Jos Prez-Rigueiro

List of Publications by Citations

94 papers	2,750 citations	30 h-index	49 g-index
98 ext. papers	3,072 ext. citations	4.7 avg, IF	4.78 L-index

#	Paper	IF	Citations
94	Mechanical properties of single-brin silkworm silk. *Journal of Applied Polymer Science*, **2000**, 75, 1270-1277	2.9	188
93	Mechanical properties of silkworm silk in liquid media. *Polymer*, **2000**, 41, 8433-8439	3.9	112
92	Stretching of supercontracted fibers: a link between spinning and the variability of spider silk. *Journal of Experimental Biology*, **2005**, 208, 25-30	3	95
91	Controlled supercontraction tailors the tensile behaviour of spider silk. *Polymer*, **2003**, 44, 3733-3736	3.9	93
90	Effect of degumming on the tensile properties of silkworm (Bombyx mori) silk fiber. *Journal of Applied Polymer Science*, **2002**, 84, 1431-1437	2.9	91
89	Fractographic analysis of silkworm and spider silk. *Engineering Fracture Mechanics*, **2002**, 69, 1035-1048	4.2	91
88	Thermo-hygro-mechanical behavior of spider dragline silk: Glassy and rubbery states. *Journal of Polymer Science, Part B: Polymer Physics*, **2006**, 44, 994-999	2.6	76
87	Volume constancy during stretching of spider silk. *Biomacromolecules*, **2006**, 7, 2173-7	6.9	74
86	Relationship between microstructure and mechanical properties in spider silk fibers: identification of two regimes in the microstructural changes. *Soft Matter*, **2012**, 8, 6015	3.6	71
85	Active control of spider silk strength: comparison of drag line spun on vertical and horizontal surfaces. *Polymer*, **2002**, 43, 1537-1540	3.9	70
84	The effect of spinning forces on spider silk properties. *Journal of Experimental Biology*, **2005**, 208, 2633-9	3	69
83	Revisiting the mechanical behavior of alumina/silicon carbide nanocomposites. *Acta Materialia*, **1998**, 46, 5399-5411	8.4	68
82	Self-tightening of spider silk fibers induced by moisture. *Polymer*, **2003**, 44, 5785-5788	3.9	65
81	Tensile properties of silkworm silk obtained by forced silking. *Journal of Applied Polymer Science*, **2001**, 82, 1928-1935	2.9	65
80	The hidden link between supercontraction and mechanical behavior of spider silks. *Journal of the Mechanical Behavior of Biomedical Materials*, **2011**, 4, 658-69	4.1	63
79	Safety and tolerability of silk fibroin hydrogels implanted into the mouse brain. *Acta Biomaterialia*, **2016**, 45, 262-275	10.8	63
78	Sequential origin in the high performance properties of orb spider dragline silk. *Scientific Reports*, **2012**, 2, 782	4.9	62

77	Bioinspired Fibers Follow the Track of Natural Spider Silk. *Macromolecules*, **2011**, 44, 1166-1176	5.5	61
76	Effect of water on Bombyx mori regenerated silk fibers and its application in modifying their mechanical properties. *Journal of Applied Polymer Science*, **2008**, 109, 1793-1801	2.9	55
75	Biofunctionalization of surfaces of nanostructured porous silicon. *Materials Science and Engineering C*, **2003**, 23, 697-701	8.3	54
74	Recovery in spider silk fibers. *Journal of Applied Polymer Science*, **2004**, 92, 3537-3541	2.9	52
73	The variability and interdependence of spider drag line tensile properties. *Polymer*, **2002**, 43, 4495-4502	3.9	52
72	Old Silks Endowed with New Properties. *Macromolecules*, **2009**, 42, 8977-8982	5.5	50
71	Mechanical behavior of silk during the evolution of orb-web spinning spiders. *Biomacromolecules*, **2009**, 10, 1904-10	6.9	46
70	Similarities and Differences in the Supramolecular Organization of Silkworm and Spider Silk. *Macromolecules*, **2007**, 40, 5360-5365	5.5	44
69	Influence of the draw ratio on the tensile and fracture behavior of NMMO regenerated silk fibers. *Journal of Polymer Science, Part B: Polymer Physics*, **2007**, 45, 2568-2579	2.6	43
68	Minor ampullate silks from Nephila and Argiope spiders: tensile properties and microstructural characterization. *Biomacromolecules*, **2012**, 13, 2087-98	6.9	39
67	Mechanical and in vitro testing of aerosol-gel deposited titania coatings for biocompatible applications. *Biomaterials*, **2002**, 23, 349-56	15.6	32
66	Study of carrier transport in metal/porous silicon/Si structures. *Journal of Applied Physics*, **1999**, 86, 6911-6914	2.5	31
65	Correlation between processing conditions, microstructure and mechanical behavior in regenerated silkworm silk fibers. *Journal of Polymer Science, Part B: Polymer Physics*, **2012**, 50, 455-465	2.6	30
64	Reproducibility of the tensile properties of spider (Argiope trifasciata) silk obtained by forced silking. *Journal of Experimental Zoology Part A, Comparative Experimental Biology*, **2005**, 303, 37-44		29
63	Finding inspiration in argiope trifasciata spider silk fibers. *Jom*, **2005**, 57, 60-66	2.1	28
62	Production of High Performance Bioinspired Silk Fibers by Straining Flow Spinning. *Biomacromolecules*, **2017**, 18, 1127-1133	6.9	27
61	Surface biofunctionalization of materials by amine groups. *Journal of Materials Research*, **2004**, 19, 2415-2420	2.5	26
60	Material properties of evolutionary diverse spider silks described by variation in a single structural parameter. *Scientific Reports*, **2016**, 6, 18991	4.9	25

59	Ageing of aluminum electrical contacts to porous silicon. *Journal of Applied Physics*, **1999**, 85, 583-586	2.5	25
58	The apparent variability of silkworm (Bombyx mori) silk and its relationship with degumming. *European Polymer Journal*, **2016**, 78, 129-140	5.2	25
57	Porous silicon multilayer stacks for optical biosensing applications. *Microelectronics Journal*, **2004**, 35, 45-48	1.8	24
56	Hydrogels-Assisted Cell Engraftment for Repairing the Stroke-Damaged Brain: Chimera or Reality. *Polymers*, **2018**, 10,	4.5	22
55	Cortical Reshaping and Functional Recovery Induced by Silk Fibroin Hydrogels-Encapsulated Stem Cells Implanted in Stroke Animals. *Frontiers in Cellular Neuroscience*, **2018**, 12, 296	6.1	22
54	Recovery in viscid line fibers. *Biomacromolecules*, **2010**, 11, 1174-9	6.9	21
53	Supercontraction of dragline silk spun by lynx spiders (Oxyopidae). *International Journal of Biological Macromolecules*, **2010**, 46, 555-7	7.9	19
52	Supramolecular organization of regenerated silkworm silk fibers. *International Journal of Biological Macromolecules*, **2009**, 44, 195-202	7.9	19
51	Example of microprocessing in a natural polymeric fiber: Role of reeling stress in spider silk. *Journal of Materials Research*, **2006**, 21, 1931-1938	2.5	19
50	Evaluation of Neurosecretome from Mesenchymal Stem Cells Encapsulated in Silk Fibroin Hydrogels. *Scientific Reports*, **2019**, 9, 8801	4.9	18
49	Biomaterials to Neuroprotect the Stroke Brain: A Large Opportunity for Narrow Time Windows. *Cells*, **2020**, 9,	7.9	18
48	Formation of amine functionalized films by chemical vapour deposition. *Materials Science and Engineering C*, **2006**, 26, 938-941	8.3	18
47	Testing biomaterials by the in-situ evaluation of cell response. *New Biotechnology*, **2002**, 19, 239-42		17
46	Structure-Function Relationship of Artificial Spider Silk Fibers Produced by Straining Flow Spinning. *Biomacromolecules*, **2020**, 21, 2116-2124	6.9	16
45	Development of human mesenchymal stem cells on DC sputtered titanium nitride thin films. *Journal of Materials Science: Materials in Medicine*, **2002**, 13, 289-93	4.5	16
44	Fracture surfaces and tensile properties of UV-irradiated spider silk fibers. *Journal of Polymer Science, Part B: Polymer Physics*, **2007**, 45, 786-793	2.6	15
43	Improved Measurement of Elastic Properties of Cells by Micropipette Aspiration and Its Application to Lymphocytes. *Annals of Biomedical Engineering*, **2017**, 45, 1375-1385	4.7	14
42	Comparison of the effects of post-spinning drawing and wet stretching on regenerated silk fibers produced through straining flow spinning. *Polymer*, **2018**, 150, 311-317	3.9	14

41	Straining flow spinning: production of regenerated silk fibers under a wide range of mild coagulating chemistries. *Green Chemistry*, **2017**, 19, 3380-3389	10	14
40	Unexpected behavior of irradiated spider silk links conformational freedom to mechanical performance. *Soft Matter*, **2015**, 11, 4868-78	3.6	13
39	Tensile properties of Attacus atlas silk submerged in liquid media. *Journal of Applied Polymer Science*, **2001**, 82, 53-62	2.9	13
38	Polymeric fibers with tunable properties: Lessons from spider silk. *Materials Science and Engineering C*, **2011**, 31, 1184-1188	8.3	12
37	Characterization of biofunctional thin films deposited by activated vapor silanization. *Journal of Materials Research*, **2008**, 23, 1931-1939	2.5	12
36	The influence of anaesthesia on the tensile properties of spider silk. *Journal of Experimental Biology* , **2006**, 209, 320-6	3	12
35	Potential use of silkworm gut fiber braids as scaffolds for tendon and ligament tissue engineering. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2019**, 107, 2209-2215	3.5	11
34	Emergence of supercontraction in regenerated silkworm (Bombyx mori) silk fibers. *Scientific Reports*, **2019**, 9, 2398	4.9	11
33	Enhanced Biological Response of AVS-Functionalized Ti-6Al-4V Alloy through Covalent Immobilization of Collagen. *Scientific Reports*, **2018**, 8, 3337	4.9	11
32	Comparison of cell mechanical measurements provided by Atomic Force Microscopy (AFM) and Micropipette Aspiration (MPA). *Journal of the Mechanical Behavior of Biomedical Materials*, **2019**, 95, 103-115	4.1	10
31	Mechanical behaviour and formation process of silkworm silk gut. *Soft Matter*, **2015**, 11, 8981-91	3.6	10
30	Conduits based on the combination of hyaluronic acid and silk fibroin: Characterization, in vitro studies and in vivo biocompatibility. *International Journal of Biological Macromolecules*, **2020**, 148, 378-390	7.9	10
29	Insights into the production and characterization of electrospun fibers from regenerated silk fibroin. *European Polymer Journal*, **2014**, 60, 123-134	5.2	10
28	Straining Flow Spinning of Artificial Silk Fibers: A Review. *Biomimetics*, **2018**, 3,	3.7	10
27	Bioactivity test for amine-based functionalized meso- and macro-porous silicon substrates. *Materials Science and Engineering C*, **2007**, 27, 1211-1214	8.3	9
26	Spider silk gut: development and characterization of a novel strong spider silk fiber. *Scientific Reports*, **2014**, 4, 7326	4.9	8
25	Optimization of functionalization conditions for protein analysis by AFM. *Applied Surface Science*, **2014**, 317, 462-468	6.7	8
24	Surface functionalisation by the condensation of hybrid titanate□mino sols. *Thin Solid Films*, **2002**, 415, 253-257	2.2	8

23	Straining flow spinning: Simplified model of a bioinspired process to mass produce regenerated silk fibers controllably. *European Polymer Journal*, **2017**, 97, 26-39	5.2	7
22	Stability and activity of lactate dehydrogenase on biofunctional layers deposited by activated vapor silanization (AVS) and immersion silanization (IS). *Applied Surface Science*, **2017**, 416, 965-970	6.7	6
21	The variability and interdependence of spider viscid line tensile properties. *Journal of Experimental Biology*, **2013**, 216, 4722-8	3	6
20	Preparation of Si?TiSi2 Schottky diodes by rapid thermal annealing. *Thin Solid Films*, **1994**, 246, 172-176	2.2	6
19	Preparation and characterization of Nephila clavipes tubuliform silk gut. *Soft Matter*, **2019**, 15, 2960-2970	3.6	5
18	Silicidation process of Ti/TiNx/Si structures. *Journal of Applied Physics*, **1997**, 81, 781-785	2.5	5
17	Biotechnology and Biomaterial-Based Therapeutic Strategies for Age-Related Macular Degeneration. Part II: Cell and Tissue Engineering Therapies. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 588014	5.8	5
16	Development of a versatile procedure for the biofunctionalization of Ti-6Al-4V implants. *Applied Surface Science*, **2016**, 387, 652-660	6.7	4
15	Nitridation of TiSi2 thin films by rapid thermal processing. *Surface and Coatings Technology*, **1996**, 80, 72-75	4.4	4
14	Application of the Spider Silk Standardization Initiative (SI) methodology to the characterization of major ampullate gland silk fibers spun by spiders from Pantanos de Villa wetlands (Lima, Peru). *Journal of the Mechanical Behavior of Biomedical Materials*, **2020**, 111, 104023	4.1	4
13	Silk Fibroin: An Ancient Material for Repairing the Injured Nervous System. *Pharmaceutics*, **2021**, 13,	6.4	4
12	Production of regenerated silkworm silk fibers from aqueous dopes through straining flow spinning. *Textile Reseach Journal*, **2019**, 89, 4554-4567	1.7	3
11	Functionalization of atomic force microscopy cantilevers and tips by activated vapour silanization. *Applied Surface Science*, **2019**, 484, 1141-1148	6.7	3
10	Topographical and mechanical characterization of living eukaryotic cells on opaque substrates: development of a general procedure and its application to the study of non-adherent lymphocytes. *Physical Biology*, **2015**, 12, 026005	3	3
9	Basic Principles in the Design of Spider Silk Fibers. *Molecules*, **2021**, 26,	4.8	3
8	First steps for the development of silk fibroin-based 3D biohybrid retina for age-related macular degeneration (AMD). *Journal of Neural Engineering*, **2020**, 17, 055003	5	2
7	Regenerated Silk Fibers Obtained by Straining Flow Spinning for Guiding Axonal Elongation in Primary Cortical Neurons. *ACS Biomaterials Science and Engineering*, **2020**, 6, 6842-6852	5.5	2
6	Lessons From Spider and Silkworm Silk Guts. *Frontiers in Materials*, **2020**, 7,	4	1

5	Mechanical and structural adaptations to migration in the flight feathers of a Palaearctic passerine. *Journal of Evolutionary Biology*, **2020**, 33, 979-989	2.3	1
4	Biomimetic Approaches for Separated Regeneration of Sensory and Motor Fibers in Amputee People: Necessary Conditions for Functional Integration of Sensory-Motor Prostheses With the Peripheral Nerves. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 584823	5.8	1
3	Reproducibility of the tensile properties of spider (Argiope trifasciata) silk obtained by forced silking **2005**, 303A, 37		1
2	Improved cell adhesion to activated vapor silanization-biofunctionalized Ti-6Al-4V surfaces with ECM-derived oligopeptides.. *Materials Science and Engineering C*, **2021**, 112614	8.3	0
1	Spider Silk as an Inspiration for Biomimicking. *Advances in Science and Technology*, **2008**, 58, 1-9	0.1	