Gustavo R Plaza

List of Publications by Citations

60 papers	1,756 citations	25 h-index	40 g-index
62 ext. papers	2,042 ext. citations	4.6 avg, IF	4.49 L-index

#	Paper	IF	Citations
60	Biomimetic spinning of artificial spider silk from a chimeric minispidroin. *Nature Chemical Biology*, **2017**, 13, 262-264	11.7	143
59	Stretching of supercontracted fibers: a link between spinning and the variability of spider silk. *Journal of Experimental Biology*, **2005**, 208, 25-30	3	95
58	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
57	Volume constancy during stretching of spider silk. *Biomacromolecules*, **2006**, 7, 2173-7	6.9	74
56	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
55	The effect of spinning forces on spider silk properties. *Journal of Experimental Biology*, **2005**, 208, 2633-9	3	69
54	Self-tightening of spider silk fibers induced by moisture. *Polymer*, **2003**, 44, 5785-5788	3.9	65
53	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
52	Sequential origin in the high performance properties of orb spider dragline silk. *Scientific Reports*, **2012**, 2, 782	4.9	62
51	Bioinspired Fibers Follow the Track of Natural Spider Silk. *Macromolecules*, **2011**, 44, 1166-1176	5.5	61
50	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
49	Recovery in spider silk fibers. *Journal of Applied Polymer Science*, **2004**, 92, 3537-3541	2.9	52
48	Elongated Nanoparticle Aggregates in Cancer Cells for Mechanical Destruction with Low Frequency Rotating Magnetic Field. *Theranostics*, **2017**, 7, 1735-1748	12.1	51
47	Old Silks Endowed with New Properties. *Macromolecules*, **2009**, 42, 8977-8982	5.5	50
46	Mechanical behavior of silk during the evolution of orb-web spinning spiders. *Biomacromolecules*, **2009**, 10, 1904-10	6.9	46
45	Advances in Micropipette Aspiration: Applications in Cell Biomechanics, Models, and Extended Studies. *Biophysical Journal*, **2019**, 116, 587-594	2.9	46
44	Similarities and Differences in the Supramolecular Organization of Silkworm and Spider Silk. *Macromolecules*, **2007**, 40, 5360-5365	5.5	44

43	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
42	Minor ampullate silks from Nephila and Argiope spiders: tensile properties and microstructural characterization. *Biomacromolecules*, **2012**, 13, 2087-98	6.9	39
41	Persistence and variation in microstructural design during the evolution of spider silk. *Scientific Reports*, **2015**, 5, 14820	4.9	35
40	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
39	Finding inspiration in argiope trifasciata spider silk fibers. *Jom*, **2005**, 57, 60-66	2.1	28
38	Production of High Performance Bioinspired Silk Fibers by Straining Flow Spinning. *Biomacromolecules*, **2017**, 18, 1127-1133	6.9	27
37	Material properties of evolutionary diverse spider silks described by variation in a single structural parameter. *Scientific Reports*, **2016**, 6, 18991	4.9	25
36	The apparent variability of silkworm (Bombyx mori) silk and its relationship with degumming. *European Polymer Journal*, **2016**, 78, 129-140	5.2	25
35	Identification and dynamics of polyglycine II nanocrystals in Argiope trifasciata flagelliform silk. *Scientific Reports*, **2013**, 3, 3061	4.9	24
34	Recovery in viscid line fibers. *Biomacromolecules*, **2010**, 11, 1174-9	6.9	21
33	Supercontraction of dragline silk spun by lynx spiders (Oxyopidae). *International Journal of Biological Macromolecules*, **2010**, 46, 555-7	7.9	19
32	Supramolecular organization of regenerated silkworm silk fibers. *International Journal of Biological Macromolecules*, **2009**, 44, 195-202	7.9	19
31	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
30	Remote Control of Mechanical Forces via Mitochondrial-Targeted Magnetic Nanospinners for Efficient Cancer Treatment. *Small*, **2020**, 16, e1905424	11	19
29	Low-Intensity Pulsed Ultrasound Improves the Functional Properties of Cardiac Mesoangioblasts. *Stem Cell Reviews and Reports*, **2015**, 11, 852-65	6.4	16
28	Ultraviolet-visible optical isolators based on CeF3 Faraday rotator. *Journal of Applied Physics*, **2015**, 117, 233101	2.5	15
27	Programmable ROS-Mediated Cancer Therapy via Magneto-Inductions. *Advanced Science*, **2020**, 7, 1902936	15	15
26	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

25	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
24	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
23	Straining flow spinning: production of regenerated silk fibers under a wide range of mild coagulating chemistries. *Green Chemistry*, **2017**, 19, 3380-3389	10	14
22	Unexpected behavior of irradiated spider silk links conformational freedom to mechanical performance. *Soft Matter*, **2015**, 11, 4868-78	3.6	13
21	Simple measurement of the apparent viscosity of a cell from only one picture: Application to cardiac stem cells. *Physical Review E*, **2014**, 90, 052715	2.4	12
20	Polymeric fibers with tunable properties: Lessons from spider silk. *Materials Science and Engineering C*, **2011**, 31, 1184-1188	8.3	12
19	The influence of anaesthesia on the tensile properties of spider silk. *Journal of Experimental Biology* , **2006**, 209, 320-6	3	12
18	Study of the influence of actin-binding proteins using linear analyses of cell deformability. *Soft Matter*, **2015**, 11, 5435-46	3.6	11
17	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
16	Mechanical behaviour and formation process of silkworm silk gut. *Soft Matter*, **2015**, 11, 8981-91	3.6	10
15	Insights into the production and characterization of electrospun fibers from regenerated silk fibroin. *European Polymer Journal*, **2014**, 60, 123-134	5.2	10
14	Straining Flow Spinning of Artificial Silk Fibers: A Review. *Biomimetics*, **2018**, 3,	3.7	10
13	Spider silk gut: development and characterization of a novel strong spider silk fiber. *Scientific Reports*, **2014**, 4, 7326	4.9	8
12	Contraction speed of the actomyosin cytoskeleton in the absence of the cell membrane. *Soft Matter*, **2013**, 9, 4390	3.6	7
11	Cell Mechanosensors and the Possibilities of Using Magnetic Nanoparticles to Study Them and to Modify Cell Fate. *Annals of Biomedical Engineering*, **2017**, 45, 2475-2486	4.7	7
10	The variability and interdependence of spider viscid line tensile properties. *Journal of Experimental Biology*, **2013**, 216, 4722-8	3	6
9	Single-cell biophysical study reveals deformability and internal ordering relationship in T cells. *Soft Matter*, **2020**, 16, 5669-5678	3.6	5
8	Probing the effect of tip pressure on fungal growth: Application to Aspergillus nidulans. *Physical Review E*, **2017**, 96, 022402	2.4	4

List of Publications

7	Energy distribution in disordered elastic networks. *Physical Review E*, **2010**, 82, 031902	2.4	4
6	Soft-Lithography of Polyacrylamide Hydrogels Using Microstructured Templates: Towards Controlled Cell Populations on Biointerfaces. *Materials*, **2020**, 13,	3.5	4
5	Production of regenerated silkworm silk fibers from aqueous dopes through straining flow spinning. *Textile Reseach Journal*, **2019**, 89, 4554-4567	1.7	3
4	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
3	Basic Principles in the Design of Spider Silk Fibers. *Molecules*, **2021**, 26,	4.8	3
2	Structure and properties of spider and silkworm silk for tissue scaffolds **2014**, 239-274		2
1	Spider Silk as an Inspiration for Biomimicking. *Advances in Science and Technology*, **2008**, 58, 1-9	0.1	