Claude Verdier

List of Publications by Year
in descending order

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81	2,364	172457	223800
papers	citations	29 h-index	46 g-index

85	85	85	2746
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cell crawling on a compliant substrate: A biphasic relation with linear friction. International Journal of Non-Linear Mechanics, 2022, 139, 103897.	2.6	6
2	Efficient deformation mechanisms enable invasive cancer cells to migrate faster in 3D collagen networks. Scientific Reports, 2022, 12, 7867.	3.3	5
3	Mechanical behavior of multi-cellular spheroids under osmotic compression. Journal of the Mechanics and Physics of Solids, 2021, 147, 104205.	4.8	17
4	Viscoelastic Properties in Cancer: From Cells to Spheroids. Cells, 2021, 10, 1704.	4.1	22
5	A biomechanical model for the transendothelial migration of cancer cells. Physical Biology, 2020, 17, 036004.	1.8	7
6	Displacement fields using correlation methods as a tool to investigate cell migration in 3D collagen gels. Journal of Microscopy, 2019, 275, 172-182.	1.8	3
7	On the quasi-static effective behaviour of poroelastic media containing elastic inclusions. Mechanics Research Communications, 2019, 96, 19-23.	1.8	9
8	An integrated assay to probe endothelial glycocalyx-blood cell interactions under flow in mechanically and biochemically well-defined environments. Matrix Biology, 2019, 78-79, 47-59.	3.6	15
9	Blood cell - vessel wall interactions probed by reflection interference contrast microscopy. , 2019, , .		0
10	Mechanosensitivity of Cancer Cells in Contact with Soft Substrates Using AFM. Biophysical Journal, 2018, 114, 1165-1175.	0.5	63
11	Elastohydrodynamic Lift at a Soft Wall. Physical Review Letters, 2018, 120, 198001.	7.8	36
12	Unraveling the Receptor-Ligand Interactions between Bladder Cancer Cells and the Endothelium Using AFM. Biophysical Journal, 2017, 112, 1246-1257.	0.5	23
13	Lamins and nesprin-1 mediate inside-out mechanical coupling in muscle cell precursors through FHOD1. Scientific Reports, 2017, 7, 1253.	3.3	35
14	The spontaneous motion of a slug of miscible liquids in a capillary tube. International Journal of Nanotechnology, 2017, 14, 530.	0.2	0
15	Prediction of traction forces of motile cells. Interface Focus, 2016, 6, 20160042.	3.0	18
16	Mechanosensing Defects in Nuclear Envelope Related Disorders. Biophysical Journal, 2016, 110, 96a.	0.5	0
17	Physical properties of polyacrylamide gels probed by AFM and rheology. Europhysics Letters, 2015, 109, 38003.	2.0	47
18	3D cancer cell migration in collagen matrices. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 1968-1969.	1.6	5

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19	Local mechanical properties of bladder cancer cells measured by AFM as a signature of metastatic potential. European Physical Journal Plus, 2015, 130, 1.	2.6	37
20	CCM proteins control endothelial Î²1 integrin dependent response to shear stress. Biology Open, 2014, 3, 1228-1235.	1.2	40
21	The plasma protein fibrinogen stabilizes clusters of red blood cells in microcapillary flows. Scientific Reports, 2014, 4, 4348.	3.3	107
22	Atomic Force Microscopy Reveals a Role for Endothelial Cell ICAM-1 Expression in Bladder Cancer Cell Adherence. PLoS ONE, 2014, 9, e98034.	2.5	37
23	Droplet actuation induced by coalescence: Experimental evidences and phenomenological modeling. European Physical Journal: Special Topics, 2013, 219, 131-141.	2.6	22
24	Biochemical sensing assays based on coalescence-induced self-propulsion digital microfluidics. , 2013, , .		1
25	Quantification of Depletion-Induced Adhesion of Red Blood Cells. Physical Review Letters, 2013, 110, 018102.	7.8	61
26	Timeâ€dependent traction force microscopy for cancer cells as a measure of invasiveness. Cytoskeleton, 2013, 70, 201-214.	2.0	66
27	Wall shear stress and endothelial cells dysfunction in the context of abdominal aortic aneurysms. Computer Methods in Biomechanics and Biomedical Engineering, 2013, 16, 27-29.	1.6	8
28	Microrheology of complex systems and living cells using AFM. Computer Methods in Biomechanics and Biomedical Engineering, 2013, 16, 15-16.	1.6	9
29	Mathematical framework for traction force microscopy. ESAIM: Proceedings and Surveys, 2013, 42, 61-83.	0.4	3
30	Inverse problems for the determination of traction forces by cells on a substrate: a comparison of two methods. Computer Methods in Biomechanics and Biomedical Engineering, 2012, 15, 27-29.	1.6	3
31	3D Culture of Human Muscle Cells Modulates Cell-Matrix Adhesions and Actin Cytoskeleton Organization. Biophysical Journal, 2012, 102, 417a.	0.5	0
32	Complex Interactions between Human Myoblasts and the Surrounding 3D Fibrin-Based Matrix. PLoS ONE, 2012, 7, e36173.	2.5	83
33	Self-propelling, coalescing droplets. International Journal of Multiphase Flow, 2011, 37, 462-468.	3.4	29
34	New confinement effects on the viscosity of suspensions. Europhysics Letters, 2011, 94, 44001.	2.0	28
35	Traction forces of cancer cells. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 159-160.	1.6	2
36	Numerical computation of the Faradaic impedance of inlaid microdisk electrodes using a finite element method with anisotropic mesh adaptation. Electrochimica Acta, 2010, 55, 6263-6273.	5.2	12

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37	Tumor cell/endothelial cell tight contact upregulates endothelial adhesion molecule expression mediated by NFÎºB: Differential role of the shear stress. Experimental Cell Research, 2010, 316, 615-626.	2.6	40
38	An elasto-visco-plastic model of cell aggregates. Journal of Theoretical Biology, 2010, 262, 35-47.	1.7	100
39	Breakdown of cell-collagen networks through collagen remodeling. Biorheology, 2010, 47, 277-295.	0.4	30
40	Critical stresses for cancer cell detachment in microchannels. European Biophysics Journal, 2009, 38, 1035-1047.	2.2	38
41	Modeling cell interactions under flow. Journal of Mathematical Biology, 2009, 58, 235-259.	1.9	27
42	Traction patterns of tumor cells. Journal of Mathematical Biology, 2009, 58, 163-181.	1.9	59
43	Review: Rheological properties of biological materials. Comptes Rendus Physique, 2009, 10, 790-811.	0.9	79
44	Rheology and dynamics of vesicle suspension in comparison with droplet emulsion. Journal of Non-Newtonian Fluid Mechanics, 2008, 152, 156-167.	2.4	21
45	Fractal approach to the rheology of concentrated cell suspensions. Physical Review E, 2008, 77, 011911.	2.1	32
46	Dynamics and rheology of a dilute suspension of vesicles: Higher-order theory. Physical Review E, 2007, 76, 041905.	2.1	78
47	Modeling breakup and relaxation of Newtonian droplets using the advected phase-field approach. Physical Review E, 2007, 75, 021405.	2.1	12
48	Morphological analysis of tumor cell/endothelial cell interactions under shear flow. Journal of Biomechanics, 2007, 40, 335-344.	2.1	47
49	Peeling of polydimethylsiloxane adhesives: The case of adhesive failure. Journal of Polymer Science, Part B: Polymer Physics, 2007, 45, 2113-2122.	2.1	9
50	Migration and deformation of leukocytes in pressure driven flows. Mechanics Research Communications, 2007, 34, 411-422.	1.8	24
51	Rheology of Living Materials. , 2007, , 1-31.		5
52	Direct Simulation of the Migration of Leukocytes in Pressure Driven Flow. , 2006, , .		1
53	Peeling of polydimethylsiloxane adhesives at low velocities: Cohesive failure. Journal of Polymer Science, Part B: Polymer Physics, 2005, 43, 145-157.	2.1	15
54	Elongation and burst of axisymmetric viscoelastic droplets: A numerical study. Physical Review E, 2005, 71, 066309.	2.1	4

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55	Absolute falling-ball viscometer: evaluation of measurement uncertainty. Metrologia, 2005, 42, 298-303.	1.2	15
56	Design of a high precision falling-ball viscometer. Review of Scientific Instruments, 2005, 76, 025109.	1.3	39
57	Measuring cell viscoelastic properties using a force-spectrometer: influence of protein-cytoplasm interactions. Biorheology, 2005, 42, 321-33.	0.4	41
58	A physical model for studying adhesion between a living cell and a spherical functionalized substrate. Mathematical and Computer Modelling, 2003, 37, 1121-1129.	2.0	10
59	Effect of nonlinear viscoelastic properties on tack. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 3139-3149.	2.1	23
60	An advected-field approach to the dynamics of fluid interfaces. Europhysics Letters, 2003, 63, 623-630.	2.0	27
61	Rheological Properties of Living Materials. From Cells to Tissues. Journal of Theoretical Medicine, 2003, 5, 67-91.	0.5	77
62	Adhesion Mechanisms in Cancer Metastasis. Chapman & Hall/CRC Mathematical and Computational Biology Series, 2003, , .	0.1	2
63	Understanding droplet coalescence and its use to estimate interfacial tension. Rheologica Acta, 2002, 41, 514-523.	2.4	32
64	Characterization of wheat-flourâ€“water doughs: a new method using ultrasound. Ultrasonics, 2001, 39, 133-141.	3.9	80
65	Peelback of highly oriented cellulosic fibres. Journal of Materials Science, 2001, 36, 4223-4230.	3.7	2
66	The influence of the viscosity ratio on polymer droplet collision in quiescent blends. Polymer, 2001, 42, 6999-7007.	3.8	9
67	High temperature interfacial tension measurements of PA6/PP interfaces compatibilized with copolymers using a spinning drop tensiometer. Polymer, 2000, 41, 6683-6689.	3.8	24
68	Coalescence of polymer droplets: experiments on collision. Comptes Rendus Physique, 2000, 1, 119-126.	0.1	8
69	Ultrasonic and microscopic investigation of blends of polydimethylsiloxane and polyisobutylene at all concentrations. Journal of Rheology, 2000, 44, 1189-1203.	2.6	3
70	Characterization of wheat flourâ€“water doughs. Part I: Rheometry and microstructure. Journal of Food Engineering, 1999, 41, 121-132.	5.2	183
71	Dynamic shear and compressional behavior of polydimethylsiloxanes: Ultrasonic and low frequency characterization. Rheologica Acta, 1998, 37, 234-244.	2.4	25
72	Dynamic shear rheology of high molecular weight polydimethylsiloxanes: comparison of rheometry and ultrasound1Dedicated to the memory of Professor Gianni Astarita.1. Journal of Non-Newtonian Fluid Mechanics, 1998, 76, 213-232.	2.4	57

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73	Peeling of Acrylic Pressure Sensitive Adhesives: Cross-Linked versus Uncross-Linked Adhesives. Journal of Adhesion, 1998, 68, 93-116.	3.0	37
74	The Mechanisms of Peeling of Uncross-Linked Pressure Sensitive Adhesives. Journal of Adhesion, 1997, 62, 45-73.	3.0	57
75	Acoustic wave propagation in two-phase viscoelastic fluids: The case of polymer emulsions. Journal of the Acoustical Society of America, 1997, 101, 1868-1876.	1.1	18
76	Influence of rheology and surface properties in the adhesion of uncross-linked pressure sensitive adhesives. Rheologica Acta, 1997, 36, 449-461.	2.4	23
77	Analysis of the morphology of polymer blends using ultrasound. Journal Physics D: Applied Physics, 1996, 29, 1454-1461.	2.8	21
78	A spinning drop tensioextensometer. Journal of Rheology, 1992, 36, 621-662.	2.6	51
79	Similarity solutions that give rise to hyperbolicity and change of type in steady flow of a viscoelastic fluid. Journal of Non-Newtonian Fluid Mechanics, 1989, 31, 301-323.	2.4	0
80	Change of type and loss of evolution of the white-metzner model. Journal of Non-Newtonian Fluid Mechanics, 1989, 31, 325-343.	2.4	7
81	Chondrocyte cell adhesion on chitosan supports using single-cell atomic force microscopy. International Journal of Polymer Analysis and Characterization, 0, , 1-15.	1.9	0