

# Jan Köhler

## List of Publications by Year in descending order

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Version: 2024-02-01

73  
papers

470  
citations

840776

11  
h-index

794594

19  
g-index

73  
all docs

73  
docs citations

73  
times ranked

254  
citing authors

#	ARTICLE	IF	CITATIONS
1	Development and testing of multicomponent fuel cladding with enhanced accidental performance. Nuclear Engineering and Technology, 2020, 52, 597-609.	2.3	63
2	Parallel modeling of hygrothermal performance of external wall made of highly perforated bricks. Advances in Engineering Software, 2017, 113, 47-53.	3.8	37
3	Effect of applied weather data sets in simulation of building energy demands: Comparison of design years with recent weather data. Renewable and Sustainable Energy Reviews, 2019, 100, 22-32.	16.4	33
4	Damage functions for the cold regions and their applications in hygrothermal simulations of different types of building structures. Cold Regions Science and Technology, 2017, 135, 1-7.	3.5	28
5	Generation of a critical weather year for hygrothermal simulations using partial weather data sets. Building and Environment, 2014, 76, 54-61.	6.9	27
6	Thermal and hygric assessment of an inside-insulated brick wall: 2D critical experiment and computational analysis. Journal of Building Physics, 2018, 41, 497-520.	2.4	26
7	Application of genetic algorithm for determination of water vapor diffusion parameters of building materials. Journal of Building Physics, 2012, 35, 238-250.	2.4	21
8	Environmental Efficiency Aspects of Basalt Fibers Reinforcement in Concrete Mixtures. Energies, 2021, 14, 7736.	3.1	19
9	A fast computational approach for the determination of thermal properties of hollow bricks in energy-related calculations. Energy, 2015, 83, 749-755.	8.8	18
10	Computational analysis of hygrothermal performance of renovation renders. , 2010, , .		16
11	Computational assessment of thermal performance of contemporary ceramic blocks with complex internal geometry in building envelopes. Energy and Buildings, 2015, 99, 61-66.	6.7	12
12	Multi-parameter optimization of lime composite design using a modified downhill simplex method. Composites Part B: Engineering, 2016, 93, 184-189.	12.0	12
13	Energy Effects of Retrofitting the Educational Facilities Located in South-Eastern Poland. Energies, 2020, 13, 2449.	3.1	11
14	Computational prediction of hygrothermal conditions in innovated AAC-based building envelopes. WIT Transactions on Engineering Sciences, 2010, , .	0.0	10
15	Determination of Radiative Heat Transfer Coefficient at High Temperatures Using a Combined Experimental-Computational Technique. Measurement Science Review, 2015, 15, 85-91.	1.0	8
16	Assessment of fast heat evolving processes using inverse analysis of calorimetric data. International Journal of Heat and Mass Transfer, 2017, 115, 831-838.	4.8	8
17	A Method for Rapid Evaluation of Thermal Performance of Wall Assemblies Based on Geographical Location. Energies, 2019, 12, 1353.	3.1	8
18	Determination of moisture-dependent moisture diffusivity using smoothed experimental data. , 2013, , .		7

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19	Modification of the computational model of coupled heat and moisture transport: The transition between the liquid and gaseous phases of water. AIP Conference Proceedings, 2015, , .	0.4	7
20	Heat and moisture transport in porous materials involving cyclic wetting and drying. , 2009, , .		7
21	Contribution of waste products in single-layer ceramic building envelopes to overall energy savings. Energy, 2016, 111, 947-955.	8.8	6
22	Analysis of the Frost-Induced Damage of Building Enclosures on the Territory of the Czech Republic. Advances in Materials Science and Engineering, 2018, 2018, 1-11.	1.8	6
23	Characterization of Responsive Plasters for Passive Moisture and Temperature Control. Applied Sciences (Switzerland), 2020, 10, 9116.	2.5	6
24	Energy Efficiency of Novel Interior Surface Layer with Improved Thermal Characteristics and Its Effect on Hygrothermal Performance of Contemporary Building Envelopes. Energies, 2020, 13, 2012.	3.1	6
25	Effect of Weather Data Selection on Simulated Moisture and Temperature Fields in Building Envelopes in Central Europe. Energy Procedia, 2017, 132, 514-519.	1.8	5
26	Formulation of a hygrothermal model for description of ice-forming process in porous building materials. AIP Conference Proceedings, 2018, , .	0.4	5
27	Computational compensation of systematic errors accompanying non-equilibrium thermocouple measurements. International Journal of Thermal Sciences, 2021, 168, 107049.	4.9	5
28	Utilization of Crushed Pavement Blocks in Concrete: Assessment of Functional Properties and Environmental Impacts. Materials, 2021, 14, 7361.	2.9	5
29	Comparison of Two Different Modes of Inverse Analysis Used for Determination of Moisture Diffusivity of Building Materials. Advanced Materials Research, 2014, 982, 49-53.	0.3	4
30	A Laboratory Experiment for Monitoring the Time Development of Water Freezing Processes in Porous Materials and Its Computational Analysis. International Journal of Thermophysics, 2016, 37, 1.	2.1	4
31	Identification of Water Diffusivity of Inorganic Porous Materials Using Evolutionary Algorithms. Transport in Porous Media, 2016, 113, 51-66.	2.6	4
32	Physical and mathematical models of hygrothermal processes in historical building envelopes. AIP Conference Proceedings, 2017, , .	0.4	4
33	Influence of Superabsorbent Polymers on Moisture Control in Building Interiors. Energies, 2020, 13, 2009.	3.1	4
34	Software for service life assessment of historical buildings: Implementation of coupled heat, moisture and salt transport model. AIP Conference Proceedings, 2015, , .	0.4	3
35	Computational simulation of hygrothermal processes in historical building envelopes provided with interior thermal insulation. IOP Conference Series: Materials Science and Engineering, 2018, 364, 012009.	0.6	3
36	Experimental Determination of Heat and Moisture Transport Properties of AAC in the Range of Subzero to Room Temperatures. International Journal of Thermophysics, 2019, 40, 1.	2.1	3

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37	Identification of Moisture Diffusivity of Autoclaved Aerated Concrete in the Form of Smooth Two-Variable Function. Energy Procedia, 2017, 132, 219-224.	1.8	2
38	The impact of temperature loading on massive concrete block resistance. AIP Conference Proceedings, 2017, , .	0.4	2
39	Computational Prediction of Susceptibility to Biofilms Growth: Two-Dimensional Analysis of Critical Construction Details. Energies, 2020, 13, 293.	3.1	2
40	Indoor air temperature modelling: Thermal retrofitting of historical building. AIP Conference Proceedings, 2021, , .	0.4	2
41	Identification of water vapour transport properties of gypsum using evolutionary algorithms. , 2012, , .		1
42	Validation of Genetic Programming Tool for the Inverse Analysis of Moisture Transport in Building Materials. Advanced Materials Research, 2015, 1126, 75-80.	0.3	1
43	Computational identification of freezing zones in building materials exposed to low temperatures. AIP Conference Proceedings, 2017, , .	0.4	1
44	Optimization procedure for design of geometrical configuration of acoustic bricks. AIP Conference Proceedings, 2018, , .	0.4	1
45	Water thermoporometry of aerated autoclaved concrete. AIP Conference Proceedings, 2018, , .	0.4	1
46	Hygic parameters of cement-lime plasters modified by superabsorbent polymers. MATEC Web of Conferences, 2019, 282, 02059.	0.2	1
47	Thermal, hygic and mechanical properties of HPC containing silica fume. AIP Conference Proceedings, 2019, , .	0.4	1
48	Influence of built-in thermocouples on temperature field in cement composites exposed to high temperatures. AIP Conference Proceedings, 2020, , .	0.4	1
49	Special Issue "Recent Developments in Building Physics" Energies, 2020, 13, 6356.	3.1	1
50	Computational analysis of energy performance of advanced moisture responsive plasters. AIP Conference Proceedings, 2021, , .	0.4	1
51	A brief review of computational models for simulation of conditions in hollow clay brick tunnel kiln. AIP Conference Proceedings, 2022, , .	0.4	1
52	Effect of hysteresis on moisture transport in porous building materials. , 2012, , .		0
53	A verification of the genetic programming method in the inverse analysis of moisture transport in building materials. , 2013, , .		0
54	A method for selection of a critical weather year for hygrothermal simulation based on incomplete weather data. , 2013, , .		0

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55	Assessment of material degradation considering the characteristics of its pore structure. AIP Conference Proceedings, 2016, , .	0.4	0
56	Analysis of the impact of applied climatic data on the computational modelling of frost damage in building structures. AIP Conference Proceedings, 2016, , .	0.4	0
57	Influence of the cavity geometry on the heat transfer conditions inside highly perforated bricks. AIP Conference Proceedings, 2017, , .	0.4	0
58	Thawing of ice in porous space of building materials: Experimental monitoring and computational modelling. AIP Conference Proceedings, 2017, , .	0.4	0
59	Experimental monitoring of electrical properties of porous building materials exposed to low temperatures. AIP Conference Proceedings, 2017, , .	0.4	0
60	Assessment of local environmental loads in terms of energy demands of selected building enclosures in the Czech Republic. AIP Conference Proceedings, 2018, , .	0.4	0
61	Computational modelling of degradation processes in exterior renders. AIP Conference Proceedings, 2018, , .	0.4	0
62	Uncertainty in moisture transport modelling and its effect on ice formation in porous building materials. AIP Conference Proceedings, 2018, , .	0.4	0
63	Hygrothermal model for description of ice-forming process in porous building materials: Sensitivity analysis of input material parameters. AIP Conference Proceedings, 2018, , .	0.4	0
64	Effect of the current warming trend on the computational damage assessment of building materials. AIP Conference Proceedings, 2019, , .	0.4	0
65	Comparison of hygric responses of three different plasters for interior applications. AIP Conference Proceedings, 2019, , .	0.4	0
66	Pore structure and hygrothermal characteristics of HPC based on Portland cement " Slag blends. AIP Conference Proceedings, 2019, , .	0.4	0
67	Thermal and energy performance of AAC exposed to low temperatures in the computational simulation with advanced input parameters. AIP Conference Proceedings, 2019, , .	0.4	0
68	Energy performance of the building envelopes provided with interior plasters with moisture buffering effect. AIP Conference Proceedings, 2019, , .	0.4	0
69	Thermal comfort in residential buildings after application of different thermal retrofitting measures. AIP Conference Proceedings, 2020, , .	0.4	0
70	Utilization plasters with superabsorbent admixture to moderate moisture level in constructions. E3S Web of Conferences, 2020, 172, 11009.	0.5	0
71	Interior thermal insulation materials on natural basis: Evaluation of heat losses reduction. AIP Conference Proceedings, 2021, , .	0.4	0
72	Effect of Applied Weather Data Sets on the Computational Assessment of Hygrothermal Performance of Historical Masonry. , 0, , .		0

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73	Preliminary assessment of CFD models suitable for simulation of processes in tunnel kilns. AIP Conference Proceedings, 2021, , .	0.4	0