Mark Hughes

List of Publications by Year
in descending order

99 papers	3,346 citations	117625 34 h-index	168389 53 g-index
100 all docs	100 docs citations	100 times ranked	2898 citing authors

#	Article	IF	Citations
1	The impact of fibre processing on the mechanical properties of epoxy matrix composites and wood-based particleboard reinforced with hemp (Cannabis sativa L.) fibre. Journal of Materials Science, 2022, 57, 1738-1754.	3.7	5
2	Evaluation of natural weathering and thermal degradation behavior of furfurylated bamboo strips at different weight percent gain. European Journal of Wood and Wood Products, 2022, 80, 289-299.	2.9	4
3	Design strategies to increase the reuse of wood materials in buildings: Lessons from architectural practice. Journal of Cleaner Production, 2022, 368, 133083.	9.3	16
4	The physicochemical properties of cellulose surfaces modified with (depolymerised) suberin and suberin fatty acid. Industrial Crops and Products, 2021, 159, 113070.	5.2	2
5	The fiberâ€matrix interface in Ioncell cellulose fiber composites and its implications for the mechanical performance. Journal of Applied Polymer Science, 2021, 138, 50306.	2.6	5
6	Prolonging life cycles of construction materials and combating climate change by cascading: The case of reusing timber in Finland. Resources, Conservation and Recycling, 2021, 170, 105555.	10.8	39
7	Estimating the material stock in wooden residential houses in Finland. Waste Management, 2021, 135, 318-326.	7.4	14
8	Phenol-formaldehyde resins with suitable bonding strength synthesized from â€œless-reactiveâ€• hardwood lignin fractions. Holzforschung, 2020, 74, 175-183.	1.9	30
9	Thermal properties enhancement of poplar wood by substituting poly(furfuryl alcohol) for the matrix. Polymer Composites, 2020, 41, 1066-1073.	4.6	14
10	Investigating the tactile warmth of untreated and modified wood surfaces by measuring cold sensitivity in paired-comparison experiments. International Wood Products Journal, 2020, 11, 129-137.	1.1	0
11	The structure of dislocations in hemp (Cannabis sativa L.) fibres and implications for mechanical behaviour. BioResources, 2020, 15, 2579-2595.	1.0	10
12	Quantifying the sensation of temperature: A new method for evaluating the thermal behaviour of building materials. Energy and Buildings, 2019, 195, 26-32.	6.7	5
13	Various polymeric monomers derived from renewable rosin for the modification of fast-growing poplar wood. Composites Part B: Engineering, 2019, 174, 106902.	12.0	41
14	Forest sector circular economy development in Finland: A regional study on sustainability driven competitive advantage and an assessment of the potential for cascading recovered solid wood. Journal of Cleaner Production, 2018, 181, 483-497.	9.3	70
15	A dynamic modelling approach for simulating climate change impact on energy and hygrothermal performances of wood buildings. Building Simulation, 2018, 11, 497-506.	5.6	4
16	The anisotropic temperature rise on wood surfaces during adsorption measured by thermal imaging. Wood Science and Technology, 2018, 52, 167-180.	3.2	6
17	Building material naturalness: Perceptions from Finland, Norway and Slovenia. Indoor and Built Environment, 2017, 26, 92-107.	2.8	23
18	Influence of temperature of thermal treatment on surface densification of spruce. European Journal of Wood and Wood Products, 2017, 75, 113-123.	2.9	39

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19	The potential for cascading wood from demolished buildings: potential flows and possible applications through a case study in Finland. International Wood Products Journal, 2017, 8, 208-215.	1.1	9
20	The influence of extractives on the sorption characteristics of Scots pine (Pinus sylvestris L.). Journal of Materials Science, 2017, 52, 10840-10852.	3.7	21
21	Surface modification of birch veneer by peroxide bleaching. Wood Science and Technology, 2017, 51, 85-95.	3.2	8
22	Sensory and Emotional Perception of Wooden Surfaces through Fingertip Touch. Frontiers in Psychology, 2017, 8, 367.	2.1	23
23	Effect of Log Soaking and the Temperature of Peeling on the Properties of Rotary-Cut Birch (Betula) Tj ETQq1 1 0.784314 rgBT /Overl	1.0	12
24	The potential for cascading wood from demolished buildings: the condition of recovered wood through a case study in Finland. International Wood Products Journal, 2016, 7, 137-143.	1.1	10
25	Surface densification of acetylated wood. European Journal of Wood and Wood Products, 2016, 74, 829-835.	2.9	17
26	The effect of hydration on the micromechanics of regenerated cellulose fibres from ionic liquid solutions of varying draw ratios. Carbohydrate Polymers, 2016, 151, 1110-1114.	10.2	8
27	Assessing the susceptibility of hemp fibre to the formation of dislocations during processing. Industrial Crops and Products, 2016, 85, 382-388.	5.2	27
28	Wood densification and thermal modification: hardness, set-recovery and micromorphology. Wood Science and Technology, 2016, 50, 883-894.	3.2	99
29	The cellular level mode I fracture behaviour of spruce and birch in the RT crack propagation system. Holzforschung, 2016, 70, 157-165.	1.9	10
30	The influence of log soaking temperature on surface quality and integrity performance of birch (Betula pendula Roth) veneer. Wood Science and Technology, 2016, 50, 463-474.	3.2	13
31	The effect of temperature and moisture content on the fracture behaviour of spruce and birch. Holzforschung, 2016, 70, 369-376.	1.9	18
32	The effect of elevated temperature and high moisture content on the fracture behaviour of thermally modified spruce. Journal of Materials Science, 2016, 51, 1437-1444.	3.7	10
33	The Effect of Hydrothermal Treatment on the Color Stability and Chemical Properties of Birch Veneer Surfaces. BioResources, 2015, 10, 6610-6623.	1.0	9
34	Comparison of the accuracy of two on-line industrial veneer moisture content and density measurement systems. European Journal of Wood and Wood Products, 2015, 73, 61-68.	2.9	4
35	Life cycle assessment of wood construction according to the normative standards. European Journal of Wood and Wood Products, 2015, 73, 299-312.	2.9	50
36	Estimating the spread rate of urea formaldehyde adhesive on birch (Betula pendula Roth) veneer using fluorescence. European Journal of Wood and Wood Products, 2015, 73, 69-75.	2.9	4

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37	The toughness of hygrothermally modified wood. Holzforschung, 2015, 69, 851-862.	1.9	35
38	Chemical characteristics of squeezable sap of hydrothermally treated silver birch logs (Betula) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 707 Wood Science and Technology, 2015, 49, 289-302.	3.2	7
39	Simultaneous measurement of lathe check depth and the grain angle of birch (Betula pendula Roth) veneers using laser trans-illumination imaging. Wood Science and Technology, 2015, 49, 591-605.	3.2	12
40	Cross-linking of cellulose and poly(ethylene glycol) with citric acid. Reactive and Functional Polymers, 2015, 90, 21-24.	4.1	70
41	The effect of material selection on life cycle energy balance: A case study on a hypothetical building model in Finland. Building and Environment, 2015, 89, 192-202.	6.9	60
42	Toward energy efficiency through an optimized use of wood: The development of natural hydrophobic coatings that retain moisture-buffering ability. Energy and Buildings, 2015, 105, 37-42.	6.7	34
43	Estimating birch veneer (Betula pendula Roth) moisture content using infrared technology. European Journal of Wood and Wood Products, 2015, 73, 617-625.	2.9	3
44	The chemical characteristics of squeezable sap from silver birch (Betula pendula) logs hydrothermally treated at 70ÂÂ°C: the effect of treatment time on the concentration of water extracts. Wood Science and Technology, 2015, 49, 1295-1306.	3.2	3
45	Greenhouse gas emission from construction stage of wooden buildings. International Wood Products Journal, 2014, 5, 217-223.	1.1	10
46	The influence of felling season and log-soaking temperature on the wetting and phenol formaldehyde adhesive bonding characteristics of birch veneer. Holzforschung, 2014, 68, 965-970.	1.9	19
47	Factors influencing properties of parallel laminated binderless bonded plywood manufactured from rotary cut birch (Betula pendulaL.). International Wood Products Journal, 2014, 5, 11-17.	1.1	7
48	Experimental validation of green wood peeling assisted by IR heating â€“ some considerations of the analytical system design. Holzforschung, 2014, 68, 957-964.	1.9	0
49	Spruce fiber properties after high-temperature thermomechanical pulping (HT-TMP). Holzforschung, 2014, 68, 195-201.	1.9	5
50	Mechanical and physical properties of thermally modified Scots pine wood in high pressure reactor under saturated steam at 120, 150 and 180ÂÂ°C. European Journal of Wood and Wood Products, 2014, 72, 33-41.	2.9	42
51	Simultaneous drying and densification of silver birch (Betula pendula L.) veneers: analysis of morphology, thickness swelling, and density profile. Wood Science and Technology, 2014, 48, 325-336.	3.2	14
52	Comparison of life cycle assessment databases: A case study on building assessment. Building and Environment, 2014, 79, 20-30.	6.9	121
53	Micromorphological studies of surface densified wood. Journal of Materials Science, 2014, 49, 2027-2034.	3.7	29
54	A multidisciplinary approach to sustainable building material selection: A case study in a Finnish context. Building and Environment, 2014, 82, 526-535.	6.9	77

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55	Mid-infrared absorption properties of green wood. Wood Science and Technology, 2013, 47, 1231-1241.	3.2	14
56	Soy proteinâ€“nanocellulose composite aerogels. Cellulose, 2013, 20, 2417-2426.	4.9	85
57	Reducing the set-recovery of surface densified solid Scots pine wood by hydrothermal post-treatment. European Journal of Wood and Wood Products, 2013, 71, 17-23.	2.9	56
58	The effect of process parameters on the hardness of surface densified Scots pine solid wood. European Journal of Wood and Wood Products, 2013, 71, 13-16.	2.9	44
59	Hardness and density profile of surface densified and thermally modified Scots pine in relation to degree of densification. Journal of Materials Science, 2013, 48, 2370-2375.	3.7	64
60	Mechanical behavior, structure, and reinforcement processes of TEMPOâ€oxidized cellulose reinforced poly(lactic) acid. Polymer Composites, 2013, 34, 173-179.	4.6	16
61	Experiments on the effective compliance in the radialâ€“tangential plane of Norway spruce. Composite Structures, 2013, 102, 287-293.	5.8	9
62	Colorimetric Behavior and Seasonal Characteristic of Xylem Sap Obtained by Mechanical Compression from Silver Birch (Betula pendula). ACS Sustainable Chemistry and Engineering, 2013, 1, 1075-1082.	6.7	9
63	The effect of log heating temperature on the peeling process and veneer quality: beech, birch, and spruce case studies. European Journal of Wood and Wood Products, 2013, 71, 163-171.	2.9	33
64	Measuring the thickness swelling and set-recovery of densified and thermally modified Scots pine solid wood. Journal of Materials Science, 2013, 48, 8530-8538.	3.7	38
65	Water vapour sorption behaviour of thermally modified wood. International Wood Products Journal, 2013, 4, 191-196.	1.1	17
66	Analysing density profile characteristics of surface densified solid wood using computational approach. International Wood Products Journal, 2013, 4, 144-149.	1.1	9
67	The fracture behavior of birch and spruce in the radial-tangential crack propagation direction at the scale of the growth ring. Holzforschung, 2013, 67, 673-681.	1.9	6
68	Rational production of veneer by IR-heating of green wood during peeling: Modeling experiments. Holzforschung, 2013, 67, 53-58.	1.9	8
69	Measuring the thermal properties of green wood by the transient plane source (TPS) technique. Holzforschung, 2013, 67, 437-445.	1.9	24
70	The influence of lathe check depth and orientation on the bond quality of phenol-formaldehyde â€“ bonded birch plywood. Holzforschung, 2013, 67, 779-786.	1.9	31
71	A study by X-ray photoelectron spectroscopy (XPS) of the chemistry of the surface of Scots pine (Pinus sylvestris L.) modified by friction. Holzforschung, 2012, 66, .	1.9	15
72	Ultrastructural evaluation of compression wood-like properties of common juniper (Juniperus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 62 T	1.9	11

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73	Natural and artificial ageing of spruce wood as observed by FTIR-ATR and UVRR spectroscopy. Holzforschung, 2012, 66, 163-170.	1.9	72
74	Thermodynamic characteristics of surface densified solid Scots pine wood. European Journal of Wood and Wood Products, 2012, 70, 727-734.	2.9	24
75	Micromechanics of TEMPO-Oxidized Fibrillated Cellulose Composites. ACS Applied Materials & Interfaces, 2012, 4, 331-337.	8.0	54
76	XPS and the mediumâ€dependent surface adaptation of cellulose in wood. Surface and Interface Analysis, 2012, 44, 899-903.	1.8	22
77	Acetylated microfibrillated cellulose as a toughening agent in poly(lactic acid). Journal of Applied Polymer Science, 2012, 126, E449.	2.6	88
78	Toughening mechanisms in poly(lactic) acid reinforced with TEMPO-oxidized cellulose. Journal of Materials Science, 2012, 47, 5517-5523.	3.7	31
79	Mechanical processing of bast fibres: The occurrence of damage and its effect on fibre structure. Industrial Crops and Products, 2012, 39, 7-11.	5.2	61
80	The fracture toughness and properties of thermally modified beech and ash at different moisture contents. Wood Science and Technology, 2012, 46, 5-21.	3.2	44
81	Defects in natural fibres: their origin, characteristics and implications for natural fibre-reinforced composites. Journal of Materials Science, 2012, 47, 599-609.	3.7	137
82	The water vapour sorption properties of thermally modified and densified wood. Journal of Materials Science, 2012, 47, 3191-3197.	3.7	120
83	The combined effects of boron and oil heat treatment on beech and Scots pine wood properties. Part 1: Boron leaching, thermogravimetric analysis, and chemical composition. Journal of Materials Science, 2011, 46, 598-607.	3.7	28
84	The combined effects of boron and oil heat treatment on the properties of beech and Scots pine wood. Part 2: Water absorption, compression strength, color changes, and decay resistance. Journal of Materials Science, 2011, 46, 608-615.	3.7	35
85	Surface modification of Scots pine: the effect of process parameters on the through thickness density profile. Journal of Materials Science, 2011, 46, 4780-4786.	3.7	57
86	Potential error in density profile measurements for wood composites. European Journal of Wood and Wood Products, 2011, 69, 167-169.	2.9	3
87	Density profile relation to hardness of viscoelastic thermal compressed (VTC) wood composite. Wood Science and Technology, 2011, 45, 693-705.	3.2	39
88	Kink bands in bast fibres and their effects on mechanical properties. Plastics, Rubber and Composites, 2011, 40, 307-310.	2.0	7
89	Properties and set-recovery of surface densified Norway spruce and European beech. Wood Science and Technology, 2010, 44, 679-691.	3.2	63
90	Natural Fibre Reinforced Composites Opportunities and Challenges. Journal of Biobased Materials and Bioenergy, 2010, 4, 148-158.	0.3	43

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91	Surface modification of wood using friction. Wood Science and Technology, 2009, 43, 291-299.	3.2	41
92	The fracture behaviour and toughness of woven flax fibre reinforced epoxy composites. Composites Part A: Applied Science and Manufacturing, 2008, 39, 1644-1652.	7.6	164
93	Structural biocomposites from flax â€“ Part II: The use of PEG and PVA as interfacial compatibilising agents. Composites Part A: Applied Science and Manufacturing, 2007, 38, 1403-1413.	7.6	33
94	Deformation and fracture behaviour of flax fibre reinforced thermosetting polymer matrix composites. Journal of Materials Science, 2007, 42, 2499-2511.	3.7	146
95	Structural biocomposites from flaxâ€”Part I: Effect of bio-technical fibre modification on composite properties. Composites Part A: Applied Science and Manufacturing, 2006, 37, 393-404.	7.6	78
96	Determining the physical properties of flax fibre for industrial applications: the influence of agronomic practice. Annals of Applied Biology, 2006, 149, 15-25.	2.5	28
97	Strain induced shifts in the Raman spectra of natural cellulose fibers. Journal of Materials Science Letters, 2000, 19, 721-723.	0.5	37
98	RTM Hemp Fibre-Reinforced Polyester Composites. Applied Composite Materials, 2000, 7, 341-349.	2.5	110
99	An investigation into the effects of micro-compressive defects on interphase behaviour in hemp-epoxy composites using half-fringe photoelasticity. Composite Interfaces, 2000, 7, 13-29.	2.3	61