

# Christophe Baley

## List of Publications by Year in descending order

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125  
papers

6,436  
citations

53794

45  
h-index

74163

75  
g-index

126  
all docs

126  
docs citations

126  
times ranked

3865  
citing authors

#	ARTICLE	IF	CITATIONS
1	Evolution of the flax cell wall composition during development and after gravitropism by synchrotron fluorescence imaging. <i>Industrial Crops and Products</i> , 2022, 175, 114256.	5.2	6
2	Can we predict the microstructure of a non-woven flax/PLA composite through assessment of anisotropy in tensile properties?. <i>Composites Science and Technology</i> , 2022, 218, 109173.	7.8	4
3	Exploring the impact of Verticillium wilt disease on the mechanical properties of elementary flax ( <i>Linum usitatissimum</i> L.) fibres. <i>Industrial Crops and Products</i> , 2022, 182, 114900.	5.2	0
4	Influence of water ageing on the mechanical properties of flax/PLA non-woven composites. <i>Polymer Degradation and Stability</i> , 2022, 200, 109957.	5.8	12
5	Interfacial and mechanical characterisation of biodegradable polymer-flax fibre composites. <i>Composites Science and Technology</i> , 2021, 201, 108529.	7.8	36
6	Multiscale Structure of Plant Fibers. , 2021, , 117-134.		2
7	Eighty years of composites reinforced by flax fibres: A historical review. <i>Composites Part A: Applied Science and Manufacturing</i> , 2021, 144, 106333.	7.6	50
8	Exploring the dew retting feasibility of hemp in very contrasting European environments: Influence on the tensile mechanical properties of fibres and composites. <i>Industrial Crops and Products</i> , 2021, 164, 113337.	5.2	24
9	Investigations by AFM of Ageing Mechanisms in PLA-Flax Fibre Composites during Garden Composting. <i>Polymers</i> , 2021, 13, 2225.	4.5	8
10	Influence of Embedded Gap and Overlap Fiber Placement Defects on Interlaminar Properties of High Performance Composites. <i>Materials</i> , 2021, 14, 5332.	2.9	6
11	Flax xylem as composite material reinforcement: Microstructure and mechanical properties. <i>Composites Part A: Applied Science and Manufacturing</i> , 2021, 149, 106550.	7.6	6
12	A review on alfa fibre ( <i>Stipa tenacissima</i> L.): From the plant architecture to the reinforcement of polymer composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2020, 128, 105677.	7.6	49
13	Variability of mechanical properties of flax fibres for composite reinforcement. A review. <i>Industrial Crops and Products</i> , 2020, 145, 111984.	5.2	102
14	A Review of Permeability and Flow Simulation for Liquid Composite Moulding of Plant Fibre Composites. <i>Materials</i> , 2020, 13, 4811.	2.9	15
15	Determinant morphological features of flax plant products and their contribution in injection moulded composite reinforcement. <i>Composites Part C: Open Access</i> , 2020, 3, 100054.	3.2	2
16	The potential of flax shives as reinforcements for injection moulded polypropylene composites. <i>Industrial Crops and Products</i> , 2020, 148, 112324.	5.2	27
17	Multi-scale mechanical characterization of flax fibres for the reinforcement of composite materials. , 2020, , 205-226.		1
18	Monitoring of mechanical performances of flax non-woven biocomposites during a home compost degradation. <i>Polymer Degradation and Stability</i> , 2020, 177, 109166.	5.8	37

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19	Oriented granulometry to quantify fibre orientation distributions in synthetic and plant fibre composite preforms. <i>Industrial Crops and Products</i> , 2020, 152, 112548.	5.2	11
20	Main criteria of sustainable natural fibre for efficient unidirectional biocomposites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2019, 124, 105504.	7.6	17
21	About the frontier between filling and reinforcement by fine flax particles in plant fibre composites. <i>Industrial Crops and Products</i> , 2019, 141, 111774.	5.2	10
22	Interfacial properties of hemp fiber/epoxy system measured by microdroplet test: Effect of relative humidity. <i>Composites Science and Technology</i> , 2019, 181, 107694.	7.8	20
23	Understanding the effect of moisture variation on the hygromechanical properties of porosity-controlled nonwoven biocomposites. <i>Polymer Testing</i> , 2019, 78, 105944.	4.8	29
24	Deeper insights into the moisture-induced hygroscopic and mechanical properties of hemp reinforced biocomposites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2019, 123, 278-285.	7.6	24
25	Flax ( <i>Linum usitatissimum</i> L.) Fibers for Composite Reinforcement: Exploring the Link Between Plant Growth, Cell Walls Development, and Fiber Properties. <i>Frontiers in Plant Science</i> , 2019, 10, 411.	3.6	78
26	Specific features of flax fibres used to manufacture composite materials. <i>International Journal of Material Forming</i> , 2019, 12, 1023-1052.	2.0	53
27	Compressive strength of flax fibre bundles within the stem and comparison with unidirectional flax/epoxy composites. <i>Industrial Crops and Products</i> , 2019, 130, 25-33.	5.2	25
28	The remarkable slenderness of flax plant and pertinent factors affecting its mechanical stability. <i>Biosystems Engineering</i> , 2019, 178, 1-8.	4.3	24
29	Study of plant gravitropic response: Exploring the influence of lodging and recovery on the mechanical performances of flax fibers. <i>Industrial Crops and Products</i> , 2019, 128, 235-238.	5.2	9
30	Evolution of flax cell wall ultrastructure and mechanical properties during the retting step. <i>Carbohydrate Polymers</i> , 2019, 206, 48-56.	10.2	40
31	Recommended flax fibre density values for composite property predictions. <i>Industrial Crops and Products</i> , 2018, 114, 52-58.	5.2	54
32	Exploring the link between flexural behaviour of hemp and flax stems and fibre stiffness. <i>Industrial Crops and Products</i> , 2018, 113, 179-186.	5.2	29
33	Flax and hemp nonwoven composites: The contribution of interfacial bonding to improving tensile properties. <i>Polymer Testing</i> , 2018, 66, 303-311.	4.8	37
34	Flax stems: from a specific architecture to an instructive model for bioinspired composite structures. <i>Bioinspiration and Biomimetics</i> , 2018, 13, 026007.	2.9	30
35	Polypropylene reinforcement with flax or jute fibre; Influence of microstructure and constituents properties on the performance of composite. <i>Composites Part B: Engineering</i> , 2018, 139, 64-74.	12.0	59
36	Analysis of Flax Fiber Cell-Wall Non-Cellulosic Polysaccharides Under Different Weather Conditions (Marylin Variety). <i>Journal of Natural Fibers</i> , 2018, 15, 539-544.	3.1	4

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37	Towards the design of high-performance plant fibre composites. Progress in Materials Science, 2018, 97, 347-408.	32.8	295
38	Monitoring temperature effects on flax cell-wall mechanical properties within a composite material using AFM. Polymer Testing, 2018, 69, 91-99.	4.8	17
39	Conventional or greenhouse cultivation of flax: What influence on the number and quality of flax fibers?. Industrial Crops and Products, 2018, 123, 111-117.	5.2	13
40	Investigation of the Mechanical Properties of Flax Cell Walls during Plant Development: The Relation between Performance and Cell Wall Structure. Fibers, 2018, 6, 6.	4.0	45
41	Tensile properties of flax fibers. , 2018, , 275-300.		11
42	Compressive and tensile behaviour of unidirectional composites reinforced by natural fibres: Influence of fibres (flax and jute), matrix and fibre volume fraction. Materials Today Communications, 2018, 16, 300-306.	1.9	46
43	Peeling experiments for hemp retting characterization targeting biocomposites. Industrial Crops and Products, 2018, 123, 573-580.	5.2	28
44	Influence of the scattering of flax fibres properties on flax/epoxy woven ply stiffness. Materials and Design, 2017, 122, 136-145.	7.0	31
45	Exploring the mechanical performance and in-planta architecture of secondary hemp fibres. Industrial Crops and Products, 2017, 108, 1-5.	5.2	20
46	Better insight into the nano-mechanical properties of flax fibre cell walls. Industrial Crops and Products, 2017, 97, 224-228.	5.2	66
47	Influence of PA11 and PP thermoplastic polymers on recycling stability of unidirectional flax fibre reinforced biocomposites. Polymer Degradation and Stability, 2017, 136, 1-9.	5.8	44
48	Varietal selection of flax over time: Evolution of plant architecture related to influence on the mechanical properties of fibers. Industrial Crops and Products, 2017, 97, 56-64.	5.2	46
49	Hygroscopic expansion: A key point to describe natural fibre/polymer matrix interface bond strength. Composites Science and Technology, 2017, 151, 228-233.	7.8	60
50	Exploring two innovative recycling ways for poly-(propylene)-flax non wovens wastes. Polymer Degradation and Stability, 2017, 142, 89-101.	5.8	20
51	Is the low shear modulus of flax fibres an advantage for polymer reinforcement?. Materials Letters, 2016, 185, 534-536.	2.6	20
52	Recycling of L-Poly-(lactide)-Poly-(butylene-succinate)-flax biocomposite. Polymer Degradation and Stability, 2016, 128, 77-88.	5.8	42
53	Mechanical and acoustic behaviour of porosity controlled randomly dispersed flax/PP biocomposite. Polymer Testing, 2016, 51, 174-180.	4.8	58
54	Influence of embedded gap and overlap fiber placement defects on the microstructure and shear and compression properties of carbon-epoxy laminates. Composites Part A: Applied Science and Manufacturing, 2016, 82, 198-207.	7.6	61

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55	Influence of processing temperature on mechanical performance of unidirectional polyamide 11 flax fibre composites. <i>Industrial Crops and Products</i> , 2016, 84, 151-165.	5.2	79
56	Flax/PP manufacture by automated fibre placement (AFP). <i>Materials and Design</i> , 2016, 94, 207-213.	7.0	23
57	Plant cell walls to reinforce composite materials: Relationship between nanoindentation and tensile modulus. <i>Materials Letters</i> , 2016, 167, 161-164.	2.6	30
58	Study of lime hemp concrete (LHC) – Mix design, casting process and mechanical behaviour. <i>Cement and Concrete Composites</i> , 2016, 67, 60-72.	10.7	45
59	Influence of Stem Morphology and Fibers Stiffness on the Loading Stability of Flax. <i>RILEM Bookseries</i> , 2016, , 49-59.	0.4	2
60	Evaluation of the potential of three non-woven flax fiber reinforcements: Spunlaced, needlepunched and paper process mats. <i>Industrial Crops and Products</i> , 2016, 83, 194-205.	5.2	36
61	Impact of the seeding rate on flax stem stability and the mechanical properties of elementary fibres. <i>Industrial Crops and Products</i> , 2016, 80, 17-25.	5.2	36
62	Influence du taux de porosité sur les propriétés d'un composite non tissé lin/PP. <i>Materiaux Et Techniques</i> , 2016, 104, 405.	0.9	1
63	Analysis of the role of the main constitutive polysaccharides in the flax fibre mechanical behaviour. <i>Industrial Crops and Products</i> , 2015, 76, 1039-1048.	5.2	36
64	Influence of the morphology characters of the stem on the lodging resistance of Marylin flax. <i>Industrial Crops and Products</i> , 2015, 66, 27-37.	5.2	41
65	Understanding the lodging stability of green flax stems; The importance of morphology and fibre stiffness. <i>Biosystems Engineering</i> , 2015, 137, 9-21.	4.3	24
66	Optimization of the mechanical performance of UD flax/epoxy composites by selection of fibres along the stem. <i>Composites Part A: Applied Science and Manufacturing</i> , 2015, 77, 204-208.	7.6	38
67	Microstructure and tensile properties of carbon epoxy laminates produced by automated fibre placement: Influence of a caul plate on the effects of gap and overlap embedded defects. <i>Composites Part A: Applied Science and Manufacturing</i> , 2015, 78, 124-134.	7.6	56
68	Fully biodegradable composites: Use of poly-(butylene-succinate) as a matrix and to plasticize l-poly-(lactide)-flax blends. <i>Industrial Crops and Products</i> , 2015, 64, 251-257.	5.2	45
69	Porosity in Ocean Racing Yacht Composites: a Review. <i>Applied Composite Materials</i> , 2015, 22, 13-28.	2.5	14
70	Interfacial properties of flax fibre epoxy resin systems: Existence of a complex interphase. <i>Composites Science and Technology</i> , 2014, 100, 152-157.	7.8	55
71	Elementary flax fibre tensile properties: Correlation between stress-strain behaviour and fibre composition. <i>Industrial Crops and Products</i> , 2014, 52, 762-769.	5.2	97
72	Average tensile properties of French elementary flax fibers. <i>Materials Letters</i> , 2014, 122, 159-161.	2.6	105

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73	Mechanical analysis of elementary flax fibre tensile properties after different thermal cycles. Composites Part A: Applied Science and Manufacturing, 2014, 64, 159-166.	7.6	60
74	A multi-scale study of the interface between natural fibres and a biopolymer. Composites Part A: Applied Science and Manufacturing, 2014, 65, 161-168.	7.6	28
75	Comparison of the properties of scutched flax and flax tow for composite material reinforcement. Industrial Crops and Products, 2014, 61, 284-292.	5.2	40
76	Coupled micromechanical analysis and life cycle assessment as an integrated tool for natural fibre composites development. Journal of Cleaner Production, 2014, 83, 61-69.	9.3	58
77	Tensile properties of elementary fibres of flax and glass: Analysis of reproducibility and scattering. Materials Letters, 2014, 130, 289-291.	2.6	71
78	Influence du rouissage du lin sur les propriétés mécaniques des fibres et des composites injectés lin/polypropylène. Revue Des Composites Et Des Matériaux Avances, 2014, 24, 139-153.	0.6	0
79	Effect of flax fibres individualisation on tensile failure of flax/epoxy unidirectional composite. Composites Part A: Applied Science and Manufacturing, 2013, 51, 62-70.	7.6	167
80	Influence of the degree of retting of flax fibers on the tensile properties of single fibers and short fiber/polypropylene composites. Industrial Crops and Products, 2013, 49, 755-767.	5.2	124
81	A study of the yearly reproducibility of flax fiber tensile properties. Industrial Crops and Products, 2013, 50, 400-407.	5.2	67
82	Relationships between micro-fibrillar angle, mechanical properties and biochemical composition of flax fibers. Industrial Crops and Products, 2013, 44, 343-351.	5.2	163
83	Exploring durability of interfaces in flax fibre/epoxy micro-composites. Composites Part A: Applied Science and Manufacturing, 2013, 48, 121-128.	7.6	87
84	Study of the fibre morphology stability in polypropylene-flax composites. Polymer Degradation and Stability, 2013, 98, 1216-1224.	5.8	58
85	Influence of Through-Thickness Pinning on Composite Shear Properties. Applied Composite Materials, 2012, 19, 853-864.	2.5	7
86	Nanoindentation contribution to mechanical characterization of vegetal fibers. Composites Part B: Engineering, 2012, 43, 2861-2866.	12.0	31
87	Compressive and Tensile Behaviours of PLLA Matrix Composites Reinforced with Randomly Dispersed Flax Fibres. Applied Composite Materials, 2012, 19, 171-188.	2.5	26
88	PLLA/Flax Mat/Balsa Bio-Sandwich – Environmental Impact and Simplified Life Cycle Analysis. Applied Composite Materials, 2012, 19, 363-378.	2.5	55
89	Improving the interfacial properties between flax fibres and PLLA by a water fibre treatment and drying cycle. Industrial Crops and Products, 2012, 39, 31-39.	5.2	100
90	Measuring adhesion forces between model polysaccharide films and PLA bead to mimic molecular interactions in flax/PLA biocomposite. Journal of Materials Science, 2012, 47, 2175-2181.	3.7	17

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91	Environmental Impact Analysis of the Production of Flax Fibres to be Used as Composite Material Reinforcement. <i>Journal of Biobased Materials and Bioenergy</i> , 2011, 5, 153-165.	0.3	146
92	Replacement of Glass/Unsaturated Polyester Composites by Flax/PLLA Biocomposites: Is It Justified?. <i>Journal of Biobased Materials and Bioenergy</i> , 2011, 5, 466-482.	0.3	27
93	Role of Polysaccharides on Mechanical and Adhesion Properties of Flax Fibres in Flax/PLA Biocomposite. <i>International Journal of Polymer Science</i> , 2011, 2011, 1-11.	2.7	26
94	What is the technical and environmental interest in reusing a recycled polypropyleneâ€“hemp fibre composite?. <i>Polymer Degradation and Stability</i> , 2011, 96, 1732-1739.	5.8	57
95	Influence of the sampling area of the stem on the mechanical properties of hemp fibers. <i>Materials Letters</i> , 2011, 65, 797-800.	2.6	125
96	Could oleaginous flax fibers be used as reinforcement for polymers?. <i>Industrial Crops and Products</i> , 2011, 34, 1556-1563.	5.2	70
97	PLLA/Flax Mat/Balsa Bio-Sandwich Manufacture and Mechanical Properties. <i>Applied Composite Materials</i> , 2011, 18, 421-438.	2.5	50
98	Interfacial bonding of Flax fibre/Poly(l-lactide) bio-composites. <i>Composites Science and Technology</i> , 2010, 70, 231-239.	7.8	144
99	Macroscopic analysis of interfacial properties of flax/PLLA biocomposites. <i>Composites Science and Technology</i> , 2010, 70, 1612-1620.	7.8	30
100	Importance of fiber preparation to optimize the surface and mechanical properties of unitary flax fiber. <i>Industrial Crops and Products</i> , 2010, 32, 662-667.	5.2	89
101	Effects of thermo mechanical processing on the mechanical properties of biocomposite flax fibers evaluated by nanoindentation. <i>Polymer Degradation and Stability</i> , 2010, 95, 1488-1494.	5.8	47
102	Effect of compaction on mechanical and thermal properties of hemp concrete. <i>European Journal of Environmental and Civil Engineering</i> , 2010, 14, 545-560.	2.1	92
103	Rigidity analysis of polypropylene/vegetal fibre composites after recycling. <i>Polymer Degradation and Stability</i> , 2009, 94, 297-305.	5.8	145
104	Investigations of the use of a mussel-inspired compatibilizer to improve the matrix-fiber adhesion of a biocomposite. <i>Polymer Testing</i> , 2009, 28, 668-672.	4.8	67
105	Probing cellulose/polylactic acid interactions in model biocomposite by colloidal force microscopy. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2009, 352, 47-55.	4.7	23
106	Influence of compactness and hemp hurd characteristics on the mechanical properties of lime and hemp concrete. <i>European Journal of Environmental and Civil Engineering</i> , 2009, 13, 1039-1050.	2.1	88
107	Seawater ageing of low styrene emission resins for marine composites: Mechanical behaviour and nano-indentation studies. <i>Composites Part A: Applied Science and Manufacturing</i> , 2009, 40, 1024-1032.	7.6	34
108	Adhesion Force Mapping of Raw and Treated Flax Fibres Using AFM Force-Volume. <i>Journal of Scanning Probe Microscopy</i> , 2009, 4, 66-72.	0.0	10

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109	Transverse Properties of Carbon Fibres by Nano-Indentation and Micro-mechanics. Applied Composite Materials, 2008, 15, 61-73.	2.5	63
110	Marine Composites Based on Low Styrene Content Resins. Influence of Lamination Procedure and Peel Plies on Interlaminar Resistance. Applied Composite Materials, 2008, 15, 87-97.	2.5	7
111	High modulus carbon fibre composites: Correlation between transverse tensile and mode I interlaminar fracture properties. Materials Letters, 2008, 62, 1096-1099.	2.6	21
112	Study of the tensile properties of stinging nettle fibres (Urtica dioica). Materials Letters, 2008, 62, 2143-2145.	2.6	145
113	Effect of recycling on mechanical behaviour of biocompostable flax/poly(l-lactide) composites. Composites Part A: Applied Science and Manufacturing, 2008, 39, 1471-1478.	7.6	177
114	Lins olÃ©agineux d'hiver, une source de fibres cellulosiques Ã valoriser. Revue Des Composites Et Des Materiaux Avances, 2008, 18, 151-156.	0.6	3
115	Colloid force measurements between cellulose and polylactic acid. Revue Des Composites Et Des Materiaux Avances, 2008, 18, 177-183.	0.6	2
116	Optimisation de l'usage du bÃ©ton de chanvre dans la conception d'un Ã©comatÃ©riau pour le gÃ©nie civil. Revue Des Composites Et Des Materiaux Avances, 2008, 18, 227-232.	0.6	3
117	An AFM study of the effect of chemical treatments on the surface microstructure and adhesion properties of flax fibres. Composite Interfaces, 2007, 14, 715-731.	2.3	27
118	Could biopolymers reinforced by randomly scattered flax fibre be used in structural applications?. Composites Science and Technology, 2007, 67, 462-470.	7.8	390
119	Influence of chemical treatments on surface properties and adhesion of flax fibreÃ©polyester resin. Composites Part A: Applied Science and Manufacturing, 2006, 37, 1626-1637.	7.6	202
120	Mechanical Properties of Composites Based on Low Styrene Emission Polyester Resins for Marine Applications. Applied Composite Materials, 2006, 13, 1-22.	2.5	41
121	Transverse tensile behaviour of unidirectional plies reinforced with flax fibres. Materials Letters, 2006, 60, 2984-2987.	2.6	130
122	Characterization of Interdiffusion between PVDF and Stereoregular PMMA by Using ATR-FTIR Spectroscopy. Macromolecular Symposia, 2005, 222, 265-272.	0.7	6
123	Influence of the Absorbed Water on the Tensile Strength of Flax Fibers. Macromolecular Symposia, 2005, 222, 195-202.	0.7	67
124	Application of Interlaminar Tests to Marine Composites. Relation between Glass Fibre/Polymer Interfaces and Interlaminar Properties of Marine Composites. Applied Composite Materials, 2004, 11, 77-98.	2.5	32
125	Application of Interlaminar Tests to Marine Composites. A Literature Review. Applied Composite Materials, 2004, 11, 99-126.	2.5	64