GrÃ©gory Chagnon

List of Publications by Year
in descending order

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64	1,885	361296	265120
papers	citations	20	42
		h-index	g-index

73	73	73	1538
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Experimental investigations of the human oesophagus: anisotropic properties of the embalmed muscular layer under large deformation. Biomechanics and Modeling in Mechanobiology, 2022, 21, 1169-1186.	1.4	10
2	Experimental characterisation and modelling of breast Cooperâ€™s ligaments. Biomechanics and Modeling in Mechanobiology, 2022, 21, 1157-1168.	1.4	3
3	Development and Operation of an Experimental System to Measure the Moments Generated in the Finger Joints. Bioengineering, 2022, 9, 184.	1.6	0
4	New pressure ulcers dressings to alleviate human soft tissues: A finite element study. Journal of Tissue Viability, 2022, , .	0.9	6
5	Evaluation of a biodegradable <scp>PLAâ€“PEGâ€“PLA</scp> internal biliary stent for liver transplantation: in vitro degradation and mechanical properties. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2021, 109, 410-419.	1.6	18
6	On the stress recovery behaviour of Ecoflex silicone rubbers. International Journal of Mechanical Sciences, 2021, 206, 106624.	3.6	36
7	3D small strain large deflection beam shape sensing including poisson effect. Engineering Structures, 2020, 209, 109948.	2.6	4
8	Biostable highly aligned polyurethane fibres for the potential application of small calibre vascular grafting. Materialwissenschaft Und Werkstofftechnik, 2020, 51, 1473-1480.	0.5	0
9	A comprehensive thermo-viscoelastic experimental investigation of Ecoflex polymer. Polymer Testing, 2020, 86, 106478.	2.3	59
10	From in vitro evaluation to human postmortem pre-validation of a radiopaque and resorbable internal biliary stent for liver transplantation applications. Acta Biomaterialia, 2020, 106, 70-81.	4.1	5
11	Anisotropy and Clausius-Clapeyron relation for forward and reverse stress-induced martensitic transformations in polycrystalline NiTi thin walled tubes. Mechanics of Materials, 2020, 146, 103392.	1.7	21
12	Characterizing Transformation Phenomena and Elastic Moduli of Austenite and Oriented Martensite of Superelastic Thin NiTi Wire through Isothermal Dynamic Mechanical Analysis. Journal of Materials Engineering and Performance, 2019, 28, 4667-4679.	1.2	10
13	Biomechanical behaviour of human bile duct wall and impact of cadaveric preservation processes.. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 98, 291-300.	1.5	12
14	In-Vivo Soft Tissues Mechanical Characterization: Volume-Based Aspiration Method Validated on Silicones. Experimental Mechanics, 2019, 59, 251-261.	1.1	7
15	Optimized needle shape reconstruction using experimentally based strain sensors positioning. Medical and Biological Engineering and Computing, 2019, 57, 1901-1916.	1.6	2
16	Design of polyurethane fibers: Relation between the spinning technique and the resulting fiber topology. Journal of Applied Polymer Science, 2019, 136, 47706.	1.3	13
17	Strain Gauges Based 3D Shape Monitoring of Beam Structures Using Finite Width Gauge Model. Experimental Techniques, 2019, 43, 599-611.	0.9	10
18	Experimental characterization and constitutive modeling of the biomechanical behavior of male human urethral tissues validated by histological observations. Biomechanics and Modeling in Mechanobiology, 2018, 17, 939-950.	1.4	27

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19	Geometry-Based Model for U-Shaped Strain Gauges on Medical Needles. , 2018, 2018, 4269-4272.		0
20	Inelastic deformation of highly aligned dry-spun thermoplastic polyurethane elastomer microfibres. Materials Research Express, 2018, 5, 125301.	0.8	3
21	Using thickness-shear mode quartz resonator for characterizing the viscoelastic properties of PDMS during cross-linking, from the liquid to the solid state and at different temperatures. Sensors and Actuators A: Physical, 2018, 280, 107-113.	2.0	12
22	Mechanical behavior of architectured photosensitive silicone membranes: Experimental data and numerical analysis. Mechanics of Advanced Materials and Structures, 2017, 24, 524-533.	1.5	3
23	Influence of processing parameters on the macroscopic mechanical behavior of PVA hydrogels. Materials Science and Engineering C, 2017, 75, 769-776.	3.8	18
24	Anisotropic viscoelastic models in large deformation for architectured membranes. Mechanics of Time-Dependent Materials, 2017, 21, 163-176.	2.3	0
25	Hyperelasticity Modeling for Incompressible Passive Biological Tissues. , 2017, , 3-30.		5
26	The evolution of viscoelastic properties of silicone rubber during cross-linking investigated by thickness-shear mode quartz resonator. , 2017, , 405-410.		0
27	A mixed physical-phenomenological approach for the Mullins effect. , 2017, , 237-242.		0
28	Experimental investigation and theoretical modelling of induced anisotropy during stress-softening of rubber. International Journal of Solids and Structures, 2016, 97-98, 554-565.	1.3	25
29	Lightâ€induced Bulk Architecturation of PDMS Membranes. Macromolecular Materials and Engineering, 2016, 301, 1151-1157.	1.7	7
30	A non-linear viscoelastic model to describe the mechanical behavior's evolution of biodegradable polymers during hydrolytic degradation. Polymer Degradation and Stability, 2016, 131, 145-156.	2.7	22
31	Advanced sensors placement for accurate 3D needle shape reconstruction. , 2016, 2016, 5132-5135.		2
32	Mechanical behaviour×³s evolution of a PLA- b -PEG- b -PLA triblock copolymer during hydrolytic degradation. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 60, 288-300.	1.5	24
33	Study of electropulse heat treatment of cold worked NiTi wire: From uniform to localised tensile behaviour. Journal of Materials Processing Technology, 2016, 227, 244-250.	3.1	15
34	Hyperelastic Energy Densities for Soft Biological Tissues: A Review. Journal of Elasticity, 2015, 120, 129-160.	0.9	191
35	Modeling the Mullins effect in elastomers swollen by palm biodiesel. International Journal of Engineering Science, 2015, 95, 1-22.	2.7	20
36	Radiopaque poly(Îµ-caprolactone) as additive for X-ray imaging of temporary implantable medical devices. RSC Advances, 2015, 5, 84125-84133.	1.7	20

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37	Anisotropic large deformation of geometrically architectured unfilled silicone membranes. European Journal of Mechanics, A/Solids, 2015, 50, 87-99.	2.1	5
38	Development and modeling of filled silicone architectured membranes. Meccanica, 2015, 50, 11-24.	1.2	3
39	Hyperelasticity with rate-independent microsphere hysteresis model for rubberlike materials. Computational Materials Science, 2014, 90, 89-98.	1.4	10
40	Theory and identification of a constitutive model of induced anisotropy by the Mullins effect. Journal of the Mechanics and Physics of Solids, 2014, 63, 29-39.	2.3	31
41	A conical mandrel tube drawing test designed to assess failure criteria. Journal of Materials Processing Technology, 2014, 214, 347-357.	3.1	17
42	An original architectured NiTi silicone rubber structure for biomedical applications. Materials Science and Engineering C, 2014, 45, 184-190.	3.8	21
43	Permanent set and stress-softening constitutive equation applied to rubber-like materials and soft tissues. Acta Mechanica, 2014, 225, 1685-1698.	1.1	32
44	Mechanical characterization and comparison of different NiTi/silicone rubber interfaces. International Journal of Adhesion and Adhesives, 2014, 48, 67-74.	1.4	11
45	Extension of classical viscoelastic models in large deformation to anisotropy and stress softening. International Journal of Non-Linear Mechanics, 2014, 61, 54-64.	1.4	8
46	A generic three-dimensional static force distribution basis for a medical needle inserted into soft tissue. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 28, 156-170.	1.5	8
47	Cold drawing of 316L stainless steel thin-walled tubes: Experiments and finite element analysis. International Journal of Mechanical Sciences, 2013, 70, 69-78.	3.6	40
48	Anisotropic Mullins stress softening of a deformed silicone holey plate. Mechanics Research Communications, 2013, 49, 36-43.	1.0	17
49	Influence of the temperature on the mechanical behaviour of filled and unfilled silicone rubbers. Polymer Testing, 2013, 32, 492-501.	2.3	115
50	Toward a real-time tracking of a medical deformable needle from strain measurements. , 2013, 2013, 3495-8.		0
51	Using a 3D needleâ€“tissue force distribution basis to optimise the design of an instrumented needle. Computer Methods in Biomechanics and Biomedical Engineering, 2013, 16, 320-322.	0.9	1
52	AN OSMOTICALLY INFLATABLE SEAL TO TREAT ENDOLEAKS OF TYPE 1, FOLLOWING ENDOVASCULAR ANEURYSM REPAIR. Journal of Mechanics in Medicine and Biology, 2012, 12, 1250070.	0.3	2
53	NUMERICAL ANALYSIS OF THE WALL STRESS IN ABDOMINAL AORTIC ANEURYSM: INFLUENCE OF THE MATERIAL MODEL NEAR-INCOMPRESSIBILITY. Journal of Mechanics in Medicine and Biology, 2012, 12, 1250005.	0.3	13
54	Membrane Curvatures and Stress-strain Full Fields of Axisymmetric Bulge Tests from 3D-DIC Measurements. Theory and Validation on Virtual and Experimental results. Experimental Mechanics, 2012, 52, 865-880.	1.1	56

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55	Induced anisotropy by the Mullins effect in filled silicone rubber. Mechanics of Materials, 2012, 50, 70-80.	1.7	75
56	Simulation of Drawing of Small Stainless Steel Platinum Medical Tubesâ€"Influence of the Tool Parameters on the Forming Limit. , 2011, , .		2
57	From the experimental determination of stress-strain full fields during a bulge test thanks to 3D-DIC technique to the characterization of anisotropic Mullins effect. , 2011, , 259-264.		0
58	Analysis of the isotropic models of the Mullins effect based on filled silicone rubber experimental results. Mechanics of Materials, 2010, 42, 841-851.	1.7	68
59	Mechanical experimental characterisation and numerical modelling of an unfilled silicone rubber. Polymer Testing, 2008, 27, 765-777.	2.3	181
60	Tube Drawing Process Modelling By A Finite Element Analysis. AIP Conference Proceedings, 2007, , .	0.3	8
61	Development of new constitutive equations for the Mullins effect in rubber using the network alteration theory. International Journal of Solids and Structures, 2006, 43, 6817-6831.	1.3	88
62	A Comparison of the Hart-Smith Model with Arruda-Boyce and Gent Formulations for Rubber Elasticity. Rubber Chemistry and Technology, 2004, 77, 724-735.	0.6	57
63	On the relevance of Continuum Damage Mechanics as applied to the Mullins effect in elastomers. Journal of the Mechanics and Physics of Solids, 2004, 52, 1627-1650.	2.3	114
64	A theory of network alteration for the Mullins effect. Journal of the Mechanics and Physics of Solids, 2002, 50, 2011-2028.	2.3	276