# Gustavo Victor Guinea Tortuero

## List of Publications by Year in Descending Order



| | | | |
|---|---|---|---|
| 128 papers | 5,075 citations | 42 h-index | 68 g-index |
| 143 ext. papers | 5,709 ext. citations | 4.4 avg, IF | 5.37 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 128 | Basic Principles in the Design of Spider Silk Fibers. *Molecules*, **2021**, 26, | 4.8 | 3 |
| 127 | Silk Fibroin: An Ancient Material for Repairing the Injured Nervous System. *Pharmaceutics*, **2021**, 13, | 6.4 | 4 |
| 126 | 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 |
| 125 | Biomaterials to Neuroprotect the Stroke Brain: A Large Opportunity for Narrow Time Windows. *Cells*, **2020**, 9, | 7.9 | 18 |
| 124 | Single-cell biophysical study reveals deformability and internal ordering relationship in T cells. *Soft Matter*, **2020**, 16, 5669-5678 | 3.6 | 5 |
| 123 | Structure-Function Relationship of Artificial Spider Silk Fibers Produced by Straining Flow Spinning. *Biomacromolecules*, **2020**, 21, 2116-2124 | 6.9 | 16 |
| 122 | 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 |
| 121 | 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 |
| 120 | Biotechnology and Biomaterial-Based Therapeutic Strategies for Age-Related Macular Degeneration. Part I: Biomaterials-Based Drug Delivery Devices. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 549089 | 5.8 | 3 |
| 119 | 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 |
| 118 | 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 |
| 117 | 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 |
| 116 | Evaluation of Neurosecretome from Mesenchymal Stem Cells Encapsulated in Silk Fibroin Hydrogels. *Scientific Reports*, **2019**, 9, 8801 | 4.9 | 18 |
| 115 | Production of regenerated silkworm silk fibers from aqueous dopes through straining flow spinning. *Textile Reseach Journal*, **2019**, 89, 4554-4567 | 1.7 | 3 |
| 114 | Functionalization of atomic force microscopy cantilevers and tips by activated vapour silanization. *Applied Surface Science*, **2019**, 484, 1141-1148 | 6.7 | 3 |
| 113 | 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 |
| 112 | Emergence of supercontraction in regenerated silkworm (Bombyx mori) silk fibers. *Scientific Reports*, **2019**, 9, 2398 | 4.9 | 11 |

| | | | |
|---|---|---|---|
| 111 | Advances in Micropipette Aspiration: Applications in Cell Biomechanics, Models, and Extended Studies. *Biophysical Journal*, **2019**, 116, 587-594 | 2.9 | 46 |
| 110 | Enhanced Biological Response of AVS-Functionalized Ti-6Al-4V Alloy through Covalent Immobilization of Collagen. *Scientific Reports*, **2018**, 8, 3337 | 4.9 | 11 |
| 109 | Hydrogels-Assisted Cell Engraftment for Repairing the Stroke-Damaged Brain: Chimera or Reality. *Polymers*, **2018**, 10, | 4.5 | 22 |
| 108 | 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 |
| 107 | Straining Flow Spinning of Artificial Silk Fibers: A Review. *Biomimetics*, **2018**, 3, | 3.7 | 10 |
| 106 | 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 |
| 105 | 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 |
| 104 | Production of High Performance Bioinspired Silk Fibers by Straining Flow Spinning. *Biomacromolecules*, **2017**, 18, 1127-1133 | 6.9 | 27 |
| 103 | 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 |
| 102 | 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 |
| 101 | Probing the effect of tip pressure on fungal growth: Application to Aspergillus nidulans. *Physical Review E*, **2017**, 96, 022402 | 2.4 | 4 |
| 100 | Straining flow spinning: production of regenerated silk fibers under a wide range of mild coagulating chemistries. *Green Chemistry*, **2017**, 19, 3380-3389 | 10 | 14 |
| 99 | Material properties of evolutionary diverse spider silks described by variation in a single structural parameter. *Scientific Reports*, **2016**, 6, 18991 | 4.9 | 25 |
| 98 | Mechanical Characterization of the Human Aorta: Experiments, Modeling and Simulation. *Advanced Structured Materials*, **2016**, 151-202 | 0.6 | |
| 97 | Development of a versatile procedure for the biofunctionalization of Ti-6Al-4V implants. *Applied Surface Science*, **2016**, 387, 652-660 | 6.7 | 4 |
| 96 | Mechanical behavior of bilayered small-diameter nanofibrous structures as biomimetic vascular grafts. *Journal of the Mechanical Behavior of Biomedical Materials*, **2016**, 60, 220-233 | 4.1 | 51 |
| 95 | Tear and decohesion of bovine pericardial tissue. *Journal of the Mechanical Behavior of Biomedical Materials*, **2016**, 63, 1-9 | 4.1 | 2 |
| 94 | The apparent variability of silkworm (Bombyx mori) silk and its relationship with degumming. *European Polymer Journal*, **2016**, 78, 129-140 | 5.2 | 25 |

| | | | |
|---|---|---|---|
| 93 | Indentation hardness: A simple test that correlates with the dissipated-energy predictor for fatigue-life in bovine pericardium membranes for bioprosthetic heart valves. *Journal of the Mechanical Behavior of Biomedical Materials*, **2016**, 61, 55-61 | 4.1 | 3 |
| 92 | Safety and tolerability of silk fibroin hydrogels implanted into the mouse brain. *Acta Biomaterialia*, **2016**, 45, 262-275 | 10.8 | 63 |
| 91 | Structure and properties of spider and silkworm silk for tissue scaffolds**This chapter was first published as Chapter 9 Structure and properties of spider and silkworm silk for tissue scaffolds by Gustavo Guinea in Silk biomaterials for tissue engineering and regenerative medicine, ed. S. Kundu, Woodhead Publishing Limited, 2014, ISBN: 978-0-85709-699-9, **2015**, 185-217 | | 2 |
| 90 | 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 |
| 89 | Mechanical behaviour and formation process of silkworm silk gut. *Soft Matter*, **2015**, 11, 8981-91 | 3.6 | 10 |
| 88 | Efficacy of supraspinatus tendon repair using mesenchymal stem cells along with a collagen I scaffold. *Journal of Orthopaedic Surgery and Research*, **2015**, 10, 124 | 2.8 | 19 |
| 87 | Persistence and variation in microstructural design during the evolution of spider silk. *Scientific Reports*, **2015**, 5, 14820 | 4.9 | 35 |
| 86 | Unexpected behavior of irradiated spider silk links conformational freedom to mechanical performance. *Soft Matter*, **2015**, 11, 4868-78 | 3.6 | 13 |
| 85 | Spider silk gut: development and characterization of a novel strong spider silk fiber. *Scientific Reports*, **2014**, 4, 7326 | 4.9 | 8 |
| 84 | Structure and properties of spider and silkworm silk for tissue scaffolds **2014**, 239-274 | | 2 |
| 83 | Insights into the production and characterization of electrospun fibers from regenerated silk fibroin. *European Polymer Journal*, **2014**, 60, 123-134 | 5.2 | 10 |
| 82 | Optimization of functionalization conditions for protein analysis by AFM. *Applied Surface Science*, **2014**, 317, 462-468 | 6.7 | 8 |
| 81 | Chronic renal dysfunction in maintenance heart transplant patients: the ICEBERG study. *Transplantation Proceedings*, **2014**, 46, 14-20 | 1.1 | 14 |
| 80 | 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 |
| 79 | The variability and interdependence of spider viscid line tensile properties. *Journal of Experimental Biology*, **2013**, 216, 4722-8 | 3 | 6 |
| 78 | Stability and mechanical evaluation of bovine pericardium cross-linked with polyurethane prepolymer in aqueous medium. *Materials Science and Engineering C*, **2013**, 33, 2392-8 | 8.3 | 29 |
| 77 | Identification and dynamics of polyglycine II nanocrystals in Argiope trifasciata flagelliform silk. *Scientific Reports*, **2013**, 3, 3061 | 4.9 | 24 |
| 76 | 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 |

| | | | |
|---|---|---|---|
| 75 | Mechanical characterisation of the human thoracic descending aorta: experiments and modelling. *Computer Methods in Biomechanics and Biomedical Engineering*, **2012**, 15, 185-93 | 2.1 | 38 |
| 74 | Minor ampullate silks from Nephila and Argiope spiders: tensile properties and microstructural characterization. *Biomacromolecules*, **2012**, 13, 2087-98 | 6.9 | 39 |
| 73 | 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 |
| 72 | Mechanical behaviour and rupture of normal and pathological human ascending aortic wall. *Medical and Biological Engineering and Computing*, **2012**, 50, 559-66 | 3.1 | 76 |
| 71 | Sequential origin in the high performance properties of orb spider dragline silk. *Scientific Reports*, **2012**, 2, 782 | 4.9 | 62 |
| 70 | Bioinspired Fibers Follow the Track of Natural Spider Silk. *Macromolecules*, **2011**, 44, 1166-1176 | 5.5 | 61 |
| 69 | Decellularization of pericardial tissue and its impact on tensile viscoelasticity and glycosaminoglycan content. *Acta Biomaterialia*, **2011**, 7, 1241-8 | 10.8 | 110 |
| 68 | Polymeric fibers with tunable properties: Lessons from spider silk. *Materials Science and Engineering C*, **2011**, 31, 1184-1188 | 8.3 | 12 |
| 67 | 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 |
| 66 | Factors influencing the mechanical behaviour of healthy human descending thoracic aorta. *Physiological Measurement*, **2010**, 31, 1553-65 | 2.9 | 15 |
| 65 | Recovery in viscid line fibers. *Biomacromolecules*, **2010**, 11, 1174-9 | 6.9 | 21 |
| 64 | Supercontraction of dragline silk spun by lynx spiders (Oxyopidae). *International Journal of Biological Macromolecules*, **2010**, 46, 555-7 | 7.9 | 19 |
| 63 | Mechanical properties of human coronary arteries. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2010**, 2010, 3792-5 | 0.9 | 24 |
| 62 | Optimal selection of biological tissue using the energy dissipated in the first loading cycle. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2010**, 95, 414-20 | 3.5 | 3 |
| 61 | Association between mechanics and structure in arteries and veins: theoretical approach to vascular graft confection. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2009**, 2009, 4258-61 | 0.9 | 1 |
| 60 | Preservation of muscular and elastic artery distensibility after an intercontinental cryoconserved exchange: theoretical advances in arterial homograft generation and utilization. *Artificial Organs*, **2009**, 33, 662-9 | 2.6 | 5 |
| 59 | Mechanical behavior of silk during the evolution of orb-web spinning spiders. *Biomacromolecules*, **2009**, 10, 1904-10 | 6.9 | 46 |
| 58 | Old Silks Endowed with New Properties. *Macromolecules*, **2009**, 42, 8977-8982 | 5.5 | 50 |

| | | | |
|---|---|---|---|
| 57 | Supramolecular organization of regenerated silkworm silk fibers. *International Journal of Biological Macromolecules*, **2009**, 44, 195-202 | 7.9 | 19 |
| 56 | Effect of atherosclerosis on thermo-mechanical properties of arterial wall and its repercussion on plaque instability. *International Journal of Cardiology*, **2009**, 132, 444-6 | 3.2 | 3 |
| 55 | Fractional-order viscoelasticity applied to describe uniaxial stress relaxation of human arteries. *Physics in Medicine and Biology*, **2008**, 53, 4543-54 | 3.8 | 88 |
| 54 | Spider Silk as an Inspiration for Biomimicking. *Advances in Science and Technology*, **2008**, 58, 1-9 | 0.1 | |
| 53 | Arterial complex elastic modulus was preserved after an intercontinental cryoconserved exchange. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2008**, 2008, 3598-601 | 0.9 | 1 |
| 52 | Increases of corporal temperature as a risk factor of atherosclerotic plaque instability. *Annals of Biomedical Engineering*, **2008**, 36, 66-76 | 4.7 | 14 |
| 51 | 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 |
| 50 | Influencia de la presi□ y la temperatura en el comportamiento de la aorta y las car□idas humanas. *Revista Espanola De Cardiologia*, **2007**, 60, 259-267 | 1.5 | 15 |
| 49 | Similarities and Differences in the Supramolecular Organization of Silkworm and Spider Silk. *Macromolecules*, **2007**, 40, 5360-5365 | 5.5 | 44 |
| 48 | 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 |
| 47 | 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 |
| 46 | Constitutive model for fiber-reinforced materials with deformable matrices. *Physical Review E*, **2007**, 76, 041903 | 2.4 | 19 |
| 45 | 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 |
| 44 | The influence of anaesthesia on the tensile properties of spider silk. *Journal of Experimental Biology* , **2006**, 209, 320-6 | 3 | 12 |
| 43 | Volume constancy during stretching of spider silk. *Biomacromolecules*, **2006**, 7, 2173-7 | 6.9 | 74 |
| 42 | 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 |
| 41 | Fracture of model concrete: 2. Fracture energy and characteristic length. *Cement and Concrete Research*, **2006**, 36, 1345-1353 | 10.3 | 61 |
| 40 | Failure criteria for linear elastic materials with U-notches. *International Journal of Fracture*, **2006**, 141, 99-113 | 2.3 | 106 |

| | | | |
|---|---|---|---|
| 39 | 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 |
| 38 | Finding inspiration in argiope trifasciata spider silk fibers. *Jom*, **2005**, 57, 60-66 | 2.1 | 28 |
| 37 | Stretching of supercontracted fibers: a link between spinning and the variability of spider silk. *Journal of Experimental Biology*, **2005**, 208, 25-30 | 3 | 95 |
| 36 | Thermomechanical behavior of human carotid arteries in the passive state. *American Journal of Physiology - Heart and Circulatory Physiology*, **2005**, 288, H2940-5 | 5.2 | 29 |
| 35 | The effect of spinning forces on spider silk properties. *Journal of Experimental Biology*, **2005**, 208, 2633-9 | 3 | 69 |
| 34 | Reproducibility of the tensile properties of spider (Argiope trifasciata) silk obtained by forced silking **2005**, 303A, 37 | | 1 |
| 33 | Recovery in spider silk fibers. *Journal of Applied Polymer Science*, **2004**, 92, 3537-3541 | 2.9 | 52 |
| 32 | Stress intensity factors for internal circular cracks in fibers under tensile loading. *Engineering Fracture Mechanics*, **2004**, 71, 365-377 | 4.2 | 7 |
| 31 | Brittle failure of dry spaghetti. *Engineering Failure Analysis*, **2004**, 11, 705-714 | 3.2 | 14 |
| 30 | Generalizations and specializations of cohesive crack models. *Engineering Fracture Mechanics*, **2003**, 70, 1759-1776 | 4.2 | 97 |
| 29 | Controlled supercontraction tailors the tensile behaviour of spider silk. *Polymer*, **2003**, 44, 3733-3736 | 3.9 | 93 |
| 28 | Self-tightening of spider silk fibers induced by moisture. *Polymer*, **2003**, 44, 5785-5788 | 3.9 | 65 |
| 27 | The cohesive zone model: advantages, limitations and challenges. *Engineering Fracture Mechanics*, **2002**, 69, 137-163 | 4.2 | 709 |
| 26 | Assessment of defect size in brittle fibers. *Engineering Fracture Mechanics*, **2002**, 69, 1057-1066 | 4.2 | 5 |
| 25 | The effect of the bond between the matrix and the aggregates on the cracking mechanism and fracture parameters of concrete. *Cement and Concrete Research*, **2002**, 32, 1961-1970 | 10.3 | 88 |
| 24 | Properties of concrete produced from multicomponent blended cements. *Cement and Concrete Research*, **2002**, 32, 1937-1942 | 10.3 | 24 |
| 23 | Review of the splitting-test standards from a fracture mechanics point of view. *Cement and Concrete Research*, **2001**, 31, 73-82 | 10.3 | 86 |
| 22 | Micromechanical modeling of brick-masonry fracture. *Cement and Concrete Research*, **2000**, 30, 731-737 | 10.3 | 28 |

| | | | |
|---|---|---|---|
| 21 | KI evaluation by the displacement extrapolation technique. *Engineering Fracture Mechanics*, **2000**, 66, 243-255 | 4.2 | 78 |
| 20 | Assessment of the tensile strength through size effect curves. *Engineering Fracture Mechanics*, **2000**, 65, 189-207 | 4.2 | 22 |
| 19 | Fracture mechanics applied to concrete. *European Structural Integrity Society*, **2000**, 26, 183-210 | | 5 |
| 18 | Size effect and inverse analysis in concrete fracture **1999**, 367-378 | | |
| 17 | Size effect and inverse analysis in concrete fracture. *International Journal of Fracture*, **1999**, 95, 367-378 | 2.3 | 50 |
| 16 | Size effect and boundary conditions in the Brazilian test: Experimental verification. *Materials and Structures/Materiaux Et Constructions*, **1999**, 32, 210-217 | 3.4 | 101 |
| 15 | Size effect and boundary conditions in the brazilian test: theoretical analysis. *Materials and Structures/Materiaux Et Constructions*, **1999**, 32, 437-444 | 3.4 | 73 |
| 14 | Stress Intensity factor, compliance and CMOD for a General Three-Point-Bend Beam. *International Journal of Fracture*, **1998**, 89, 103-116 | 2.3 | 130 |
| 13 | Mixed Mode Fracture of Concrete under Proportional and Nonproportional Loading. *International Journal of Fracture*, **1998**, 94, 267-284 | 2.3 | 139 |
| 12 | GENERALIZED SIZE EFFECT EQUATION FOR QUASIBRITTLE MATERIALS. *Fatigue and Fracture of Engineering Materials and Structures*, **1997**, 20, 671-687 | 3 | 49 |
| 11 | The effect of constraint on creep fracture assessments. *International Journal of Fracture*, **1997**, 87, 139-149 | 2.3 | 50 |
| 10 | On the measurement of concrete fracture energy using three-point bend tests. *Materiaux Et Constructions*, **1997**, 30, 375-376 | | 49 |
| 9 | Stress intensity factors for wedge-splitting geometry. *International Journal of Fracture*, **1996**, 81, 113-124 | 2.3 | 23 |
| 8 | Crack trajectories under mixed mode and non-proportional loading. *International Journal of Fracture*, **1996**, 81, 171-193 | 2.3 | 14 |
| 7 | Modelling the fracture of concrete: the cohesive crack. *Materiaux Et Constructions*, **1995**, 28, 187-194 | | 12 |
| 6 | A general bilinear fit for the softening curve of concrete. *Materiaux Et Constructions*, **1994**, 27, 99-105 | | 127 |
| 5 | Stiffness associated with quasi-concentrated loads. *Materiaux Et Constructions*, **1994**, 27, 311-318 | | 10 |
| 4 | Cohesive cracks versus nonlocal models: Closing the gap. *International Journal of Fracture*, **1993**, 63, 173-187 | 2.3 | 60 |

| | | |
|---|---|---|
| 3 | Measurement of the fracture energy using three-point bend tests: Part 3Influence of cutting theP-Ltail. *Materiaux Et Constructions*, **1992**, 25, 327-334 | 156 |
| 2 | Measurement of the fracture energy using three-point bend tests: Part 2Influence of bulk energy dissipation. *Materiaux Et Constructions*, **1992**, 25, 305-312 | 159 |
| 1 | Measurement of the fracture energy using three-point bend tests: Part 1Influence of experimental procedures. *Materiaux Et Constructions*, **1992**, 25, 212-218 | 153 |