Samuel L Zelinka

List of Publications by Year
in descending order

60	1,072	361413	477307
papers	citations	20 h-index	29 g-index

61	61	61	689
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Oxidation states of copper in preservative treated wood as studied by X-ray absorption near edge spectroscopy (XANES). PLoS ONE, 2022, 17, e0263073.	2.5	2
2	Moisture Monitoring of a CLT Structure in a Southern Climate. Journal of Architectural Engineering, 2022, 28, .	1.6	0
3	Review of Wood Modification and Wood Functionalization Technologies. Forests, 2022, 13, 1004.	2.1	47
4	Exponential decay analysis: a flexible, robust, data-driven methodology for analyzing sorption kinetic data. Cellulose, 2021, 28, 153-174.	4.9	4
5	A Small-Scale Test to Examine Heat Delamination in Cross Laminated Timber (CLT). Forests, 2021, 12, 232.	2.1	7
6	Oxidation states of iron and manganese in lignocellulose altered by the brown rot fungus Gloeophyllum trabeum measured in-situ using X-ray absorption near edge spectroscopy (XANES). International Biodeterioration and Biodegradation, 2021, 158, 105162.	3.9	9
7	Durability and Fire Performance of Charred Wood Siding (Shou Sugi Ban). Forests, 2021, 12, 1262.	2.1	14
8	Common sorption isotherm models are not physically valid for water in wood. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 627, 127214.	4.7	20
9	Long-Term Moisture Monitoring Results of an Eight-Story Mass Timber Building in the Pacific Northwest. Journal of Architectural Engineering, 2021, 27, 06021002.	1.6	1
10	Artifacts in electrical measurements on wood caused by non-uniform moisture distributions. Holzforschung, 2021, 75, 517-525.	1.9	6
11	Corrosion of metal fasteners embedded in acetylated and untreated wood at different moisture contents. Wood Material Science and Engineering, 2020, 15, 182-189.	2.3	5
12	Moisture Redistribution in Full-Scale Wood-Frame Wall Assemblies: Measurements and Engineering Approximation. Buildings, 2020, 10, 141.	3.1	1
13	The Effect of Acetylation on Iron Uptake and Diffusion in Water Saturated Wood Cell Walls and Implications for Decay. Forests, 2020, 11, 1121.	2.1	6
14	Hygrothermal characterization and modeling of cross-laminated timber in the building envelope. Building and Environment, 2020, 177, 106866.	6.9	19
15	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
16	Evaluation of previous measurements of water vapor sorption in wood at multiple temperatures. Wood Science and Technology, 2020, 54, 769-786.	3.2	13
17	Corrosiveness of Thermally Modified Wood. Forests, 2020, 11, 50.	2.1	6
18	Effects of Wood Moisture Content and the Level of Acetylation on Brown Rot Decay. Forests, 2020, 11, 299.	2.1	20

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19	Fungalâ€“copper interactions in wood examined with large field of view synchrotron-based X-ray fluorescence microscopy. Wood Material Science and Engineering, 2019, 14, 174-184.	2.3	6
20	Copper distribution and oxidation states near corroded fasteners in treated wood. SN Applied Sciences, 2019, 1, 1.	2.9	6
21	Small scale tests on the performance of adhesives used in cross laminated timber (CLT) at elevated temperatures. International Journal of Adhesion and Adhesives, 2019, 95, 102436.	2.9	22
22	Structure Moisture Monitoring of an 8-Story Mass Timber Building in the Pacific Northwest. Journal of Architectural Engineering, 2019, 25, .	1.6	23
23	Kinetics of Water Vapor Sorption in Wood Cell Walls: State of the Art and Research Needs. Forests, 2019, 10, 704.	2.1	41
24	Relative humidity versus moisture content relationship for several commercial wood species and its potential effect on flame spread. Fire and Materials, 2019, 43, 365-372.	2.0	5
25	Effects of Moisture on Diffusion in Unmodified Wood Cell Walls: A Phenomenological Polymer Science Approach. Forests, 2019, 10, 1084.	2.1	49
26	The parallel exponential kinetics model is unfit to characterize moisture sorption kinetics in cellulosic materials. Cellulose, 2019, 26, 723-735.	4.9	20
27	Role of transport in wood damage mechanisms â€“ WSE 2017 keynote lecture. International Wood Products Journal, 2018, 9, 50-57.	1.1	2
28	Quantifying and reducing errors in equilibrium moisture content measurements with dynamic vapor sorption (DVS) experiments. Wood Science and Technology, 2018, 52, 909-927.	3.2	50
29	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
30	Myth versus reality: Do parabolic sorption isotherm models reflect actual woodâ€“water thermodynamics?. Wood Science and Technology, 2018, 52, 1701-1706.	3.2	28
31	Experimental investigation of the influence of temperature on thermal conductivity of multilayer reflective thermal insulation. Energy and Buildings, 2018, 174, 26-30.	6.7	29
32	APPARATUS FOR GRAVIMETRIC MEASUREMENT OF MOISTURE SORPTION ISOTHERMS FOR 1-100 g SAMPLES IN PARALLEL. Wood and Fiber Science, 2018, 50, 244-253.	0.6	5
33	Short hold times in dynamic vapor sorption measurements mischaracterize the equilibrium moisture content of wood. Wood Science and Technology, 2017, 51, 243-260.	3.2	54
34	Effect of weight percent gain and experimental method on fiber saturation point of acetylated wood determined by differential scanning calorimetry. Wood Science and Technology, 2017, 51, 1291-1305.	3.2	20
35	Not Just Lumberâ€”Using Wood in the Sustainable Future of Materials, Chemicals, and Fuels. Jom, 2016, 68, 2395-2404.	1.9	40
36	Electrical properties of wood colonized by Gloeophyllum trabeum. International Biodeterioration and Biodegradation, 2016, 114, 110-115.	3.9	9

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37	Comparison of the corrosion of fasteners embedded in wood measured in outdoor exposure with the predictions from a combined hygrothermal-corrosion model. Corrosion Science, 2016, 102, 178-185.	6.6	8
38	Moisture storage and transport properties of preservative treated and untreated southern pine wood. Wood Material Science and Engineering, 2016, 11, 228-238.	2.3	12
39	A solution thermodynamics definition of the fiber saturation point and the derivation of a woodâ€“water phase (state) diagram. Wood Science and Technology, 2016, 50, 443-462.	3.2	38
40	Improvements to Water Vapor Transmission and Capillary Absorption Measurements in Porous Materials. Journal of Testing and Evaluation, 2016, 44, 2396-2402.	0.7	8
41	Anatomically informed mesoscale electrical impedance spectroscopy in southern pine and the electric field distribution for pin-type electric moisture metres. Wood Material Science and Engineering, 2015, 10, 189-196.	2.3	7
42	Forceâ€“displacement measurements of earlywood bordered pits using a mesomechanical tester. Plant, Cell and Environment, 2015, 38, 2088-2097.	5.7	18
43	Threshold for ion movements in wood cell walls below fiber saturation observed by X-ray fluorescence microscopy (XFM). Holzforschung, 2015, 69, 441-448.	1.9	36
44	[Technical Note] Thermal Insulation System Made of Wood and Paper for Use in Residential Construction. Forest Products Journal, 2015, 65, 352-357.	0.4	7
45	Preserving ancient artifacts for the next millennia. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17700-17701.	7.1	3
46	Comparing the Methodologies in ASTM G198 Using Combined Hygrothermal-Corrosion Modeling. Corrosion, 2014, 70, 206-213.	1.1	1
47	The effect of moisture content on the corrosion of fasteners embedded in wood subjected to alkaline copper quaternary treatment. Corrosion Science, 2014, 83, 67-74.	6.6	14
48	Wood as inspiration for new stimuli-responsive structures and materials. , 2014, , .		3
49	Plant-based torsional actuator with memory. Smart Materials and Structures, 2013, 22, 072001.	3.5	29
50	Examination of water phase transitions in Loblolly pine and cell wall components by differential scanning calorimetry. Thermochimica Acta, 2012, 533, 39-45.	2.7	45
51	Modeling the Effect of Nail Corrosion on the Lateral Strength of Joints. Forest Products Journal, 2012, 62, 160-166.	0.4	11
52	Corrosion of metals in wood: Comparing the results of a rapid test method with long-term exposure tests across six wood treatments. Corrosion Science, 2011, 53, 1708-1714.	6.6	26
53	Combining hygrothermal and corrosion models to predict corrosion of metal fasteners embedded in wood. Building and Environment, 2011, 46, 2060-2068.	6.9	28
54	Exposure testing of fasteners in preservative treated wood: Gravimetric corrosion rates and corrosion product analyses. Corrosion Science, 2010, 52, 3943-3948.	6.6	23

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55	Water Vapor Sorption Isotherms for Southern Pine Treated with Several Waterborne Preservatives. Journal of Testing and Evaluation, 2010, 38, 521-525.	0.7	9
56	Corrosion Rates of Fasteners in Treated Wood Exposed to 100% Relative Humidity. Journal of Materials in Civil Engineering, 2009, 21, 758-763.	2.9	31
57	Electrochemical corrosion testing of fasteners in extracts of treated wood. Corrosion Science, 2008, 50, 1251-1257.	6.6	20
58	Impedance spectroscopy and circuit modeling of Southern pine above 20% moisture content. Holzforschung, 2008, 62, 737-744.	1.9	21
59	Minimizing Corrosive Action in Timber Bridges Treated with Waterborne Preservatives. , 2007, , .		0
60	Direct current testing to measure corrosiveness of wood preservatives. Corrosion Science, 2007, 49, 1673-1685.	6.6	12