

# Dominique Derome

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

174  
papers

3,436  
citations

30  
h-index

47  
g-index

195  
ext. papers

4,151  
ext. citations

4.7  
avg, IF

5.87  
L-index

#	Paper	IF	Citations
174	Investigation of coupled vapor and heat transport in hygroscopic material during adsorption and desorption. <i>Building and Environment</i> , <b>2022</b> , 108845	6.5	0
173	Droplet evaporation in finite-size systems: Theoretical analysis and mesoscopic modeling.. <i>Physical Review E</i> , <b>2022</b> , 105, 025101	2.4	5
172	Analysis of moisture risk in internally insulated masonry walls. <i>Building and Environment</i> , <b>2022</b> , 212, 108734	3.4	3
171	A study on diurnal microclimate hysteresis and plant morphology of a <i>Buxus sempervirens</i> using PIV, infrared thermography, and X-ray imaging. <i>Agricultural and Forest Meteorology</i> , <b>2022</b> , 313, 108722	5.8	0
170	Hygromechanics of softwood cellulosic nanocomposite with intermolecular interactions at fiber-matrix interface investigated with molecular dynamics. <i>Composites Part B: Engineering</i> , <b>2022</b> , 228, 109449	10	1
169	Moisture-induced deformations of wood and shape memory. <i>Journal of Physics: Conference Series</i> , <b>2021</b> , 2069, 012012	0.3	
168	Impact of climate change on the wind-driven rain exposure of a historical building. <i>Journal of Physics: Conference Series</i> , <b>2021</b> , 2069, 012054	0.3	0
167	Drying of porous materials at pore scale using lattice Boltzmann and pore network models. <i>Journal of Physics: Conference Series</i> , <b>2021</b> , 2069, 012001	0.3	
166	Mitigation measures for urban heat island and their impact on pedestrian thermal comfort. <i>Journal of Physics: Conference Series</i> , <b>2021</b> , 2069, 012058	0.3	1
165	Combined Use of Wind-Driven Rain Load and Potential Evaporation to Evaluate Moisture Damage Risk: Case Study on the Parliament Buildings in Ottawa, Canada. <i>Buildings</i> , <b>2021</b> , 11, 476	3.2	0
164	Droplet impact of Newtonian fluids and blood on simple fabrics: Effect of fabric pore size and underlying substrate. <i>Physics of Fluids</i> , <b>2021</b> , 33, 033308	4.4	8
163	Hydrogen bonds dominated frictional stick-slip of cellulose nanocrystals. <i>Carbohydrate Polymers</i> , <b>2021</b> , 258, 117682	10.3	10
162	Four-dimensional imaging and free-energy analysis of sudden pore-filling events in wicking of yarns. <i>Physical Review E</i> , <b>2021</b> , 103, 053101	2.4	2
161	Self-Driven Multiplex Reaction: Reactant and Product Diffusion via a Transpiration-Inspired Capillary. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 22031-22039	9.5	1
160	Lattice Boltzmann Modeling of Drying of Porous Media Considering Contact Angle Hysteresis. <i>Transport in Porous Media</i> , <b>2021</b> , 140, 395-420	3.1	7
159	Smart wetting of permeable pavements as an evaporative-cooling measure for improving the urban climate during heat waves. <i>Journal of Building Physics</i> , <b>2021</b> , 45, 36-66	2.6	12
158	Assessment of moisture risk of wooden beam embedded in internally insulated masonry walls with 2D and 3D models. <i>Building and Environment</i> , <b>2021</b> , 193, 107460	6.5	5

157	Lattice Boltzmann modeling of heat conduction enhancement by colloidal nanoparticle deposition in microporous structures. <i>Physical Review E</i> , <b>2021</b> , 103, 023311	2.4	2
156	Spontaneous Imbibition in a Square Tube With Corner Films: Theoretical Model and Numerical Simulation. <i>Water Resources Research</i> , <b>2021</b> , 57, e2020WR029190	5.4	5
155	Three influential factors on colloidal nanoparticle deposition for heat conduction enhancement in 3D chip stacks. <i>Applied Thermal Engineering</i> , <b>2021</b> , 187, 116585	5.8	2
154	Hygromechanical mechanisms of wood cell wall revealed by molecular modeling and mixture rule analysis. <i>Science Advances</i> , <b>2021</b> , 7, eabi8919	14.3	3
153	Role of cellulose nanocrystals on hysteretic sorption and deformation of nanocomposites. <i>Cellulose</i> , <b>2020</b> , 27, 6945-6960	5.5	1
152	Non-Lithography Hydrodynamic Printing of Micro/Nanostructures on Curved Surfaces. <i>Angewandte Chemie - International Edition</i> , <b>2020</b> , 59, 14234-14240	16.4	7
151	Non-Lithography Hydrodynamic Printing of Micro/Nanostructures on Curved Surfaces. <i>Angewandte Chemie</i> , <b>2020</b> , 132, 14340-14346	3.6	
150	Masonry brick-mortar interface resistance to water transport determined with neutron radiography and numerical modeling. <i>Journal of Building Physics</i> , <b>2020</b> , 44, 251-271	2.6	12
149	Assessment of risk of freeze-thaw damage in internally insulated masonry in a changing climate. <i>Building and Environment</i> , <b>2020</b> , 175, 106773	6.5	14
148	Controlled 3D nanoparticle deposition by drying of colloidal suspension in designed thin micro-porous architectures. <i>International Journal of Heat and Mass Transfer</i> , <b>2020</b> , 158, 120000	4.9	10
147	Disentangling Heat and Moisture Effects on Biopolymer Mechanics. <i>Macromolecules</i> , <b>2020</b> , 53, 1527-1535	5.5	5
146	Simulation of quasi-static drainage displacement in porous media on pore-scale: Coupling lattice Boltzmann method and pore network model. <i>Journal of Hydrology</i> , <b>2020</b> , 588, 125080	6	18
145	Moisture-induced crossover in the thermodynamic and mechanical response of hydrophilic biopolymer. <i>Cellulose</i> , <b>2020</b> , 27, 89-99	5.5	7
144	Coupling of sorption and deformation in soft nanoporous polymers: Molecular simulation and poromechanics. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2020</b> , 137, 103830	5	9
143	The use of permeable and reflective pavements as a potential strategy for urban heat island mitigation. <i>Urban Climate</i> , <b>2020</b> , 31, 100534	6.8	42
142	Energy-efficient mitigation measures for improving indoor thermal comfort during heat waves. <i>Applied Energy</i> , <b>2020</b> , 278, 115620	10.7	8
141	Improved pore network models to simulate single-phase flow in porous media by coupling with lattice Boltzmann method. <i>Advances in Water Resources</i> , <b>2020</b> , 145, 103738	4.7	18
140	A Poromechanical Model for Sorption Hysteresis in Nanoporous Polymers. <i>Journal of Physical Chemistry B</i> , <b>2020</b> , 124, 8690-8703	3.4	4

139	Design of smart wetting of building materials as evaporative cooling measure for improving the urban climate during heat waves. <i>E3S Web of Conferences</i> , <b>2020</b> , 172, 03001	0.5	1
138	Advancement in Urban Climate Modelling at Local Scale: Urban Heat Island Mitigation and Building Cooling Demand. <i>Atmosphere</i> , <b>2020</b> , 11, 1313	2.7	7
137	Tricoupled hybrid lattice Boltzmann model for nonisothermal drying of colloidal suspensions in micropore structures. <i>Physical Review E</i> , <b>2019</b> , 99, 053306	2.4	12
136	Molecular Simulation of Sorption-Induced Deformation in Atomistic Nanoporous Materials. <i>Langmuir</i> , <b>2019</b> , 35, 7751-7758	4	8
135	Sprays from droplets impacting a mesh. <i>Journal of Fluid Mechanics</i> , <b>2019</b> , 871, 489-509	3.7	18
134	Impact of evaporative cooling due to wetting of urban materials on local thermal comfort in a street canyon. <i>Sustainable Cities and Society</i> , <b>2019</b> , 49, 101574	10.1	19
133	Two-stage wicking of yarns at the fiber scale investigated by synchrotron X-ray phase-contrast fast tomography. <i>Textile Reseach Journal</i> , <b>2019</b> , 89, 4967-4979	1.7	3
132	Study of non-isothermal liquid evaporation in synthetic micro-pore structures with hybrid lattice Boltzmann model. <i>Journal of Fluid Mechanics</i> , <b>2019</b> , 866, 33-60	3.7	25
131	Impact of drying methods on the changes of fruit microstructure unveiled by X-ray micro-computed tomography.. <i>RSC Advances</i> , <b>2019</b> , 9, 10606-10624	3.7	11
130	A cluster-based pore network model of drying with corner liquid films, with application to a macroporous material. <i>International Journal of Heat and Mass Transfer</i> , <b>2019</b> , 140, 620-633	4.9	6
129	WoodMoisture Relationships Studied with Molecular Simulations: Methodological Guidelines. <i>Forests</i> , <b>2019</b> , 10, 628	2.8	10
128	Coupled numerical simulations of cooling potential due to evaporation in a street canyon and an urban public square. <i>Journal of Physics: Conference Series</i> , <b>2019</b> , 1343, 012016	0.3	0
127	Simulation of indoor temperature and humidity conditions in the suburban and urban area over a hot summer. <i>Journal of Physics: Conference Series</i> , <b>2019</b> , 1343, 012168	0.3	
126	Saline Water Evaporation and Crystallization-Induced Deformations in Building Stone: Insights from High-Resolution Neutron Radiography. <i>Transport in Porous Media</i> , <b>2019</b> , 128, 895-913	3.1	6
125	LBM Simulation of Self-Assembly of Clogging Structures by Evaporation of Colloidal Suspension in 2D Porous Media. <i>Transport in Porous Media</i> , <b>2019</b> , 128, 929-943	3.1	10
124	Modeling wicking in textiles using the dual porosity approach. <i>Textile Reseach Journal</i> , <b>2019</b> , 89, 3519-3528		5
123	Dynamics of Contact Line Pinning and Depinning of Droplets Evaporating on Microribs. <i>Langmuir</i> , <b>2018</b> , 34, 5635-5645	4	17
122	Is desiccation tolerance and avoidance reflected in xylem and phloem anatomy of two coexisting arid-zone coniferous trees?. <i>Plant, Cell and Environment</i> , <b>2018</b> , 41, 1551-1564	8.4	11

121	Entropic multiple-relaxation-time multirange pseudopotential lattice Boltzmann model for two-phase flow. <i>Physics of Fluids</i> , <b>2018</b> , 30, 032104	4.4	30
120	Influence of envelope properties on interior insulation solutions for masonry walls. <i>Building and Environment</i> , <b>2018</b> , 135, 246-256	6.5	36
119	Coupling of physical phenomena in urban microclimate: A model integrating air flow, wind-driven rain, radiation and transport in building materials. <i>Urban Climate</i> , <b>2018</b> , 24, 398-418	6.8	21
118	Parametric study of the influence of environmental factors and tree properties on the transpirative cooling effect of trees. <i>Agricultural and Forest Meteorology</i> , <b>2018</b> , 248, 259-274	5.8	52
117	CFD modeling of convective scalar transport in a macroporous material for drying applications. <i>International Journal of Thermal Sciences</i> , <b>2018</b> , 123, 86-98	4.1	20
116	Swelling interactions of earlywood and latewood across a growth ring: global and local deformations. <i>Wood Science and Technology</i> , <b>2018</b> , 52, 91-114	2.5	18
115	New insights into the apple fruit dehydration process at the cellular scale by 3D continuum modeling. <i>Journal of Food Engineering</i> , <b>2018</b> , 239, 52-63	6	15
114	A non-rigid registration method for the analysis of local deformations in the wood cell wall. <i>Advanced Structural and Chemical Imaging</i> , <b>2018</b> , 4, 1	3.9	7
113	Using Modeling to Understand the Hygromechanical and Hysteretic Behavior of the S2 Cell Wall Layer of Wood <b>2018</b> , 247-269		2
112	Comparative study of flow field and drag coefficient of model and small natural trees in a wind tunnel. <i>Urban Forestry and Urban Greening</i> , <b>2018</b> , 35, 230-239	5.4	18
111	Role of hydrogen bonding in hysteresis observed in sorption-induced swelling of soft nanoporous polymers. <i>Nature Communications</i> , <b>2018</b> , 9, 3507	17.4	58
110	A review on advanced imaging technologies for the quantification of wicking in textiles. <i>Textile Research Journal</i> , <b>2017</b> , 87, 110-132	1.7	13
109	Distribution of moisture in reconstructed oil paintings on canvas during absorption and drying: A neutron radiography and NMR study. <i>Studies in Conservation</i> , <b>2017</b> , 62, 393-409	0.6	12
108	Computational fluid dynamics simulations of wind-driven rain on a mid-rise residential building with various types of facade details. <i>Journal of Building Performance Simulation</i> , <b>2017</b> , 10, 125-143	2.8	19
107	Ten questions concerning modeling of wind-driven rain in the built environment. <i>Building and Environment</i> , <b>2017</b> , 114, 495-506	6.5	8
106	Three-dimensional model of air speed in the secondary zone of displacement ventilation jet. <i>Building and Environment</i> , <b>2017</b> , 114, 483-494	6.5	4
105	Thermal manikins controlled by human thermoregulation models for energy efficiency and thermal comfort research [A review]. <i>Renewable and Sustainable Energy Reviews</i> , <b>2017</b> , 78, 1315-1330	16.2	30
104	Beyond-Cassie Mode of Wetting and Local Contact Angles of Droplets on Checkboard-Patterned Surfaces. <i>Langmuir</i> , <b>2017</b> , 33, 6192-6200	4	26

103	Investigation of Gravity-Driven Drainage and Forced Convective Drying in a Macroporous Medium Using Neutron Radiography. <i>Transport in Porous Media</i> , <b>2017</b> , 118, 119-142	3.1	6
102	Detergency and Its Implications for Oil Emulsion Sieving and Separation. <i>Langmuir</i> , <b>2017</b> , 33, 4250-4259	4	9
101	Impact of hydration on the micromechanical properties of the polymer composite structure of wood investigated with atomistic simulations. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2017</b> , 103, 221-235	5	19
100	Analysis of time-resolved wind-driven rain on an array of low-rise cubic buildings using large eddy simulation and an Eulerian multiphase model. <i>Building and Environment</i> , <b>2017</b> , 114, 68-81	6.5	14
99	Hygrothermal modeling and evaluation of freeze-thaw damage risk of masonry walls retrofitted with internal insulation. <i>Building and Environment</i> , <b>2017</b> , 125, 285-298	6.5	40
98	Dynamic Wicking Process in Textiles. <i>Transport in Porous Media</i> , <b>2017</b> , 119, 611-632	3.1	22
97	Coupled Hygro-Thermo-Mechanical Behavior of Amorphous Biopolymers: Molecular Dynamic Study of Softwood Lignin <b>2017</b> ,		2
96	Wetting and drying in hydrophobic, macroporous asphalt structures. <i>Construction and Building Materials</i> , <b>2017</b> , 152, 82-95	6.7	11
95	Insights from modeling dynamics of water sorption in spherical particles for adsorption heat pumps. <i>International Journal of Heat and Mass Transfer</i> , <b>2017</b> , 105, 326-337	4.9	12
94	Electrical conductivity sensors for water penetration monitoring in building masonry materials. <i>Materials and Structures/Materiaux Et Constructions</i> , <b>2016</b> , 49, 2535-2547	3.4	18
93	Water uptake in clay brick at different temperatures: Experiments and numerical simulations. <i>Journal of Building Physics</i> , <b>2016</b> , 39, 373-389	2.6	10
92	A new procedure for selecting moisture reference years for hygrothermal simulations. <i>Bauphysik</i> , <b>2016</b> , 38, 361-365	0.4	2
91	Comparison of the corrosion of fasteners embedded in wood measured in outdoor exposure with the predictions from a combined hygrothermal-corrosion model. <i>Corrosion Science</i> , <b>2016</b> , 102, 178-185	6.8	7
90	Turbulent airflow above a full-scale macroporous material: Boundary layer characterization and conditional statistical analysis. <i>Experimental Thermal and Fluid Science</i> , <b>2016</b> , 74, 390-403	3	3
89	Transport of Polar and Nonpolar Liquids in Softwood Imaged by Neutron Radiography. <i>Transport in Porous Media</i> , <b>2016</b> , 113, 383-404	3.1	7
88	Moisture storage and transport properties of preservative treated and untreated southern pine wood. <i>Wood Material Science and Engineering</i> , <b>2016</b> , 11, 228-238	1.9	9
87	Modeling the Maximum Spreading of Liquid Droplets Impacting Wetting and Nonwetting Surfaces. <i>Langmuir</i> , <b>2016</b> , 32, 1299-308	4	85
86	Energy Budget of Liquid Drop Impact at Maximum Spreading: Numerical Simulations and Experiments. <i>Langmuir</i> , <b>2016</b> , 32, 1279-88	4	64

85	Recent advances in drying at interfaces of biomaterials. <i>Drying Technology</i> , <b>2016</b> , 34, 1904-1925	2.6	12
84	Absorption of impinging water droplet in porous stones. <i>Journal of Colloid and Interface Science</i> , <b>2016</b> , 471, 59-70	9.3	29
83	Moisture uptake and permeability of canvas paintings and their components. <i>Journal of Cultural Heritage</i> , <b>2016</b> , 19, 445-453	2.9	10
82	Drop impact on natural porous stones. <i>Journal of Colloid and Interface Science</i> , <b>2016</b> , 469, 147-156	9.3	28
81	Probing inside fruit slices during convective drying by quantitative neutron imaging. <i>Journal of Food Engineering</i> , <b>2016</b> , 178, 198-202	6	28
80	Influence of sorption hysteresis on moisture transport in wood. <i>Wood Science and Technology</i> , <b>2016</b> , 50, 259-283	2.5	20
79	Contact Angle Effects on Pore and Corner Arc Menisci in Polygonal Capillary Tubes Studied with the Pseudopotential Multiphase Lattice Boltzmann Model. <i>Computation</i> , <b>2016</b> , 4, 12	2.2	13
78	Universal rescaling of drop impact on smooth and rough surfaces. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 786,	3.7	102
77	Moisture adsorption of glucomannan and xylan hemicelluloses. <i>Cellulose</i> , <b>2016</b> , 23, 1629-1637	5.5	27
76	Robust moisture reference year methodology for hygrothermal simulations. <i>Building and Environment</i> , <b>2016</b> , 110, 23-35	6.5	30
75	Hygrothermal behavior of a massive wall with interior insulation during wetting. <i>Building and Environment</i> , <b>2015</b> , 89, 59-71	6.5	28
74	A hygrothermo-mechanical model for wood: part A. Poroelastic formulation and validation with neutron imaging. <i>Holzforschung</i> , <b>2015</b> , 69, 825-837	2	6
73	Impact of Moisture Adsorption on Structure and Physical Properties of Amorphous Biopolymers. <i>Macromolecules</i> , <b>2015</b> , 48, 2793-2800	5.5	54
72	A film flow model for analysing gravity-driven, thin wavy fluid films. <i>International Journal of Multiphase Flow</i> , <b>2015</b> , 73, 207-216	3.6	9
71	CFD analysis of forced convective heat transfer coefficients at windward building facades: Influence of building geometry. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , <b>2015</b> , 146, 102-116	3.7	46
70	Water diffusion in amorphous hydrophilic systems: a stop and go process. <i>Langmuir</i> , <b>2015</b> , 31, 10843-9	4	26
69	Water Adsorption in Wood Microfibril-Hemicellulose System: Role of the Crystalline-Amorphous Interface. <i>Biomacromolecules</i> , <b>2015</b> , 16, 2972-8	6.9	78
68	Risk analysis of biodeterioration of wooden beams embedded in internally insulated masonry walls. <i>Construction and Building Materials</i> , <b>2015</b> , 99, 159-168	6.7	21



67	Poromechanical modeling of moisture induced swelling anisotropy in cellular tissues of softwoods. <i>RSC Advances</i> , <b>2015</b> , 5, 3560-3566	3.7	7
66	Numerical modeling of turbulent dispersion for wind-driven rain on building facades. <i>Environmental Fluid Mechanics</i> , <b>2015</b> , 15, 109-133	2.2	26
65	Poroelastic model for adsorption-induced deformation of biopolymers obtained from molecular simulations. <i>Physical Review E</i> , <b>2015</b> , 92, 022605	2.4	25
64	Numerical study of gravity-driven droplet displacement on a surface using the pseudopotential multiphase lattice Boltzmann model with high density ratio. <i>Computers and Fluids</i> , <b>2015</b> , 117, 42-53	2.8	17
63	Wind-driven rain on two parallel wide buildings: Field measurements and CFD simulations. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , <b>2015</b> , 146, 11-28	3.7	29
62	A hygrothermo-mechanical model for wood: Part B. Parametric studies and application to wood welding. <i>Holzforschung</i> , <b>2015</b> , 69, 839-849	2	5
61	Unraveling wetting transition through surface textures with X-rays: liquid meniscus penetration phenomena. <i>Scientific Reports</i> , <b>2014</b> , 4, 4055	4.9	42
60	A comparative molecular dynamics study of crystalline, paracrystalline and amorphous states of cellulose. <i>Cellulose</i> , <b>2014</b> , 21, 1103-1116	5.5	90
59	Crystallization of hydrated and anhydrous salts in porous limestone resolved by synchrotron X-ray microtomography. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2014</b> , 324, 102-112	1.2	24
58	Understanding forced convective drying of apple tissue: Combining neutron radiography and numerical modelling. <i>Innovative Food Science and Emerging Technologies</i> , <b>2014</b> , 24, 97-105	6.8	6
57	Neutron imaging of moisture displacement due to steep temperature gradients in hardwood. <i>International Journal of Thermal Sciences</i> , <b>2014</b> , 81, 1-12	4.1	7
56	Moisture Migration in Wood Under Heating Measured by Thermal Neutron Radiography. <i>Experimental Heat Transfer</i> , <b>2014</b> , 27, 160-179	2.4	6
55	Numerical simulations of wind-driven rain on an array of low-rise cubic buildings and validation by field measurements. <i>Building and Environment</i> , <b>2014</b> , 81, 283-295	6.5	50
54	Quantitative neutron imaging of water distribution, venation network and sap flow in leaves. <i>Planta</i> , <b>2014</b> , 240, 423-36	4.7	20
53	Micro-Scale Restraint Methodology for Humidity Induced Swelling Investigated by Phase Contrast X-Ray Tomography. <i>Experimental Mechanics</i> , <b>2014</b> , 54, 1215-1226	2.6	1
52	Cross-scale modelling of transpiration from stomata via the leaf boundary layer. <i>Annals of Botany</i> , <b>2014</b> , 114, 711-23	4.1	15
51	Molecular Mechanism of Moisture-Induced Transition in Amorphous Cellulose. <i>ACS Macro Letters</i> , <b>2014</b> , 3, 1037-1040	6.6	47
50	The effect of moisture content on the corrosion of fasteners embedded in wood subjected to alkaline copper quaternary treatment. <i>Corrosion Science</i> , <b>2014</b> , 83, 67-74	6.8	10



49 Swelling of Wood Tissue: Interactions at the Cellular Scale **2014**, 153-170

48 Investigation of Water Uptake in Porous Asphalt Concrete Using Neutron Radiography. *Transport in Porous Media*, **2014**, 105, 431-450 3.1 13

47 Hygroscopic swelling and shrinkage of latewood cell wall micropillars reveal ultrastructural anisotropy. *Journal of the Royal Society Interface*, **2014**, 11, 20140126 4.1 45

46 High-resolution field measurements of wind-driven rain on an array of low-rise cubic buildings. *Building and Environment*, **2014**, 78, 1-13 6.5 40

45 Liquid uptake in Scots pine sapwood and hardwood visualized and quantified by neutron radiography. *Materials and Structures/Materiaux Et Constructions*, **2014**, 47, 1083-1096 3.4 13

44 Novel Application of Neutron Radiography to Forced Convective Drying of Fruit Tissue. *Food and Bioprocess Technology*, **2013**, 6, 3353-3367 5.1 23

43 Multiscale analysis of free swelling of Norway spruce. *Composites Part A: Applied Science and Manufacturing*, **2013**, 54, 70-78 8.4 29

42 Time resolved analysis of water drainage in porous asphalt concrete using neutron radiography. *Applied Radiation and Isotopes*, **2013**, 77, 5-13 1.7 17

41 Stomatal transpiration and droplet evaporation on leaf surfaces by a microscale modelling approach. *International Journal of Heat and Mass Transfer*, **2013**, 65, 180-191 4.9 25

40 CFD simulation and validation of wind-driven rain on a building facade with an Eulerian multiphase model. *Building and Environment*, **2013**, 61, 69-81 6.5 74

39 Dehydration of apple tissue: Intercomparison of neutron tomography with numerical modelling. *International Journal of Heat and Mass Transfer*, **2013**, 67, 173-182 4.9 29

38 Hysteresis in swelling and in sorption of wood tissue. *Journal of Structural Biology*, **2013**, 182, 226-34 3.4 44

37 Rainwater runoff from building facades: A review. *Building and Environment*, **2013**, 60, 339-361 6.5 96

36 Micromechanics investigation of hygro-elastic behavior of cellular materials with multi-layered cell walls. *Composite Structures*, **2013**, 95, 607-611 5.3 13

35 Nonlinear Poro-Elastic Model for Unsaturated Porous Solids. *Journal of Applied Mechanics, Transactions ASME*, **2013**, 80, 2.7 15

34 The role of water in the behavior of wood. *Journal of Building Physics*, **2013**, 36, 398-421 2.6 13

33 Characterizing saline uptake and salt distributions in porous limestone with neutron radiography and X-ray micro-tomography. *Journal of Building Physics*, **2013**, 36, 353-374 2.6 32

32 Swelling of cellular solids: From conventional to re-entrant honeycombs. *Applied Physics Letters*, **2013**, 102, 211907 3.4 6

31	Forced Convective Drying of Wet Porous Asphalt Imaged with Neutron Radiography. <i>Advanced Engineering Materials</i> , <b>2013</b> , 15, 1136-1145	3.5	12
30	Hysteretic moisture behavior of concrete: Modeling and analysis. <i>Cement and Concrete Research</i> , <b>2012</b> , 42, 1379-1388	10.3	46
29	Hygromorphic behaviour of cellular material: hysteretic swelling and shrinkage of wood probed by phase contrast X-ray tomography. <i>Philosophical Magazine</i> , <b>2012</b> , 92, 3680-3698	1.6	35
28	Coupled CFD, radiation and porous media transport model for evaluating evaporative cooling in an urban environment. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , <b>2012</b> , 104-106, 455-463	3.7	39
27	Visualization and quantification of liquid water transport in softwood by means of neutron radiography. <i>International Journal of Heat and Mass Transfer</i> , <b>2012</b> , 55, 6211-6221	4.9	72
26	The role of geometrical disorder on swelling anisotropy of cellular solids. <i>Mechanics of Materials</i> , <b>2012</b> , 55, 49-59	3.3	12
25	Variation of measured cross-sectional cell dimensions and calculated water vapor permeability across a single growth ring of spruce wood. <i>Wood Science and Technology</i> , <b>2012</b> , 46, 827-840	2.5	20
24	Temperature driven inward vapor diffusion under constant and cyclic loading in small-scale wall assemblies: Part 2 heat-moisture transport simulations. <i>Building and Environment</i> , <b>2012</b> , 47, 161-169	6.5	14
23	Experimental assessment of the velocity and temperature distribution in an indoor displacement ventilation jet. <i>Building and Environment</i> , <b>2012</b> , 47, 150-160	6.5	16
22	Temperature driven inward vapor diffusion under constant and cyclic loading in small-scale wall assemblies: Part 1 experimental investigation. <i>Building and Environment</i> , <b>2012</b> , 48, 48-56	6.5	17
21	Convective heat and mass transfer modelling at air-porous material interfaces: Overview of existing methods and relevance. <i>Chemical Engineering Science</i> , <b>2012</b> , 74, 49-58	4.4	46
20	Numerical analysis of convective drying of gypsum boards. <i>International Journal of Heat and Mass Transfer</i> , <b>2012</b> , 55, 2590-2600	4.9	21
19	Computational up-scaling of anisotropic swelling and mechanical behavior of hierarchical cellular materials. <i>Composites Science and Technology</i> , <b>2012</b> , 72, 744-751	8.6	43
18	Hysteretic swelling of wood at cellular scale probed by phase-contrast X-ray tomography. <i>Journal of Structural Biology</i> , <b>2011</b> , 173, 180-90	3.4	84
17	Combining hygrothermal and corrosion models to predict corrosion of metal fasteners embedded in wood. <i>Building and Environment</i> , <b>2011</b> , 46, 2060-2068	6.5	21
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10	Identification of multiple criteria for the evaluation of light-frame wood wall assemblies. <i>Journal of Building Performance Simulation</i> , <b>2008</b> , 1, 221-236	2.8	9
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8	Hygroscopic Behavior of Paper and Books. <i>Journal of Building Physics</i> , <b>2007</b> , 31, 9-34	2.6	17
7	Exposure to Condensation Moisture of Sheathing in Retrofitted Leaky Wall Assemblies. <i>Journal of Architectural Engineering</i> , <b>2006</b> , 12, 72-82	1.5	6
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4	Life-Cycle Analysis of Improvements to an Existing Energy-Efficient House in Montreal. <i>Architectural Science Review</i> , <b>2003</b> , 46, 341-352	2.6	2
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1	Pore-scale simulation of drying in porous media using a hybrid lattice Boltzmann: pore network model. <i>Drying Technology</i> , 1-16	2.6	0