Pierre J J Dumont

List of Publications by Year
in descending order

65	1,621	257101 24	315357 38
papers	citations	h-index	g-index

66	66	66	1469
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cellulose nanofibril foams: Links between ice-templating conditions, microstructures and mechanical properties. Materials and Design, 2016, 104, 376-391.	3.3	141
2	X-ray phase contrast microtomography for the analysis of the fibrous microstructure of SMC composites. Composites Part A: Applied Science and Manufacturing, 2008, 39, 91-103.	3.8	87
3	Towards the 3D in situ characterisation of deformation micro-mechanisms within a compressed bundle of fibres. Composites Science and Technology, 2011, 71, 480-488.	3.8	85
4	Compression moulding of SMC: In situ experiments, modelling and simulation. Composites Part A: Applied Science and Manufacturing, 2007, 38, 353-368.	3.8	72
5	Heterogeneous flow kinematics of cellulose nanofibril suspensions under shear. Soft Matter, 2015, 11, 4742-4755.	1.2	70
6	Anisotropic viscous behavior of sheet molding compounds (SMC) during compression molding. International Journal of Plasticity, 2003, 19, 625-646.	4.1	65
7	Mechanical integrity of thin inorganic coatings on polymer substrates under quasi-static, thermal and fatigue loadings. Thin Solid Films, 2010, 519, 1729-1737.	0.8	53
8	Evaluation of interfacial stress transfer efficiency by coating fragmentation test. Mechanics of Materials, 2007, 39, 834-844.	1.7	52
9	Finding fibres and their contacts within 3D images of disordered fibrous media. Composites Science and Technology, 2013, 89, 202-210.	3.8	48
10	Cellulose crystals plastify by localized shear. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 7260-7265.	3.3	43
11	Rheology of highly concentrated planar fiber suspensions. Journal of Rheology, 2005, 49, 1029-1058.	1.3	42
12	Ice-Templated Porous Nanocellulose-Based Materials: Current Progress and Opportunities for Materials Engineering. Applied Sciences (Switzerland), 2018, 8, 2463.	1.3	39
13	Evaluation of toughness by finite fracture mechanics from crack onset strain of brittle coatings on polymers. Theoretical and Applied Fracture Mechanics, 2008, 49, 151-157.	2.1	38
14	Rheometry of compression moulded fibre-reinforced polymer composites: Rheology, compressibility, and friction forces with mould surfaces. Composites Part A: Applied Science and Manufacturing, 2012, 43, 2107-2119.	3.8	36
15	Processing, characterisation and rheology of transparent concentrated fibre-bundle suspensions. Rheologica Acta, 2007, 46, 639-651.	1.1	34
16	Micro-mechanics of electrostatically stabilized suspensions of cellulose nanofibrils under steady state shear flow. Soft Matter, 2016, 12, 1721-1735.	1.2	34
17	Analysis of the hygroexpansion of a lignocellulosic fibrous material by digital correlation of images obtained by X-ray synchrotron microtomography: application to a folding box board. Journal of Materials Science, 2011, 46, 4756-4769.	1.7	33
18	3D analysis of paper microstructures at the scale of fibres and bonds. Cellulose, 2015, 22, 1517-1539.	2.4	33

#	Article	IF	Citations
19	A Method to Measure Moisture Induced Swelling Properties of a Single Wood Cell. Experimental Mechanics, 2016, 56, 723-733.	1.1	32
20	Lubricated compression and X-ray microtomography to analyse the rheology of a fibre-reinforced mortar. Rheologica Acta, 2010, 49, 221-235.	1.1	31
21	In-plane conduction of polymer composite plates reinforced with architectured networks of Copper fibres. Journal of Materials Science, 2012, 47, 2932-2942.	1.7	30
22	Surface stress and strain fields on compressed panels of corrugated board boxes. An experimental analysis by using Digital Image Stereocorrelation. Composite Structures, 2011, 93, 2861-2873.	3.1	27
23	Crack growth in planar elastic fiber materials. International Journal of Solids and Structures, 2012, 49, 1900-1907.	1.3	27
24	A numerical analysis of the evolution of bundle orientation in concentrated fibre-bundle suspensions. Journal of Non-Newtonian Fluid Mechanics, 2009, 160, 76-92.	1.0	25
25	Numerical modeling of high aspect ratio flexible fibers in inertial flows. Physics of Fluids, 2017, 29, .	1.6	25
26	3D in situ observations of the compressibility and pore transport in Sheet Moulding Compounds during the early stages of compression moulding. Composites Part A: Applied Science and Manufacturing, 2017, 92, 51-61.	3.8	25
27	Intrinsic, thermal and hygroscopic residual stresses in thin gas-barrier films on polymer substrates. Thin Solid Films, 2007, 515, 7437-7441.	0.8	24
28	Towards 3D analysis of pulp fibre networks at the fibre and bond levels. Nordic Pulp and Paper Research Journal, 2012, 27, 245-255.	0.3	23
29	3D real-time and in situ characterisation of fibre kinematics in dilute non-Newtonian fibre suspensions during confined and lubricated compression flow. Composites Science and Technology, 2016, 134, 258-266.	3.8	21
30	Microstructure and deformation micromechanisms of concentrated fiber bundle suspensions: An analysis combining x-ray microtomography and pull-out tests. Journal of Rheology, 2012, 56, 593-623.	1.3	20
31	On the origins of the elasticity of cellulose nanofiber nanocomposites and nanopapers: a micromechanical approach. RSC Advances, 2016, 6, 47258-47271.	1.7	20
32	Approximation of mode I crack-tip displacement fields by a gradient enhanced elasticity theory. Engineering Fracture Mechanics, 2014, 117, 1-11.	2.0	19
33	Analytical post-buckling model of corrugated board panels using digital image correlation measurements. Composite Structures, 2013, 101, 243-254.	3.1	18
34	Towards the simulation of mould filling with polymer composites reinforced with mineral fillers and short fibres. International Journal of Material Forming, 2010, 3, 1313-1326.	0.9	17
35	Microstructural and mechanical properties of biocomposites made of native starch granules and wood fibers. Composites Science and Technology, 2019, 182, 107755.	3.8	16
36	Physico-Chemical and Thermal Characterization of Some Lignocellulosic Fibres: <i>Ananas comosus</i> (AC), <i>Neuropeltis acuminatas</i> (NA) and <i>Rhecktophyllum camerunense</i> (RC). Journal of Minerals and Materials Characterization and Engineering, 2020, 08, 205-222.	0.1	15

#	Article	IF	Citations
37	Lubricated compression of BMC, a concentrated and fibre-reinforced granular polymer suspension. Rheologica Acta, 2008, 47, 677-688.	1.1	13
38	Homogeneous and heterogeneous rheology and flow-induced microstructures of a fresh fiber-reinforced mortar. Cement and Concrete Research, 2016, 82, 130-141.	4.6	13
39	Crumpled paper sheets: Low-cost biobased cellular materials for structural applications. Materials and Design, 2017, 136, 150-164.	3.3	13
40	Influences of roll-to-roll process and polymer substrate anisotropies on the tensile failure of thin oxide films. Thin Solid Films, 2010, 518, 6984-6992.	0.8	12
41	Influence of the local mass density variation on the fracture behavior of fiber network materials. International Journal of Solids and Structures, 2018, 138, 236-244.	1.3	11
42	Fibre kinematics in dilute non-Newtonian fibre suspensions during confined and lubricated squeeze flow: Direct numerical simulation and analytical modelling. Journal of Non-Newtonian Fluid Mechanics, 2019, 273, 104187.	1.0	10
43	Some experimental aspects of the compression behaviour of boxes made up of Gâ€flute corrugated boards. Packaging Technology and Science, 2010, 23, 69-89.	1.3	9
44	Analysis of the Strain and Stress Fields of Cardboard Box during Compression by 3D Digital Image Correlation. Applied Mechanics and Materials, 0, 24-25, 103-108.	0.2	9
45	Effectiveness of thermo-compression for manufacturing native starch bulk materials. Journal of Materials Science, 2016, 51, 5146-5159.	1.7	9
46	Three-dimensional visualization and quantification of the fracture mechanisms in sparse fibre networks using multiscale X-ray microtomography. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180175.	1.0	9
47	Separation of the polymer matrix and the fibrous reinforcement during compression moulding of Glass Mat Thermoplastics (GMT). International Journal of Material Forming, 2008, 1, 929-932.	0.9	8
48	How to Prepare SMC and BMC-like Compounds to Perform Relevant Rheological Experiments?. Applied Composite Materials, 2013, 20, 157-169.	1.3	8
49	Tensile behaviour of uncured sheet moulding compounds: Rheology and flow-induced microstructures. Composites Part A: Applied Science and Manufacturing, 2017, 101, 459-470.	3.8	7
50	Permeability of flax fibre mats: Numerical and theoretical prediction from 3D X-ray microtomography images. Composites Part A: Applied Science and Manufacturing, 2021, 151, 106644.	3.8	7
51	On the role of fibre bonds on the elasticity of low-density papers: a micro-mechanical approach. Cellulose, 2021, 28, 9919-9941.	2.4	6
52	Rheology of Highly Concentrated Fiber Suspensions. , 2015, , 119-166.		5
53	Ultrasonic welding of 100% lignocellulosic papers. Journal of Materials Science, 2019, 54, 12938-12950.	1.7	5
54	Manufacturing of starch-based materials using ultrasonic compression moulding (UCM): toward a structural application. Heliyon, 2021, 7, e06482.	1.4	5

#	Article	IF	Citations
55	Finite element implementation of a two-phase model for compression molding of composites. Revue Europeenne Des Elements, 2005, 14, 885-902.	0.1	4
56	Evaluating the Effectiveness of Using Flexography Printing for Manufacturing Catalystâ€Coated Membranes for Fuel Cells. Fuel Cells, 2014, 14, 614-625.	1.5	4
57	Fabrication of Foldable Composite Structures Obtained by Selective Curing of Prepregs Made of Long-fibre Reinforcements Impregnated with UV-curable Resin System. Applied Composite Materials, 2021, 28, 1781-1797.	1.3	4
58	Rheological response of compressible SMCs under various deformation kinematics: Experimental aspects and simple modelling approach. Composites Part A: Applied Science and Manufacturing, 2022, 154, 106774.	3.8	4
59	23.1: Invited Paper: Models and Experiments of Mechanical Integrity for Flexible Displays. Digest of Technical Papers SID International Symposium, 2008, 39, 310-313.	0.1	3
60	In situ 3D observations of capillary-driven flows in parallel arrangements of rigid fibres using X-ray microtomography. Composites Part A: Applied Science and Manufacturing, 2022, 157, 106941.	3.8	2
61	Statistical analysis of the crack sensitivity of fiber networks. International Journal of Solids and Structures, 2021, 208-209, 133-140.	1.3	1
62	Une approche multi-Ã©chelle de la rhÃ©ologie des suspensions concentrÃ©es de fibres. Revue Des Composites Et Des Materiaux Avances, 2005, 15, 355-369.	0.2	1
63	Quelques aspects du comportement hygromÃ©canique du papier. Mecanique Et Industries, 2009, 10, 43-48.	0.2	0
64	Shear behavior of thermoformed woven-textile thermoplastic prepregs: An analysis combining bias-extension test and X-ray microtomography. AIP Conference Proceedings, 2017, , .	0.3	0
65	Un modÃ¨le biphasique pour simuler la mise en forme par compression des composites Ã fibres courtes. Revue Des Composites Et Des Materiaux Avances, 2002, 12, 477-497.	0.2	0