

Manuel Elices

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

110
papers

3,162
citations

33
h-index

53
g-index

121
ext. papers

3,485
ext. citations

4
avg, IF

5.13
L-index

#	Paper	IF	Citations
110	Basic Principles in the Design of Spider Silk Fibers. <i>Molecules</i> , 2021 , 26,	4.8	3
109	Improved cell adhesion to activated vapor silanization-biofunctionalized Ti-6Al-4V surfaces with ECM-derived oligopeptides.. <i>Materials Science and Engineering C</i> , 2021 , 112614	8.3	0
108	Lessons From Spider and Silkworm Silk Guts. <i>Frontiers in Materials</i> , 2020 , 7,	4	1
107	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). <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020 , 111, 104023	4.1	4
106	Regenerated Silk Fibers Obtained by Straining Flow Spinning for Guiding Axonal Elongation in Primary Cortical Neurons. <i>ACS Biomaterials Science and Engineering</i> , 2020 , 6, 6842-6852	5.5	2
105	Production of regenerated silkworm silk fibers from aqueous dopes through straining flow spinning. <i>Textile Reseach Journal</i> , 2019 , 89, 4554-4567	1.7	3
104	Functionalization of atomic force microscopy cantilevers and tips by activated vapour silanization. <i>Applied Surface Science</i> , 2019 , 484, 1141-1148	6.7	3
103	Preparation and characterization of Nephila clavipes tubuliform silk gut. <i>Soft Matter</i> , 2019 , 15, 2960-2970	9.6	5
102	Comparison of cell mechanical measurements provided by Atomic Force Microscopy (AFM) and Micropipette Aspiration (MPA). <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019 , 95, 103-115	4.1	10
101	Emergence of supercontraction in regenerated silkworm (<i>Bombyx mori</i>) silk fibers. <i>Scientific Reports</i> , 2019 , 9, 2398	4.9	11
100	Enhanced Biological Response of AVS-Functionalized Ti-6Al-4V Alloy through Covalent Immobilization of Collagen. <i>Scientific Reports</i> , 2018 , 8, 3337	4.9	11
99	Environmental effects on large diameter high-strength rods for structural applications. <i>Engineering Failure Analysis</i> , 2018 , 83, 230-238	3.2	6
98	Comparison of the effects of post-spinning drawing and wet stretching on regenerated silk fibers produced through straining flow spinning. <i>Polymer</i> , 2018 , 150, 311-317	3.9	14
97	Straining Flow Spinning of Artificial Silk Fibers: A Review. <i>Biomimetics</i> , 2018 , 3,	3.7	10
96	Improved Measurement of Elastic Properties of Cells by Micropipette Aspiration and Its Application to Lymphocytes. <i>Annals of Biomedical Engineering</i> , 2017 , 45, 1375-1385	4.7	14
95	Production of High Performance Bioinspired Silk Fibers by Straining Flow Spinning. <i>Biomacromolecules</i> , 2017 , 18, 1127-1133	6.9	27
94	Stability and activity of lactate dehydrogenase on biofunctional layers deposited by activated vapor silanization (AVS) and immersion silanization (IS). <i>Applied Surface Science</i> , 2017 , 416, 965-970	6.7	6

93	Straining flow spinning: Simplified model of a bioinspired process to mass produce regenerated silk fibers controllably. <i>European Polymer Journal</i> , 2017 , 97, 26-39	5.2	7
92	Straining flow spinning: production of regenerated silk fibers under a wide range of mild coagulating chemistries. <i>Green Chemistry</i> , 2017 , 19, 3380-3389	10	14
91	Material properties of evolutionary diverse spider silks described by variation in a single structural parameter. <i>Scientific Reports</i> , 2016 , 6, 18991	4.9	25
90	Development of a versatile procedure for the biofunctionalization of Ti-6Al-4V implants. <i>Applied Surface Science</i> , 2016 , 387, 652-660	6.7	4
89	Tear and decohesion of bovine pericardial tissue. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016 , 63, 1-9	4.1	2
88	The apparent variability of silkworm (<i>Bombyx mori</i>) silk and its relationship with degumming. <i>European Polymer Journal</i> , 2016 , 78, 129-140	5.2	25
87	Safety and tolerability of silk fibroin hydrogels implanted into the mouse brain. <i>Acta Biomaterialia</i> , 2016 , 45, 262-275	10.8	63
86	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. <i>Physical Biology</i> , 2015 , 12, 026005	3	3
85	Mechanical behaviour and formation process of silkworm silk gut. <i>Soft Matter</i> , 2015 , 11, 8981-91	3.6	10
84	Fracture assessment of graphite V-notched and U-notched specimens by using the cohesive crack model. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2015 , 38, 563-573	3	34
83	Persistence and variation in microstructural design during the evolution of spider silk. <i>Scientific Reports</i> , 2015 , 5, 14820	4.9	35
82	Unexpected behavior of irradiated spider silk links conformational freedom to mechanical performance. <i>Soft Matter</i> , 2015 , 11, 4868-78	3.6	13
81	Spider silk gut: development and characterization of a novel strong spider silk fiber. <i>Scientific Reports</i> , 2014 , 4, 7326	4.9	8
80	Structure and properties of spider and silkworm silk for tissue scaffolds 2014 , 239-274		2
79	Insights into the production and characterization of electrospun fibers from regenerated silk fibroin. <i>European Polymer Journal</i> , 2014 , 60, 123-134	5.2	10
78	Optimization of functionalization conditions for protein analysis by AFM. <i>Applied Surface Science</i> , 2014 , 317, 462-468	6.7	8
77	Brittle or Quasi-Brittle Fracture of Engineering Materials: Recent Developments and New Challenges. <i>Advances in Materials Science and Engineering</i> , 2014 , 2014, 1-2	1.5	2
76	Simple measurement of the apparent viscosity of a cell from only one picture: Application to cardiac stem cells. <i>Physical Review E</i> , 2014 , 90, 052715	2.4	12

75	Polymethylmethacrylate Data from U-Notched Specimens and V-Notches with End Holes: A Synthesis by Means of Local Energy. <i>Key Engineering Materials</i> , 2014 , 627, 73-76	0.4	
74	Fracture Behavior of Notched Round Bars Made of Gray Cast Iron Subjected to Torsion. <i>Key Engineering Materials</i> , 2014 , 627, 69-72	0.4	1
73	A synthesis of Polymethylmethacrylate data from U-notched specimens and V-notches with end holes by means of local energy. <i>Materials & Design</i> , 2013 , 49, 826-833		34
72	The variability and interdependence of spider viscid line tensile properties. <i>Journal of Experimental Biology</i> , 2013 , 216, 4722-8	3	6
71	The Cohesive Crack Model Applied to Notched PMMA Specimens Obeying a Non Linear Behaviour under Torsion Loading. <i>Key Engineering Materials</i> , 2013 , 577-578, 49-52	0.4	3
70	Fracture behaviour of notched round bars made of PMMA subjected to torsion at 80 °C. <i>Engineering Fracture Mechanics</i> , 2013 , 102, 271-287	4.2	78
69	Identification and dynamics of polyglycine II nanocrystals in Argiope trifasciata flagelliform silk. <i>Scientific Reports</i> , 2013 , 3, 3061	4.9	24
68	Failure analysis of prestressed anchor bars. <i>Engineering Failure Analysis</i> , 2012 , 24, 57-66	3.2	23
67	Relationship between microstructure and mechanical properties in spider silk fibers: identification of two regimes in the microstructural changes. <i>Soft Matter</i> , 2012 , 8, 6015	3.6	71
66	Fracture behaviour of notched round bars made of PMMA subjected to torsion at room temperature. <i>Engineering Fracture Mechanics</i> , 2012 , 90, 143-160	4.2	72
65	The Role of Residual Stresses in the Performance and Durability of Prestressing Steel Wires. <i>Experimental Mechanics</i> , 2012 , 52, 881-893	2.6	9
64	Minor ampullate silks from Nephila and Argiope spiders: tensile properties and microstructural characterization. <i>Biomacromolecules</i> , 2012 , 13, 2087-98	6.9	39
63	Correlation between processing conditions, microstructure and mechanical behavior in regenerated silkworm silk fibers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2012 , 50, 455-465	2.6	30
62	Sequential origin in the high performance properties of orb spider dragline silk. <i>Scientific Reports</i> , 2012 , 2, 782	4.9	62
61	Influencia de las condiciones de almacenamiento sobre la relajaci3n de aceros de pretensado. <i>Materiales De Construccion</i> , 2012 , 62, 531-546	1.8	
60	Thermo-mechanical treatment effects on stress relaxation and hydrogen embrittlement of cold-drawn eutectoid steels. <i>Metals and Materials International</i> , 2011 , 17, 899-910	2.4	7
59	Influence of coiling on the stress relaxation of prestressing steel wires. <i>Structural Concrete</i> , 2011 , 12, 120-125	2.6	2
58	Behaviour of steel prestressing wires under extreme conditions of strain rate and temperature. <i>Structural Concrete</i> , 2011 , 12, 255-261	2.6	9

57	Bioinspired Fibers Follow the Track of Natural Spider Silk. <i>Macromolecules</i> , 2011 , 44, 1166-1176	5.5	61
56	Synchrotron strain scanning for residual stress measurement in cold-drawn steel rods. <i>Journal of Strain Analysis for Engineering Design</i> , 2011 , 46, 627-637	1.3	1
55	Polymeric fibers with tunable properties: Lessons from spider silk. <i>Materials Science and Engineering C</i> , 2011 , 31, 1184-1188	8.3	12
54	The hidden link between supercontraction and mechanical behavior of spider silks. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011 , 4, 658-69	4.1	63
53	Factors influencing the mechanical behaviour of healthy human descending thoracic aorta. <i>Physiological Measurement</i> , 2010 , 31, 1553-65	2.9	15
52	Effect of Initial Residual Stress on Stress Relaxation in Cold-Drawn Steel Rods. <i>Materials Science Forum</i> , 2010 , 652, 227-232	0.4	
51	Recovery in viscid line fibers. <i>Biomacromolecules</i> , 2010 , 11, 1174-9	6.9	21
50	Supercontraction of dragline silk spun by lynx spiders (Oxyopidae). <i>International Journal of Biological Macromolecules</i> , 2010 , 46, 555-7	7.9	19
49	Mechanical properties of human coronary arteries. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2010 , 2010, 3792-5	0.9	24
48	Fracture of V-notched specimens under mixed mode (I + II) loading in brittle materials. <i>International Journal of Fracture</i> , 2009 , 159, 121-135	2.3	116
47	Brittle failures from U- and V-notches in mode I and mixed, I + II, mode: a synthesis based on the strain energy density averaged on finite-size volumes. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2009 , 32, 671-684	3	120
46	Cohesive crack modelling of a simple concrete: Experimental and numerical results. <i>Engineering Fracture Mechanics</i> , 2009 , 76, 1398-1410	4.2	43
45	Fracture of U-notched specimens under mixed mode: Experimental results and numerical predictions. <i>Engineering Fracture Mechanics</i> , 2009 , 76, 236-249	4.2	92
44	Effect of aggregate shape on the mechanical properties of a simple concrete. <i>Engineering Fracture Mechanics</i> , 2009 , 76, 286-298	4.2	94
43	Behavior of prestressing steels after a simulated fire: Fire-induced damages. <i>Construction and Building Materials</i> , 2009 , 23, 2932-2940	6.7	42
42	Mechanical behavior of silk during the evolution of orb-web spinning spiders. <i>Biomacromolecules</i> , 2009 , 10, 1904-10	6.9	46
41	Old Silks Endowed with New Properties. <i>Macromolecules</i> , 2009 , 42, 8977-8982	5.5	50
40	Supramolecular organization of regenerated silkworm silk fibers. <i>International Journal of Biological Macromolecules</i> , 2009 , 44, 195-202	7.9	19

39	Effect of atherosclerosis on thermo-mechanical properties of arterial wall and its repercussion on plaque instability. <i>International Journal of Cardiology</i> , 2009 , 132, 444-6	3.2	3
38	Spider Silk as an Inspiration for Biomimicking. <i>Advances in Science and Technology</i> , 2008 , 58, 1-9	0.1	
37	Increases of corporal temperature as a risk factor of atherosclerotic plaque instability. <i>Annals of Biomedical Engineering</i> , 2008 , 36, 66-76	4.7	14
36	Effect of water on Bombyx mori regenerated silk fibers and its application in modifying their mechanical properties. <i>Journal of Applied Polymer Science</i> , 2008 , 109, 1793-1801	2.9	55
35	Effect of aggregate size on the fracture and mechanical properties of a simple concrete. <i>Engineering Fracture Mechanics</i> , 2008 , 75, 3839-3851	4.2	97
34	A generalised notch stress intensity factor for U-notched components loaded under mixed mode. <i>Engineering Fracture Mechanics</i> , 2008 , 75, 4819-4833	4.2	81
33	Optimisation of post-drawing treatments by means of neutron diffraction. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 480, 439-448	5.3	9
32	Influencia de la presión y la temperatura en el comportamiento de la aorta y las carótidas humanas. <i>Revista Española De Cardiología</i> , 2007 , 60, 259-267	1.5	15
31	Similarities and Differences in the Supramolecular Organization of Silkworm and Spider Silk. <i>Macromolecules</i> , 2007 , 40, 5360-5365	5.5	44
30	Fracture surfaces and tensile properties of UV-irradiated spider silk fibers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2007 , 45, 786-793	2.6	15
29	Influence of the draw ratio on the tensile and fracture behavior of NMMO regenerated silk fibers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2007 , 45, 2568-2579	2.6	43
28	Local strain energy to assess the static failure of U-notches in plates under mixed mode loading. <i>International Journal of Fracture</i> , 2007 , 145, 29-45	2.3	161
27	Fracture assessment of U-notches under mixed mode loading: two procedures based on the Equivalent local mode II concept. <i>International Journal of Fracture</i> , 2007 , 148, 415-433	2.3	133
26	Role of Residual Stresses in Stress Relaxation of Prestressed Concrete Wires. <i>Journal of Materials in Civil Engineering</i> , 2007 , 19, 703-708	3	13
25	Constitutive model for fiber-reinforced materials with deformable matrices. <i>Physical Review E</i> , 2007 , 76, 041903	2.4	19
24	Damage tolerance of an anchor head in a post-tensioning anchorage system. <i>Engineering Failure Analysis</i> , 2006 , 13, 235-246	3.2	2
23	Example of microprocessing in a natural polymeric fiber: Role of reeling stress in spider silk. <i>Journal of Materials Research</i> , 2006 , 21, 1931-1938	2.5	19
22	The influence of anaesthesia on the tensile properties of spider silk. <i>Journal of Experimental Biology</i> , 2006 , 209, 320-6	3	12

21	Volume constancy during stretching of spider silk. <i>Biomacromolecules</i> , 2006 , 7, 2173-7	6.9	74
20	Thermo-hygro-mechanical behavior of spider dragline silk: Glassy and rubbery states. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2006 , 44, 994-999	2.6	76
19	Fracture of model concrete: 2. Fracture energy and characteristic length. <i>Cement and Concrete Research</i> , 2006 , 36, 1345-1353	10.3	61
18	Fracture loads for ceramic samples with rounded notches. <i>Engineering Fracture Mechanics</i> , 2006 , 73, 880-894	4.2	45
17	Effect of thermo-mechanical treatments on residual stresses measured by neutron diffraction in cold-drawn steel rods. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006 , 435-436, 725-735	5.3	11
16	Failure criteria for linear elastic materials with U-notches. <i>International Journal of Fracture</i> , 2006 , 141, 99-113	2.3	106
15	Measurement and modelling of residual stresses in straightened commercial eutectoid steel rods. <i>Acta Materialia</i> , 2005 , 53, 4415-4425	8.4	25
14	A probabilistic model for the pearlite-induced cleavage of a plain carbon structural steel. <i>Engineering Fracture Mechanics</i> , 2005 , 72, 709-728	4.2	17
13	Reproducibility of the tensile properties of spider (<i>Argiope trifasciata</i>) silk obtained by forced silking. <i>Journal of Experimental Zoology Part A, Comparative Experimental Biology</i> , 2005 , 303, 37-44		29
12	Finding inspiration in argiope trifasciata spider silk fibers. <i>Jom</i> , 2005 , 57, 60-66	2.1	28
11	Reproducibility of the tensile properties of spider (<i>Argiope trifasciata</i>) silk obtained by forced silking 2005 , 303A, 37		1
10	Fracture of concrete and rock editorial. <i>Engineering Fracture Mechanics</i> , 2002 , 69, 93-94	4.2	2
9	KI evaluation by the displacement extrapolation technique. <i>Engineering Fracture Mechanics</i> , 2000 , 66, 243-255	4.2	78
8	Fracture mechanics parameters of concrete: An overview. <i>Advanced Cement Based Materials</i> , 1996 , 4, 116-127		2
7	Numerical modelling of ductile spall fracture. <i>International Journal of Impact Engineering</i> , 1995 , 16, 237-251	4.2	3
6	The equivalent elastic crack: 1. Load-Y equivalences. <i>International Journal of Fracture</i> , 1993 , 61, 159-172	2.3	26
5	The equivalent elastic crack: 2. X-Y equivalences and asymptotic analysis. <i>International Journal of Fracture</i> , 1993 , 61, 231-246	2.3	23
4	Ambient and High-Temperature Stable Fracture Tests in Ceramics: Applications to Yttria-Partially-Stabilized Zirconia. <i>Journal of the American Ceramic Society</i> , 1993 , 76, 2927-2929	3.8	8

3	The plastic growth of a cavity nucleated at a shear band. <i>International Journal of Solids and Structures</i> , 1993 , 30, 2971-2981	3.1	3
2	Nonlinear fracture of cohesive materials 1991 , 139-157		9
1	Nonlinear fracture of cohesive materials. <i>International Journal of Fracture</i> , 1991 , 51, 139-157	2.3	85