Gustavo R Plaza

List of Publications by Year
in descending order

61 papers	2,311 citations	186209 28 h-index	214721 47 g-index
62 all docs	62 docs citations	62 times ranked	1801 citing authors

#	Article	IF	Citations
1	Biomimetic spinning of artificial spider silk from a chimeric minispidroin. Nature Chemical Biology, 2017, 13, 262-264.	3.9	231
2	Stretching of supercontracted fibers: a link between spinning and the variability of spider silk. Journal of Experimental Biology, 2005, 208, 25-30.	0.8	107
3	Thermo-hygro-mechanical behavior of spider dragline silk: Glassy and rubbery states. Journal of Polymer Science, Part B: Polymer Physics, 2006, 44, 994-999.	2.4	92
4	Advances in Micropipette Aspiration: Applications in Cell Biomechanics, Models, and Extended Studies. Biophysical Journal, 2019, 116, 587-594.	0.2	90
5	Volume Constancy during Stretching of Spider Silk. Biomacromolecules, 2006, 7, 2173-2177.	2.6	83
6	Relationship between microstructure and mechanical properties in spider silk fibers: identification of two regimes in the microstructural changes. Soft Matter, 2012, 8, 6015.	1.2	82
7	Sequential origin in the high performance properties of orb spider dragline silk. Scientific Reports, 2012, 2, 782.	1.6	80
8	Elongated Nanoparticle Aggregates in Cancer Cells for Mechanical Destruction with Low Frequency Rotating Magnetic Field. Theranostics, 2017, 7, 1735-1748.	4.6	77
9	The effect of spinning forces on spider silk properties. Journal of Experimental Biology, 2005, 208, 2633-2639.	0.8	76
10	The hidden link between supercontraction and mechanical behavior of spider silks. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 658-669.	1.5	75
11	Self-tightening of spider silk fibers induced by moisture. Polymer, 2003, 44, 5785-5788.	1.8	72
12	Bioinspired Fibers Follow the Track of Natural Spider Silk. Macromolecules, 2011, 44, 1166-1176.	2.2	69
13	Effect of water on <i>Bombyx mori</i> regenerated silk fibers and its application in modifying their mechanical properties. Journal of Applied Polymer Science, 2008, 109, 1793-1801.	1.3	63
14	Recovery in spider silk fibers. Journal of Applied Polymer Science, 2004, 92, 3537-3541.	1.3	59
15	Mechanical Behavior of Silk During the Evolution of Orb-Web Spinning Spiders. Biomacromolecules, 2009, 10, 1904-1910.	2.6	56
16	Old Silks Endowed with New Properties. Macromolecules, 2009, 42, 8977-8982.	2.2	54
17	Minor Ampullate Silks from Nephila and Argiope Spiders: Tensile Properties and Microstructural Characterization. Biomacromolecules, 2012, 13, 2087-2098.	2.6	52
18	Similarities and Differences in the Supramolecular Organization of Silkworm and Spider Silk. Macromolecules, 2007, 40, 5360-5365.	2.2	50

#	Article	IF	Citations
19	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.	2.4	47
20	Programmable ROSâ€Mediated Cancer Therapy via Magnetoâ€Inductions. Advanced Science, 2020, 7, 1902933.	5.6	43
21	Material properties of evolutionary diverse spider silks described by variation in a single structural parameter. Scientific Reports, 2016, 6, 18991.	1.6	41
22	Persistence and variation in microstructural design during the evolution of spider silk. Scientific Reports, 2015, 5, 14820.	1.6	39
23	Remote Control of Mechanical Forces via Mitochondrialâ€Targeted Magnetic Nanospinners for Efficient Cancer Treatment. Small, 2020, 16, e1905424.	5.2	39
24	Production of High Performance Bioinspired Silk Fibers by Straining Flow Spinning. Biomacromolecules, 2017, 18, 1127-1133.	2.6	38
25	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.	2.4	37
26	Finding inspiration in argiope trifasciata spider silk fibers. Jom, 2005, 57, 60-66.	0.9	35
27	The apparent variability of silkworm (Bombyx mori) silk and its relationship with degumming. European Polymer Journal, 2016, 78, 129-140.	2.6	33
28	Identification and dynamics of polyglycine II nanocrystals in Argiope trifasciata flagelliform silk. Scientific Reports, 2013, 3, 3061.	1.6	30
29	Recovery in Viscid Line Fibers. Biomacromolecules, 2010, 11, 1174-1179.	2.6	26
30	Ultraviolet-visible optical isolators based on CeF3 Faraday rotator. Journal of Applied Physics, 2015, 117, .	1.1	24
31	Example of microprocessing in a natural polymeric fiber: Role of reeling stress in spider silk. Journal of Materials Research, 2006, 21, 1931-1938.	1.2	23
32	Straining flow spinning: production of regenerated silk fibers under a wide range of mild coagulating chemistries. Green Chemistry, 2017, 19, 3380-3389.	4.6	23
33	Supercontraction of dragline silk spun by lynx spiders (Oxyopidae). International Journal of Biological Macromolecules, 2010, 46, 555-557.	3.6	22
34	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.	1.5	22
35	Supramolecular organization of regenerated silkworm silk fibers. International Journal of Biological Macromolecules, 2009, 44, 195-202.	3.6	21
36	Low-Intensity Pulsed Ultrasound Improves the Functional Properties of Cardiac Mesoangioblasts. Stem Cell Reviews and Reports, 2015, 11, 852-865.	5.6	21

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37	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.	1.8	21
38	Improved Measurement of Elastic Properties of Cells by Micropipette Aspiration and Its Application to Lymphocytes. Annals of Biomedical Engineering, 2017, 45, 1375-1385.	1.3	20
39	Fracture surfaces and tensile properties of UV-irradiated spider silk fibers. Journal of Polymer Science, Part B: Polymer Physics, 2007, 45, 786-793.	2.4	19
40	Basic Principles in the Design of Spider Silk Fibers. Molecules, 2021, 26, 1794.	1.7	18
41	Unexpected behavior of irradiated spider silk links conformational freedom to mechanical performance. Soft Matter, 2015, 11, 4868-4878.	1.2	17
42	Simple measurement of the apparent viscosity of a cell from only one picture: Application to cardiac stem cells. Physical Review E, 2014, 90, 052715.	0.8	16
43	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.	1.3	16
44	Straining Flow Spinning of Artificial Silk Fibers: A Review. Biomimetics, 2018, 3, 29.	1.5	16
45	Study of the influence of actin-binding proteins using linear analyses of cell deformability. Soft Matter, 2015, 11, 5435-5446.	1.2	15
46	Spider silk gut: Development and characterization of a novel strong spider silk fiber. Scientific Reports, 2014, 4, 7326.	1.6	14
47	Mechanical behaviour and formation process of silkworm silk gut. Soft Matter, 2015, 11, 8981-8991.	1.2	14
48	The influence of anaesthesia on the tensile properties of spider silk. Journal of Experimental Biology, 2006, 209, 320-326.	0.8	12
49	Polymeric fibers with tunable properties: Lessons from spider silk. Materials Science and Engineering C, 2011, 31, 1184-1188.	3.8	12
50	Insights into the production and characterization of electrospun fibers from regenerated silk fibroin. European Polymer Journal, 2014, 60, 123-134.	2.6	10
51	Single-cell biophysical study reveals deformability and internal ordering relationship in T cells. Soft Matter, 2020, 16, 5669-5678.	1.2	10
52	Soft-Lithography of Polyacrylamide Hydrogels Using Microstructured Templates: Towards Controlled Cell Populations on Biointerfaces. Materials, 2020, 13, 1586.	1.3	10
53	Contraction speed of the actomyosin cytoskeleton in the absence of the cell membrane. Soft Matter, 2013, 9, 4390.	1.2	8
54	The variability and interdependence of spider viscid line tensile properties. Journal of Experimental Biology, 2013, 216, 4722-8.	0.8	7

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55	Production of regenerated silkworm silk fibers from aqueous dopes through straining flow spinning. Textile Reseach Journal, 2019, 89, 4554-4567.	1.1	7
56	Probing the effect of tip pressure on fungal growth: Application to<i>Aspergillus nidulans</i>. Physical Review E, 2017, 96, 022402.	0.8	5
57	Energy distribution in disordered elastic networks. Physical Review E, 2010, 82, 031902.	0.8	4
58	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.	0.8	4
59	Structure and properties of spider and silkworm silk for tissue scaffolds. , 2014, , 239-274.		3
60	Spider Silk as an Inspiration for Biomimicking. Advances in Science and Technology, 2008, 58, 1-9.	0.2	0
61	Independent Tuning of Viscous and Elastic Properties of Protein Biomaterials. Biophysical Journal, 2020, 118, 163a-164a.	0.2	0