 50	5.8	6
25	Tyrosine residues mediate supercontraction in biomimetic spider silk. *Communications Materials*, **2021**, 2,	6	6
24	Impact of synthetic surfactant CHF5633 with SP-B and SP-C analogues on lung function and inflammation in rabbit model of acute respiratory distress syndrome. *Physiological Reports*, **2021**, 9, e14700	2.6	6
23	Transient Expression of a Major Ampullate Spidroin 1 Gene Fragment from sp. in Mammalian Cells. *Cancer Genomics and Proteomics*, **2006**, 3, 83-87	3.3	6
22	High-yield production of a super-soluble miniature spidroin for biomimetic high-performance materials. *Materials Today*, **2021**,	21.8	5
21	High intracellular stability of the spidroin N-terminal domain in spite of abundant amyloidogenic segments revealed by in-cell hydrogen/deuterium exchange mass spectrometry. *FEBS Journal*, **2020**, 287, 2823-2833	5.7	4
20	Native-like Flow Properties of an Artificial Spider Silk Dope. *ACS Biomaterials Science and Engineering*, **2021**, 7, 462-471	5.5	4
19	Degree of Biomimicry of Artificial Spider Silk Spinning Assessed by NMR Spectroscopy. *Angewandte Chemie*, **2017**, 129, 12745-12749	3.6	3
18	Systemic AA amyloidosis in the red fox (Vulpes vulpes). *Protein Science*, **2017**, 26, 2312-2318	6.3	2

List of Publications

17	AA amyloid in human food chain is a possible biohazard. *Scientific Reports*, **2021**, 11, 21069	4.9	2
16	In Vitro Study of Human Immune Responses to Hyaluronic Acid Hydrogels, Recombinant Spidroins and Human Neural Progenitor Cells of Relevance to Spinal Cord Injury Repair. *Cells*, **2021**, 10,	7.9	2
15	Expression of the human molecular chaperone domain Bri2 BRICHOS on a gram per liter scale with an E. coli fed-batch culture. *Microbial Cell Factories*, **2021**, 20, 150	6.4	2
14	Artificial and natural silk materials have high mechanical property variability regardless of sample size.. *Scientific Reports*, **2022**, 12, 3507	4.9	2
13	A Novel Approach for the Production of Aggregation-Prone Proteins Using the Spidroin-Derived NT* Tag.. *Methods in Molecular Biology*, **2022**, 2406, 113-130	1.4	1
12	An Image-Analysis-Based Method for the Prediction of Recombinant Protein Fiber Tensile Strength.. *Materials*, **2022**, 15,	3.5	1
11	Artificial spider silk supports and guides neurite extension in vitro. *FASEB Journal*, **2021**, 35, e21896	0.9	1
10	Recombinant spider silk protein matrices facilitate multi-analysis of calcium-signaling in neural stem cell-derived AMPA-responsive neurons		1
9	Recombinant Spider Silk Protein Matrices Facilitate Differentiation of Neural Stem Cells Into Mature and Functional Neurons. *Frontiers in Materials*, **2021**, 7,	4	1
8	Expression of JNK interacting protein JIP-1 is down-regulated in liver from mouse embryos with a disrupted insulin-like growth factor II gene. *In Vivo*, **2004**, 18, 643-7	2.3	1
7	The JNK interacting protein JIP-1 and insulin like growth factor II genes are co-expressed in human embryonic tumours. *Anticancer Research*, **2005**, 25, 1075-8	2.3	1
6	A "spindle and thread" mechanism unblocks p53 translation by modulating N-terminal disorder.. *Structure*, **2022**,	5.2	1
5	The dimerization mechanism of the N-terminal domain of spider silk proteins is conserved despite extensive sequence divergence.. *Journal of Biological Chemistry*, **2022**, 101913	5.4	1
4	Efficient delipidation of a recombinant lung surfactant lipopeptide analogue by liquid-gel chromatography. *PLoS ONE*, **2019**, 14, e0226072	3.7	0
3	Engineered Spider Silk Proteins for Biomimetic Spinning of Fibers with Toughness Equal to Dragline Silks. *Advanced Functional Materials*,2200986	15.6	0
2	Engineered Spider Silk Proteins for Biomimetic Spinning of Fibers with Toughness Equal to Dragline Silks (Adv. Funct. Mater. 23/2022). *Advanced Functional Materials*, **2022**, 32, 2270134	15.6	0
1	Citrullination Alters the Antibacterial and Anti-Inflammatory Functions of the Host Defense Peptide Canine Cathelicidin K9CATH In Vitro. *Journal of Immunology*, **2021**, 207, 974-984	5.3	