Rafik Belarbi

List of Publications by Year in Descending Order

88 papers	2,049 citations	26 h-index	43 g-index
92 ext. papers	2,431 ext. citations	4.7 avg, IF	5.31 L-index

#	Paper	IF	Citations
88	Towards understanding cork concrete behaviour: Impact of considering cork absorption during mixing process. *Construction and Building Materials*, **2022**, 317, 125905	6.7	1
87	Assessment of hygrothermal performance of hemp concrete compared to conventional building materials at overall building scale. *Construction and Building Materials*, **2022**, 316, 126007	6.7	1
86	Experimental Characterization of Raw Earth Properties for Modeling Their Hygrothermal Behavior. *Buildings*, **2022**, 12, 648	3.2	0
85	Investigation of a novel bio-based phase change material hemp concrete for passive energy storage in buildings. *Applied Thermal Engineering*, **2022**, 212, 118620	5.8	0
84	Review on the Integration of Phase Change Materials in Building Envelopes for Passive Latent Heat Storage. *Applied Sciences (Switzerland)*, **2021**, 11, 9305	2.6	5
83	Accelerated Aging Effects on the Hygrothermal Behaviour of Hemp Concrete: Experimental and Numerical Investigations. *Energies*, **2021**, 14, 7005	3.1	2
82	Experimental and numerical modelling of hygrothermal transfer: Application on building energy performance. *Energy and Buildings*, **2021**, 111633	7	2
81	Hygrothermal and Mechanical Behaviors of Fiber Mortar: Comparative Study between Palm and Hemp Fibers. *Energies*, **2021**, 14, 7110	3.1	1
80	Experimental and numerical validation of hygrothermal transfer in brick wall. *Heat Transfer*, **2021**, 50, 6300-6327	3.1	1
79	Effect of geo-climatic conditions and pipe material on heating performance of earth-air heat exchangers. *Renewable Energy*, **2021**, 163, 22-40	8.1	11
78	On the hygrothermal behavior of concrete containing glass powder and silica fume. *Journal of Cleaner Production*, **2021**, 318, 128647	10.3	10
77	Utilization of treated saw dust in concrete as partial replacement of natural sand. *Journal of Cleaner Production*, **2020**, 261, 121226	10.3	12
76	Contribution to the Modelling of Coupled Heat and Mass Transfers on 3D Real Structure of Heterogeneous Building Materials: Application to Hemp Concrete. *Transport in Porous Media*, **2020**, 133, 333-356	3.1	7
75	Fly ash and ground granulated blast furnace slag-based alkali-activated concrete: Mechanical, transport and microstructural properties. *Construction and Building Materials*, **2020**, 257, 119548	6.7	49
74	Comparative cradle to grave environmental life cycle assessment of traditional and extensive vegetative roofs: an application for the Lebanese context. *International Journal of Life Cycle Assessment*, **2020**, 25, 423-442	4.6	10
73	Experimental investigation on the influence of immersion/drying cycles on the hygrothermal and mechanical properties of hemp concrete. *Journal of Building Engineering*, **2020**, 32, 101758	5.2	17
72	Effect of flax shives content and size on the hygrothermal and mechanical properties of flax concrete. *Construction and Building Materials*, **2020**, 262, 120077	6.7	15

71	Moisture transfer modelling in polystyrene mortar with consideration of sorption hysteresis. *E3S Web of Conferences*, **2019**, 128, 07006	0.5	3
70	Hygromorphic characterization of softwood under high resolution X-ray tomography for hygrothermal simulation. *Heat and Mass Transfer*, **2018**, 54, 2761-2769	2.2	8
69	Multiscale modelling for better hygrothermal prediction of porous building materials. *MATEC Web of Conferences*, **2018**, 149, 02005	0.3	4
68	Thermal performance of a residential house equipped with a combined system: A direct solar floor and an earthâair heat exchanger. *Sustainable Cities and Society*, **2018**, 40, 534-545	10.1	15
67	Influence of recycled polystyrene beads on cement paste properties. *MATEC Web of Conferences*, **2018**, 149, 01032	0.3	
66	Multiscale modelling for better hygrothermal prediction of porous building materials. *MATEC Web of Conferences*, **2018**, 149, 02005	0.3	
65	Convective and conductive thermal homogenization for non-saturated porous building materials: Application on the thermal conductivity tensor. *Thermal Science*, **2018**, 22, 2367-2378	1.2	3
64	Investigation of factors affecting condensation on soiled PV modules. *Solar Energy*, **2018**, 159, 488-500	6.8	61
63	A genetic algorithm to optimize consistency ratio in AHP method for energy performance assessment of residential buildingsâApplication of top-down and bottom-up approaches in Algerian case study. *Sustainable Cities and Society*, **2018**, 42, 622-636	10.1	15
62	Effect of Variability of Porous Media Properties on Drying Kinetics: Application to Cement-based Materials **2018**, 243-289		
61	Microscopic hydric characterization of hemp concrete by X-ray microtomography and digital volume correlation. *Construction and Building Materials*, **2018**, 188, 983-994	6.7	19
60	Characterization of EPS lightweight concrete microstructure by X-ray tomography with consideration of thermal variations. *Construction and Building Materials*, **2018**, 178, 339-348	6.7	16
59	Moisture transport in cementitious materials. Periodic homogenization and numerical analysis. *European Journal of Environmental and Civil Engineering*, **2017**, 21, 1026-1042	1.5	3
58	Experimental study of green walls impacts on buildings in summer and winter under an oceanic climate. *Energy and Buildings*, **2017**, 150, 403-411	7	40
57	Effect of bacteria on strength, permeation characteristics and micro-structure of silica fume concrete. *Construction and Building Materials*, **2017**, 142, 92-100	6.7	63
56	Seasonal variability of temperature profiles of vegetative and traditional gravel-ballasted roofs: A case study for Lebanon. *Energy and Buildings*, **2017**, 151, 358-364	7	6
55	Influence of the pozzolanic reactivity of the Blast Furnace Slag (BFS) and metakaolin on mortars. *Energy Procedia*, **2017**, 139, 224-229	2.3	17
54	Influence of the origin of metakaolin on pozzolanic reactivity of mortars. *Energy Procedia*, **2017**, 139, 230-235	2.3	11

53	On The Semi-Analytical Solution of Integro-Partial Differential Equations. *Energy Procedia*, **2017**, 139, 358-366	2.3	1
52	A CFD Comsol model for simulating complex urban flow. *Energy Procedia*, **2017**, 139, 373-378	2.3	11
51	Hydric and structural approaches for earth based materials characterization. *Energy Procedia*, **2017**, 139, 417-423	2.3	3
50	Albedo effect of external surfaces on the energy loads and thermal comfort in buildings. *Energy Procedia*, **2017**, 139, 571-577	2.3	12
49	Green wall impacts inside and outside buildings: experimental study. *Energy Procedia*, **2017**, 139, 578-583	2.3	8
48	Impact of coupled heat and moisture transfer effects on buildings energy consuption. *Thermal Science*, **2017**, 21, 1359-1368	1.2	6
47	Periodic homogenization for heat, air, and moisture transfer of porous building materials. *Numerical Heat Transfer, Part B: Fundamentals*, **2016**, 70, 420-440	1.3	15
46	The impact of height/width ratio on the microclimate and thermal comfort levels of urban courtyards. *International Journal of Sustainable Building Technology and Urban Development*, **2016**, 7, 174-183		8
45	Energy performance evaluation of direct solar floor in traditional and modern buildings. *Building Services Engineering Research and Technology*, **2016**, 37, 450-467	2.3	1
44	Durability Properties of Concrete Made with High Volumes of Low-Calcium Coal Bottom Ash As a Replacement of Two Types of Sand. *Journal of Materials in Civil Engineering*, **2016**, 28, 04015175	3	13
43	Sensitivity analyses of convective and diffusive driving potentials on combined heat air and mass transfer in hygroscopic materials. *Numerical Heat Transfer; Part A: Applications*, **2016**, 69, 1079-1091	2.3	14
42	Modeling green wall interactions with street canyons for building energy simulation in urban context. *Urban Climate*, **2016**, 16, 75-85	6.8	38
41	Modeling of static contact angles with curved boundaries using a multiphase lattice Boltzmann method with variable density and viscosity ratios. *International Journal for Numerical Methods in Fluids*, **2016**, 82, 451-470	1.9	26
40	Hygrothermal behavior modeling of the hygroscopic envelopes of buildings: A dynamic co-simulation approach. *Building Simulation*, **2016**, 9, 501-512	3.9	17
39	Real-time temperature monitoring for Traditional gravel ballasted and Extensive green roofs: A Lebanese case study. *Energy and Buildings*, **2016**, 133, 197-205	7	12
38	Cradle-to-gate Life Cycle Assessment of traditional gravel ballasted, white reflective, and vegetative roofs: A Lebanese case study. *Journal of Cleaner Production*, **2016**, 137, 833-842	10.3	32
37	Comparative investigation on the influence of spent foundry sand as partial replacement of fine aggregates on the properties of two grades of concrete. *Construction and Building Materials*, **2015**, 83, 216-222	6.7	48
36	Experimental study of the urban microclimate mitigation potential of green roofs and green walls in street canyons. *International Journal of Low-Carbon Technologies*, **2015**, 10, 34-44	2.8	38

35	Dynamic control and advanced load management of a stand-alone hybrid renewable power system for remote housing. *Energy Conversion and Management*, **2015**, 105, 377-392	10.6	47
34	Unstable two-phase flow rate in micro-channels and cracks under imposed pressure difference. *International Journal of Multiphase Flow*, **2015**, 77, 131-141	3.6	12
33	Analysis of thermal effects of vegetated envelopes: Integration of a validated model in a building energy simulation program. *Energy and Buildings*, **2015**, 86, 93-103	7	65
32	Experimental Characterization of Green Roof Components. *Energy Procedia*, **2015**, 78, 1183-1188	2.3	10
31	Moisture Transfers in Porous Construction Materials: Mechanisms and Applications **2015**, 41-116		
30	Use of the Buffering Capacity of the Building Envelope for the Reduction of the Rate of Air Exchange. *Energy Procedia*, **2015**, 78, 1531-1536	2.3	
29	Impact of plants transpiration, grey and clean water irrigation on the thermal resistance of green roofs. *Ecological Engineering*, **2014**, 67, 60-66	3.9	25
28	Effect of Hygrothermal Transfer on Multilayer Walls Behavior, Assessment of Condensation Risk. *Advanced Materials Research*, **2014**, 1051, 647-655	0.5	5
27	Experimental and numerical investigation of urban street canyons to evaluate the impact of green roof inside and outside buildings. *Applied Energy*, **2014**, 114, 273-282	10.7	61
26	Reply on the comments regarding the paper â€Assessment of temperature gradient effects on moisture transfer through thermogradient coefficientâ€*Building Simulation*, **2013**, 6, 109-110	3.9	1
25	Methods and Results of Experimental Researches of Thermal Conductivity of Soils. *Energy Procedia*, **2013**, 42, 775-783	2.3	21
24	Experimental investigation of the variability of concrete durability properties. *Cement and Concrete Research*, **2013**, 45, 21-36	10.3	63
23	Total Pressure Gradient Incidence on Hygrothermal Transfer in Highly Porous Building Materials. *Advanced Materials Research*, **2013**, 772, 124-129	0.5	3
22	Evaluation of Earth-Air Heat Exchangers Efficiency in Hot and Dry Climates. *Advanced Materials Research*, **2013**, 739, 318-324	0.5	2
21	A comprehensive study of the impact of green roofs on building energy performance. *Renewable Energy*, **2012**, 43, 157-164	8.1	294
20	Development and validation of a coupled heat and mass transfer model for green roofs. *International Communications in Heat and Mass Transfer*, **2012**, 39, 752-761	5.8	51
19	Assessment of temperature gradient effects on moisture transfer through thermogradient coefficient. *Building Simulation*, **2012**, 5, 107-115	3.9	21
18	Characterization of green roof components: Measurements of thermal and hydrological properties. *Building and Environment*, **2012**, 56, 78-85	6.5	66

17	Assessment of green roof thermal behavior: A coupled heat and mass transfer model. *Building and Environment*, **2011**, 46, 2624-2631	6.5	124
16	Simulation of whole building coupled hygrothermal-airflow transfer in different climates. *Energy Conversion and Management*, **2011**, 52, 1470-1478	10.6	46
15	Two-dimensional hygrothermal transfer in porous building materials. *Applied Thermal Engineering*, **2010**, 30, 2555-2562	5.8	27
14	Coupled heat and moisture transfer in multi-layer building materials. *Construction and Building Materials*, **2009**, 23, 967-975	6.7	101
13	Simulation of coupled heat and moisture transfer in air-conditioned buildings. *Automation in Construction*, **2009**, 18, 624-631	9.6	40
12	Experimental and theoretical investigation of non-isothermal transfer in hygroscopic building materials. *Building and Environment*, **2008**, 43, 2154-2162	6.5	42
11	Nonisothermal moisture transport in hygroscopic building materials: modeling for the determination of moisture transport coefficients. *Transport in Porous Media*, **2008**, 72, 255-271	3.1	33
10	Simultaneous heat and moisture transport in porous building materials: evaluation of nonisothermal moisture transport properties. *Journal of Materials Science*, **2008**, 43, 3655-3663	4.3	6
9	Development of simplified approach to model the moisture transfer in building materials. *Revue Europ□enne De G□nie Civil*, **2006**, 10, 1033-1048		5
8	An analytical method to calculate the coupled heat and moisture transfer in building materials. *International Communications in Heat and Mass Transfer*, **2006**, 33, 39-48	5.8	39
7	Modeling of water spray evaporation: Application to passive cooling of buildings. *Solar Energy*, **2006**, 80, 1540-1552	6.8	46
6	Modelling solar effects on the heat and mass transfer in a street canyon, a simplified approach. *Solar Energy*, **2005**, 79, 10-24	6.8	33
5	Development of an Analytical Method for Simultaneous Heat and Moisture Transfer in Building Materials Utilizing Transfer Function Method. *Journal of Materials in Civil Engineering*, **2005**, 17, 492-497	3	20
4	□valuation des b□iments munis de syst□mes de rafra□chissement passif. Application au cas de l'□vaporation adiabatique. *International Journal of Thermal Sciences*, **1997**, 36, 547-561		2
3	Effect of Immersion/Freezing/Drying Cycles on the Hygrothermal and Mechanical Behaviour of Hemp Concrete		1
2	Influence of hydric solicitations on the morphological behavior of hemp concrete. *RILEM Technical Letters*,4, 16-21		5
1	Development of a numerical approach to assess the effect of coupled heat and moisture transfer on energy consumption of residential buildings in Moroccan context. *Journal of Building Physics*,1744259112110560	2.6	0