Jos Joaquim da Costa

List of Publications by Citations

86 papers	1,948 citations	22 h-index	42 g-index
91 ext. papers	2,272 ext. citations	5.3 avg, IF	5.17 L-index

#	Paper	IF	Citations
86	Review of passive PCM latent heat thermal energy storage systems towards buildings' energy efficiency. *Energy and Buildings*, **2013**, 59, 82-103	7	610
85	Multi-dimensional optimization of the incorporation of PCM-drywalls in lightweight steel-framed residential buildings in different climates. *Energy and Buildings*, **2014**, 70, 411-421	7	98
84	Review and future trends of solar adsorption refrigeration systems. *Renewable and Sustainable Energy Reviews*, **2014**, 39, 102-123	16.2	85
83	Energy efficiency and thermal performance of lightweight steel-framed (LSF) construction: A review. *Renewable and Sustainable Energy Reviews*, **2017**, 78, 194-209	16.2	66
82	Test of several versions for the k type turbulence modelling of internal mixed convection flows. *International Journal of Heat and Mass Transfer*, **1999**, 42, 4391-4409	4.9	62
81	Energy savings by aerodynamic sealing with a downward-blowing plane air curtain A numerical approach. *Energy and Buildings*, **2006**, 38, 1182-1193	7	53
80	Laboratory and in-situ non-destructive methods to evaluate the thermal transmittance and behavior of walls, windows, and construction elements with innovative materials: A review. *Energy and Buildings*, **2019**, 182, 88-110	7	50
79	On the behaviour of hygroscopic wheels: Part I channel modelling. *International Journal of Heat and Mass Transfer*, **2007**, 50, 4812-4822	4.9	49
78	Analysis of Simplifying Assumptions for the Numerical Modeling of the Heat and Mass Transfer in a Porous Desiccant Medium. *Numerical Heat Transfer; Part A: Applications*, **2006**, 49, 851-872	2.3	37
77	Experimental evaluation of the heat transfer through small PCM-based thermal energy storage units for building applications. *Energy and Buildings*, **2016**, 116, 18-34	7	32
76	CFD modelling of aerodynamic sealing by vertical and horizontal air curtains. *Energy and Buildings*, **2012**, 52, 153-160	7	32
75	Effectiveness parameters for the prediction of the global performance of desiccant wheels An assessment based on experimental data. *Renewable Energy*, **2012**, 38, 181-187	8.1	31
74	On the behaviour of hygroscopic wheels: Part II rotor performance. *International Journal of Heat and Mass Transfer*, **2007**, 50, 4823-4832	4.9	30
73	Indoor air quality audit implementation in a hotel building in Portugal. *Building and Environment*, **2011**, 46, 1617-1623	6.5	29
72	On the validity of lumped capacitance approaches for the numerical prediction of heat and mass transfer in desiccant airflow systems. *International Journal of Thermal Sciences*, **2008**, 47, 282-292	4.1	29
71	On the Temperature Distribution Inside a Tree Under Fire Conditions. *International Journal of Wildland Fire*, **1991**, 1, 87	3.2	27
70	Thermal transmittance effect on energy consumption of Mediterranean buildings with different thermal mass. *Applied Energy*, **2019**, 252, 113437	10.7	26

69	Experimental study of the heat transfer through a vertical stack of rectangular cavities filled with phase change materials. *Applied Energy*, **2015**, 142, 192-205	10.7	26
68	An integrated energy performance-driven generative design methodology to foster modular lightweight steel framed dwellings in hot climates. *Energy for Sustainable Development*, **2018**, 44, 21-36	5.4	25
67	Assessment of an earth-air heat exchanger (EAHE) system for residential buildings in warm-summer Mediterranean climate. *Sustainable Energy Technologies and Assessments*, **2020**, 38, 100649	4.7	24
66	Experimental and mathematical study of the discontinuous drying kinetics of pears. *Journal of Food Engineering*, **2014**, 134, 30-36	6	24
65	A new approach to the effectiveness method for the simulation of desiccant wheels with variable inlet states and airflows rates. *Applied Thermal Engineering*, **2013**, 58, 670-678	5.8	23
64	Thermal transmittance of lightweight steel framed walls: Experimental versus numerical and analytical approaches. *Journal of Building Engineering*, **2019**, 25, 100776	5.2	21
63	Influence of the design parameters on the overall performance of a solar adsorption refrigerator. *Renewable Energy*, **2016**, 86, 238-250	8.1	20
62	Study of three-stage intermittent drying of pears considering shrinkage and variable diffusion coefficient. *Journal of Food Engineering*, **2016**, 180, 77-86	6	20
61	Numerical study of the influence of the atmospheric pressure on the heat and mass transfer rates of desiccant wheels. *International Journal of Heat and Mass Transfer*, **2011**, 54, 1331-1339	4.9	19
60	Modelling and performance analysis of an earth-to-air heat exchanger in a pilot installation. *Journal of Building Physics*, **2018**, 42, 259-287	2.6	17
59	Numerical evaluation of a phase change material shutter using solar energy for winter nighttime indoor heating. *Journal of Building Physics*, **2014**, 37, 367-394	2.6	17
58	The impact of thermal transmittance variation on building design in the Mediterranean region. *Applied Energy*, **2019**, 239, 581-597	10.7	17
57	Exponential correlations to predict the dependence of effectiveness parameters of a desiccant wheel on the airflow rates and on the rotation speed. *Applied Thermal Engineering*, **2013**, 51, 442-450	5.8	16
56	A mathematical model describing the two stages of low-pressure-vaporization of free water. *Journal of Food Engineering*, **2012**, 112, 274-281	6	16
55	On the use of infrared thermography in studies with air curtain devices. *Energy and Buildings*, **2006**, 38, 1194-1199	7	16
54	Low-pressure-vaporization of free water Characterization of the boiling regimes. *International Journal of Thermal Sciences*, **2014**, 77, 19-26	4.1	15
53	Fatigue Crack Growth in Maraging Steel Obtained by Selective Laser Melting. *Applied Sciences (Switzerland)*, **2019**, 9, 4412	2.6	15
52	Turbulent airflow in a room with a two-jet heating-ventilation system a numerical parametric study. *Energy and Buildings*, **2000**, 32, 327-343	7	14

51	A thermal energy storage system provided with an adsorption module – Dynamic modeling and viability study. *Energy Conversion and Management*, **2016**, 126, 548-560	10.6	13
50	Performance-based design of multi-story buildings for a sustainable urban environment: A case study. *Renewable and Sustainable Energy Reviews*, **2019**, 113, 109243	16.2	13
49	A systematic indoor air quality audit approach for public buildings. *Environmental Monitoring and Assessment*, **2013**, 185, 865-75	3.1	13
48	Modeling and parametric analysis of an adsorber unit for thermal energy storage. *Energy*, **2016**, 102, 83-94	7.9	12
47	Parametric study on the performance of an air curtain based on CFD simulations - New proposal for automatic operation. *Journal of Wind Engineering and Industrial Aerodynamics*, **2019**, 193, 103951	3.7	11
46	Study of the aerodynamic sealing of a cold store – Experimental and numerical approaches. *Energy and Buildings*, **2012**, 55, 779-789	7	11
45	Influence of the atmospheric pressure on the mass transfer rate of desiccant wheels. *International Journal of Refrigeration*, **2011**, 34, 707-718	3.8	11
44	The potential impact of low thermal transmittance construction on the European design guidelines of residential buildings. *Energy and Buildings*, **2018**, 178, 379-390	7	10
43	Validity of pseudo-gas-side-controlled models to predict the behaviour of desiccant matrices. *International Journal of Thermal Sciences*, **2009**, 48, 2171-2178	4.1	10
42	Numerical Study of the Cyclic Behavior of a Desiccant Layer of a Hygroscopic Rotor. *Numerical Heat Transfer; Part A: Applications*, **2008**, 53, 1037-1053	2.3	10
41	Can movable PCM-filled TES units be used to improve the performance of PV panels? Overview and experimental case-study. *Energy and Buildings*, **2020**, 210, 109743	7	10
40	Assessment of the indoor environmental conditions of a baroque library in Portugal. *Energy Procedia*, **2017**, 133, 257-267	2.3	9
39	Interpolation procedures for the effectiveness method to account for the influence of the inlet airflow states on the desiccant wheels performance. *Energy and Buildings*, **2012**, 55, 380-388	7	9
38	On aerodynamic sealing for industrial applications. *Journal of Wind Engineering and Industrial Aerodynamics*, **1991**, 37, 255-268	3.7	9
37	Experimental analysis of the use of wet porous media for thermal protection against high intensity heat fluxes. *International Journal of Heat and Mass Transfer*, **2004**, 47, 11-19	4.9	8
36	Experimental study of the low-pressure-vaporization of water in different porous media. *International Journal of Heat and Mass Transfer*, **2013**, 65, 561-571	4.9	7
35	The contribution of ventilation on the energy performance of small residential buildings in the Mediterranean region. *Energy*, **2020**, 191, 116577	7.9	7
34	Thermal assessment of sublimation cooling with dry-ice sprays. *International Journal of Heat and Mass Transfer*, **2018**, 118, 518-526	4.9	7

33	Optimization of a thermal energy storage system provided with an adsorption module – A GenOpt application in a TRNSYS/MATLAB model. *Energy Conversion and Management*, **2018**, 162, 90-97	10.6	6
32	Comparative assessment of the linear driving force and pseudo-gas-side-controlled models for the prediction of mass transfer in desiccant matrices. *Energy*, **2014**, 75, 603-612	7.9	6
31	Parametric study of the cyclic behaviour of a hygroscopic matrix in a desiccant airflow system. *Heat and Mass Transfer*, **2011**, 47, 1101-1112	2.2	6
30	A Discussion of Mixed Integer Linear Programming Models of Thermostatic Loads in Demand Response. *Trends in Mathematics*, **2020**, 105-122	0.3	6
29	Advances in standalone and hybrid earth-air heat exchanger (EAHE) systems for buildings: A review. *Energy and Buildings*, **2021**, 111532	7	6
28	Correlations for the mass transfer coefficient in desiccant matrices when using linear driving force and pseudo-gas-side-controlled models. *Energy*, **2014**, 75, 613-623	7.9	5
27	Simplified model of finned-tube heat exchangers based on the effectiveness method and calibrated with manufacturer and experimental data. *Applied Thermal Engineering*, **2017**, 111, 340-352	5.8	5
26	Physical and experimental calibration of a mathematical model of the low-pressure-vaporization of free water. *Journal of Food Engineering*, **2014**, 138, 23-34	6	4
25	Elastic correction of fatigue crack growth laws. *Fatigue and Fracture of Engineering Materials and Structures*, **2019**, 42, 1052-1061	3	4
24	Analysis of the air infiltration through the doorway of a refrigerated room using different approaches. *Applied Thermal Engineering*, **2019**, 159, 113927	5.8	3
23	Simplified component model of heating and dry-cooling coils: Influence of altitude and of glycol concentration in the heat transfer fluid on the error prediction of the heat transfer rate. *Journal of Building Engineering*, **2016**, 6, 39-53	5.2	3
22	Effect of non-zero mean stress bending-torsion fatigue on fracture surface parameters of 34CrNiMo6 steel notched bars. *Production Engineering Archives*, **2020**, 26, 167-173	2.3	3
21	Effect of temperature on the thermal conductivity of a granite with high heat production from Central Portugal. *Journal of Iberian Geology*, **2019**, 45, 147-161	1.1	2
20	Increasing the efficiency of high temperature furnaces through a topping cycle cogeneration – case study. *Energy Efficiency*, **2015**, 8, 85-95	3	2
19	Indoor climate assessment: A case study at a business incubation centre. *Sustainable Cities and Society*, **2016**, 26, 466-475	10.1	2
18	Mixed numerical-experimental method for generation of energy-life fatigue master curves. *Material Design and Processing Communications*, **2019**, 1, e37	0.9	1
17	Numerical recipes for successfully modeling the phase transitions in thermal energy storage adsorption systems. *Energy Storage*, **2019**, 1, e42	2.8	1
16	Effect of atomizer geometry on particle formation in dry-ice sprays. *International Journal of Multiphase Flow*, **2020**, 130, 103358	3.6	1

15	Development, calibration and validation of a mathematical model for the low-pressure-vaporization of the water in porous media. *International Journal of Heat and Mass Transfer*, **2014**, 73, 574-585	4.9	1
14	A comparative study between one and two effective doses (ED95) of rocuronium for tracheal intubation. *Revista Brasileira De Anestesiologia*, **2008**, 58, 202-9	0.8	1
13	The importance of long-term hygrothermal assessment of museum spaces: method and application in a permanent exhibition in a historical building. *Conservar Patrimonio*, **2019**, 30, 91-105	0.4	1
12	Impact of Advances on Computing and Communication Systems in Automotive Testing703-718		1
11	Heat and Mass Transfer in Matrices of Hygroscopic Wheels. *Advanced Structured Materials*, **2012**, 245-263	0.6	1
10	Prevention of Initial Depressive Disorders Among at-Risk Portuguese Adolescents. *Behavior Therapy*, **2019**, 50, 743-754	4.8	0
9	A new wind direction-driven heat convection model is needed in dynamic simulation: What, why, and how. *Energy and Buildings*, **2022**, 256, 111716	7	0
8	Performance Analysis of a Solar DHW System with Adsorption Module Operating in Different World Locations. *Applied Sciences (Switzerland)*, **2019**, 9, 5480	2.6	0
7	Daylighting simulation of a heritage building by comparing matrix methods and solar models. *Solar Energy*, **2021**, 224, 685-696	6.8	0
6	Accuracy of simplified heating coil models based on manufacturer catalogue data. *Thermal Science and Engineering Progress*, **2017**, 3, 10-23	3.6	
5	On the stress state transition in notched cracked plates under tension loading. *Material Design and Processing Communications*, **2019**, 1, e85	0.9	
4	Effectiveness Parameters for the Heat and Mass Transfer in a Desiccant Wheel. *Defect and Diffusion Forum*, **2011**, 312-315, 205-210	0.7	
3	Characterising the Differences between the Adsorption and Desorption Processes in a Desiccant Layer by Detailed Numerical Modelling. *Defect and Diffusion Forum*, **2012**, 326-328, 690-695	0.7	
2	Influence of Altitude on the Behavior of Solid Desiccant Dehumidification System **2014**, 85-107		
1	Barriers on Establishing Passive Strategies in Office Spaces: A Case Study in a Historic University Building. *Sustainability*, **2021**, 13, 4563	3.6	