Charles R Frihart

List of Publications by Year
in descending order

51 papers	1,938 citations	236912 25 h-index	254170 43 g-index
56 all docs	56 docs citations	56 times ranked	1498 citing authors

#	Article	IF	Citations
1	Characterization of nonderivatized plant cell walls using highâ€resolution solutionâ€state NMR spectroscopy. Magnetic Resonance in Chemistry, 2008, 46, 508-517.	1.9	162
2	1,N2-Ethenoguanine and N2,3-ethenoguanine. Synthesis and comparison of the electronic spectral properties of these linear and angular triheterocycles related to the Y bases. Journal of Organic Chemistry, 1977, 42, 3292-3296.	3.2	136
3	Experimental method to account for structural compliance in nanoindentation measurements. Journal of Materials Research, 2008, 23, 1113-1127.	2.6	116
4	Adhesive Groups and How They Relate to the Durability of Bonded Wood. Journal of Adhesion Science and Technology, 2009, 23, 601-617.	2.6	111
5	Perturbed [12]annulenes. Synthesis of pyracylenes. Journal of the American Chemical Society, 1971, 93, 737-745.	13.7	87
6	Nanoindentation near the edge. Journal of Materials Research, 2009, 24, 1016-1031.	2.6	86
7	Isolation of cis-Zeatin from Corynebacterium fascians Cultures. Proceedings of the National Academy of Sciences of the United States of America, 1973, 70, 3825-3829.	7.1	75
8	Synchrotron-based X-ray Fluorescence Microscopy in Conjunction with Nanoindentation to Study Molecular-Scale Interactions of Phenolâ€"Formaldehyde in Wood Cell Walls. ACS Applied Materials & Interfaces, 2015, 7, 6584-6589.	8.0	70
9	Cytokinins in Pisum Transfer Ribonucleic Acid. Plant Physiology, 1972, 49, 848-851.	4.8	63
10	High-soy-containing water-durable adhesives. Journal of Adhesion Science and Technology, 2006, 20, 859-873.	2.6	61
11	Specific oxidants improve the wood bonding strength of soy and other plant flours. Journal of Polymer Science Part A, 2019, 57, 1017-1023.	2.3	57
12	Synthetic, spectroscopic, and solution studies of imidazolate-bridged dicopper(II) complexes. Inorganic Chemistry, 1981, 20, 2933-2940.	4.0	54
13	Synthesis of 2-methylthio-cis- and trans-ribosylzeatin and their isolation from Pisum tRNA. Phytochemistry, 1974, 13, 31-37.	2.9	52
14	Soy flour dispersibility and performance as wood adhesive. Journal of Adhesion Science and Technology, 2013, 27, 2043-2052.	2.6	47
15	Reactions of Soy Flour and Soy Protein by Non-Volatile Aldehydes Generation by Specific Oxidation. Polymers, 2019, 11, 1478.	4.5	46
16	Understanding Wood Bondsâ€"Going Beyond What Meets the Eye: A Critical Review. Reviews of Adhesion and Adhesives, 2018, 6, 369-440.	3.4	42
17	Cytokinins with different connecting links between purine and isopentenyl or benzyl groups. Phytochemistry, 1975, 14, 1687-1690.	2.9	41
18	Introduction to Special Issue: Wood Adhesives: Past, Present, and Future. Forest Products Journal, 2015, 65, 4-8.	0.4	39

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19	Soy Properties and Soy Wood Adhesives. ACS Symposium Series, 2014, , 167-192.	0.5	36
20	Synthesis of 4,9-dihydro-4,6-dimethyl-9-oxo-1H-imidazo[1,2-a]purine and the "Y" base from Saccharomyces cerevisiae phenylalanine transfer RNA. Journal of Organic Chemistry, 1978, 43, 1644-1649.	3.2	33
21	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
22	Acetylation increases relative humidity threshold for ion transport in wood cell walls â€“ A means to understanding decay resistance. International Biodeterioration and Biodegradation, 2018, 133, 230-237.	3.9	29
23	Allylic rearrangement from O6 to C-8 in the guanine series. Journal of the American Chemical Society, 1973, 95, 7174-7175.	13.7	28
24	X-ray methods to observe and quantify adhesive penetration into wood. Journal of Materials Science, 2019, 54, 705-718.	3.7	28
25	Chromatographic Analysis of the Reaction of Soy Flour with Formaldehyde and Phenol for Wood Adhesives. JAOCS, Journal of the American Oil Chemists' Society, 2007, 84, 769-776.	1.9	26
26	Chemical Modification of Kraft Lignin: Effect on Chemical and Thermal Properties. BioResources, 2014, 9, .	1.0	26
27	Specific adhesion model for bonding hot-melt polyamides to vinyl. International Journal of Adhesion and Adhesives, 2004, 24, 415-422.	2.9	24
28	Adhesives for Achieving Durable Bonds with Acetylated Wood. Polymers, 2017, 9, 731.	4.5	24
29	Formaldehyde Emissions from Urea-Formaldehydeâ€“ and No-Added-Formaldehydeâ€“Bonded Particleboard as Influenced by Temperature and Relative Humidity. Forest Products Journal, 2012, 62, 551-558.	0.4	23
30	Intramolecular mechanism of the allylic rearrangement from O6 to C-8 in the guanine series. Double labeling experiments. Journal of the American Chemical Society, 1974, 96, 5894-5903.	13.7	22
31	Wood adhesives prepared from lucerne fiber fermentation residues of Ruminococcus albus and Clostridium thermocellum. Applied Microbiology and Biotechnology, 2005, 66, 635-640.	3.6	21
32	High Bonding Temperatures Greatly Improve Soy Adhesive Wet Strength. Polymers, 2016, 8, 394.	4.5	21
33	Hardness evaluation of cured ureaâ€“formaldehyde resins with different formaldehyde/urea mole ratios using nanoindentation method. European Polymer Journal, 2013, 49, 3089-3094.	5.4	20
34	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
35	Protein Modifiers Generally Provide Limited Improvement in Wood Bond Strength of Soy Flour Adhesives. Forest Products Journal, 2013, 63, 138-142.	0.4	19
36	Measurement of moisture-dependent ion diffusion constants in wood cell wall layers using time-lapse micro X-ray fluorescence microscopy. Scientific Reports, 2020, 10, 9919.	3.3	18

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37	Soy Flour Adhesive Strength Compared with That of Purified Soy Proteins*. Forest Products Journal, 2015, 65, 26-30.	0.4	18
38	Wood Adhesives: Vital for Producing Most Wood Products. Forest Products Journal, 2011, 61, 4-12.	0.4	16
39	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
40	High temperature performance of soy-based adhesives. Journal of Adhesion Science and Technology, 2013, 27, 2027-2042.	2.6	12
41	Viscoelastic properties of thermo-hydro-mechanically treated beech (Fagus sylvatica L.) determined using dynamic mechanical analysis. European Journal of Wood and Wood Products, 2021, 79, 263-271.	2.9	12
42	Comparison of Canola and Soy Flour with Added Isocyanate as Wood Adhesives. JAOCS, Journal of the American Oil Chemists' Society, 2020, 97, 1371-1383.	1.9	11
43	Delineating pMDI model reactions with loblolly pine via solution-state NMR spectroscopy. Part 1. Catalyzed reactions with wood models and wood polymers. Holzforschung, 2011, 65, .	1.9	9
44	Delineating pMDI model reactions with loblolly pine via solution-state NMR spectroscopy. Part 2. Non-catalyzed reactions with the wood cell wall. Holzforschung, 2011, 65, .	1.9	8
45	Comparative Adhesive Bonding of Wood Chemically Modified with Either Acetic Anhydride or Butylene Oxide. Forests, 2021, 12, 546.	2.1	6
46	Wood as Polar Size Exclusion Chromatography Media: Implications to Adhesive Performance*. Forest Products Journal, 2015, 65, 9-14.	0.4	6
47	Influence of chemical treatments on moisture-induced dimensional change and elastic modulus of earlywood and latewood. Holzforschung, 2010, 64, .	1.9	5
48	Creep properties of micron-size domains in ethylene glycol modified wood across 4Â½ decades in strain rate. Materials Research Society Symposia Proceedings, 2008, 1132, 1.	0.1	4
49	Improved Wood-Bond Strengths Using Soy and Canola Flours with pMDI and PAE. Polymers, 2022, 14, 1272.	4.5	3
50	Chemical Modification of Soy Flour Protein and its Properties. Advanced Materials Research, 0, 343-344, 875-881.	0.3	2
51	Standard Test Method ASTM D 7998-19 for the Cohesive Strength Development of Wood Adhesives. Journal of Visualized Experiments, 2020, , .	0.3	1