

Albert Castell

List of Publications by Year in descending order

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68
papers

7,526
citations

87843

38
h-index

114418

63
g-index

68
all docs

68
docs citations

68
times ranked

5731
citing authors

#	ARTICLE	IF	CITATIONS
1	Design of latent heat energy storage systems using phase change materials. , 2021, , 331-357.		4
2	Mapping Nighttime and All-Day Radiative Cooling Potential in Europe and the Influence of Solar Reflectivity. Atmosphere, 2021, 12, 1119.	1.0	9
3	Adaptive covers for combined radiative cooling and solar heating. A review of existing technology and materials. Solar Energy Materials and Solar Cells, 2021, 230, 111275.	3.0	21
4	Combined Radiative Cooling and Solar Thermal Collection: Experimental Proof of Concept. Energies, 2020, 13, 893.	1.6	10
5	A new flat-plate radiative cooling and solar collector numerical model: Evaluation and metamodeling. Energy, 2020, 202, 117750.	4.5	14
6	Energy Savings Potential of a Novel Radiative Cooling and Solar Thermal Collection Concept in Buildings for Various World Climates. Energy Technology, 2018, 6, 2200-2209.	1.8	25
7	Radiative cooling as low-grade energy source: A literature review. Renewable and Sustainable Energy Reviews, 2017, 77, 803-820.	8.2	145
8	High density polyethylene spheres with PCM for domestic hot water applications: Water tank and laboratory scale study. Journal of Energy Storage, 2017, 13, 262-267.	3.9	50
9	Experimental study of an active slab with PCM coupled to a solar air collector for heating purposes. Energy and Buildings, 2016, 128, 12-21.	3.1	62
10	Experimental evaluation of a concrete core slab with phase change materials for cooling purposes. Energy and Buildings, 2016, 116, 411-419.	3.1	28
11	Thermal characterization of buildings from the monitoring of the AC system consumption. Energy and Buildings, 2016, 116, 59-68.	3.1	7
12	Thermal assessment of extensive green roofs as passive tool for energy savings in buildings. Renewable Energy, 2016, 85, 1106-1115.	4.3	157
13	Thermal energy storage in building integrated thermal systems: A review. Part 2. Integration as passive system. Renewable Energy, 2016, 85, 1334-1356.	4.3	208
14	Energy performance of a ventilated double skin facade with PCM under different climates. Energy and Buildings, 2015, 91, 37-42.	3.1	71
15	Thermal behaviour of insulation and phase change materials in buildings with internal heat loads: experimental study. Energy Efficiency, 2015, 8, 895-904.	1.3	15
16	Control of a PCM ventilated facade using reinforcement learning techniques. Energy and Buildings, 2015, 106, 234-242.	3.1	43
17	PCM incorporation in a concrete core slab as a thermal storage and supply system: Proof of concept. Energy and Buildings, 2015, 103, 70-82.	3.1	70
18	A simple model to predict the thermal performance of a ventilated facade with phase change materials. Energy and Buildings, 2015, 93, 137-142.	3.1	28

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19	The thermal behaviour of extensive green roofs under low plant coverage conditions. Energy Efficiency, 2015, 8, 881-894.	1.3	25
20	An overview on design methodologies for liquid–solid PCM storage systems. Renewable and Sustainable Energy Reviews, 2015, 52, 289-307.	8.2	40
21	Design of a Prefabricated Concrete Slab with PCM Inside the Hollows. Energy Procedia, 2014, 57, 2324-2332.	1.8	17
22	Life cycle assessment (LCA) and life cycle energy analysis (LCEA) of buildings and the building sector: A review. Renewable and Sustainable Energy Reviews, 2014, 29, 394-416.	8.2	941
23	Numerical model evaluation of a PCM cold storage tank and uncertainty analysis of the parameters. Applied Thermal Engineering, 2014, 67, 16-23.	3.0	21
24	Modeling phase change materials behavior in building applications: Comments on material characterization and model validation. Renewable Energy, 2014, 61, 132-135.	4.3	69
25	Life cycle assessment of a ventilated facade with PCM in its air chamber. Solar Energy, 2014, 104, 115-123.	2.9	47
26	Environmental performance of recycled rubber as drainage layer in extensive green roofs. A comparative Life Cycle Assessment. Building and Environment, 2014, 74, 22-30.	3.0	72
27	Experimental validation of a methodology to assess PCM effectiveness in cooling building envelopes passively. Energy and Buildings, 2014, 81, 59-71.	3.1	36
28	The use of phase change materials in domestic heat pump and air-conditioning systems for short term storage: A review. Renewable and Sustainable Energy Reviews, 2014, 39, 1-13.	8.2	133
29	An effectiveness-NTU technique for characterising a finned tubes PCM system using a CFD model. Applied Energy, 2014, 131, 377-385.	5.1	70
30	PCM thermal energy storage tanks in heat pump system for space cooling. Energy and Buildings, 2014, 82, 399-405.	3.1	94
31	Green roofs as passive system for energy savings in buildings during the cooling period: use of rubber crumbs as drainage layer. Energy Efficiency, 2014, 7, 841-849.	1.3	34
32	Life cycle assessment (LCA) of phase change materials (PCMs) used in buildings. , 2014, , 287-310.		7
33	Stratification analysis in packed bed thermal energy storage systems. Applied Energy, 2013, 109, 476-487.	5.1	71
34	Evaluation of the environmental impact of experimental buildings with different constructive systems using Material Flow Analysis and Life Cycle Assessment. Applied Energy, 2013, 109, 544-552.	5.1	67
35	Thermal analysis of a ventilated facade with PCM for cooling applications. Energy and Buildings, 2013, 65, 508-515.	3.1	97
36	Building integration of PCM for natural cooling of buildings. Applied Energy, 2013, 109, 514-522.	5.1	113

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37	Numerical study on the thermal performance of a ventilated facade with PCM. Applied Thermal Engineering, 2013, 61, 372-380.	3.0	65
38	A correlation of the convective heat transfer coefficient between an air flow and a phase change material plate. Applied Thermal Engineering, 2013, 51, 1245-1254.	3.0	14
39	Life Cycle Assessment of experimental cubicles including PCM manufactured from natural resources (esters): A theoretical study. Renewable Energy, 2013, 51, 398-403.	4.3	57
40	Life Cycle Assessment of alveolar brick construction system incorporating phase change materials (PCMs). Applied Energy, 2013, 101, 600-608.	5.1	65
41	Numerical modelling of ventilated facades: A review. Renewable and Sustainable Energy Reviews, 2013, 22, 539-549.	8.2	94
42	Experimental study of a ventilated facade with PCM during winter period. Energy and Buildings, 2013, 58, 324-332.	3.1	132
43	Experimental analysis of the effectiveness of a high temperature thermal storage tank for solar cooling applications. Applied Thermal Engineering, 2013, 54, 521-527.	3.0	51
44	The use of phase change materials in fish farms: A general analysis. Applied Energy, 2013, 109, 488-496.	5.1	5
45	Thermochemical energy storage and conversion: A-state-of-the-art review of the experimental research under practical conditions. Renewable and Sustainable Energy Reviews, 2012, 16, 5207-5224.	8.2	307
46	Review on phase change materials (PCMs) for cold thermal energy storage applications. Applied Energy, 2012, 99, 513-533.	5.1	852
47	Thermal loads inside buildings with phase change materials: Experimental results. Energy Procedia, 2012, 30, 342-349.	1.8	27
48	Green roofs as passive system for energy savings when using rubber crumbs as drainage layer. Energy Procedia, 2012, 30, 452-460.	1.8	20
49	Solar Absorption in a Ventilated Facade with PCM. Experimental Results. Energy Procedia, 2012, 30, 986-994.	1.8	17
50	Evaluation of the environmental impact of experimental cubicles using Life Cycle Assessment: A highlight on the manufacturing phase. Applied Energy, 2012, 92, 534-544.	5.1	62
51	Use of microencapsulated PCM in buildings and the effect of adding awnings. Energy and Buildings, 2012, 44, 88-93.	3.1	89
52	Review of Solar Thermal Storage Techniques and Associated Heat Transfer Technologies. Proceedings of the IEEE, 2012, 100, 525-538.	16.4	70
53	Dynamic thermal performance of alveolar brick construction system. Energy Conversion and Management, 2011, 52, 2495-2500.	4.4	36
54	Maximisation of heat transfer in a coil in tank PCM cold storage system. Applied Energy, 2011, 88, 4120-4127.	5.1	119

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55	Materials used as PCM in thermal energy storage in buildings: A review. Renewable and Sustainable Energy Reviews, 2011, 15, 1675-1695.	8.2	1,333
56	Dynamic Thermal Response of Composite Materials. , 2011, , .		0
57	Dimensionless numbers used to characterize stratification in water tanks for discharging at low flow rates. Renewable Energy, 2010, 35, 2192-2199.	4.3	120
58	Experimental study on the performance of insulation materials in Mediterranean construction. Energy and Buildings, 2010, 42, 630-636.	3.1	206
59	Experimental study of using PCM in brick constructive solutions for passive cooling. Energy and Buildings, 2010, 42, 534-540.	3.1	426
60	Life Cycle Assessment of the inclusion of phase change materials (PCM) in experimental buildings. Energy and Buildings, 2010, 42, 1517-1523.	3.1	128
61	Economic Viability of a Molten Carbonate Fuel Cell Working With Biogas. Journal of Fuel Cell Science and Technology, 2010, 7, .	0.8	7
62	Thermal Behaviour of Mediterranean Buildings: Experimental Study. , 2010, , .		1
63	Experimental Study of PCM Inclusion in Different Building Envelopes. Journal of Solar Energy Engineering, Transactions of the ASME, 2009, 131, .	1.1	60
64	Comparison of Stratification in a Water Tank and a PCM-Water Tank. Journal of Solar Energy Engineering, Transactions of the ASME, 2009, 131, .	1.1	15
65	Natural convection heat transfer coefficients in phase change material (PCM) modules with external vertical fins. Applied Thermal Engineering, 2008, 28, 1676-1686.	3.0	168
66	Energetic and exergetic analysis of a domestic water tank with phase change material. International Journal of Energy Research, 2008, 32, 204-214.	2.2	36
67	Economics and climate change emissions analysis of a bioclimatic institutional building with trigeneration and solar support. Applied Thermal Engineering, 2008, 28, 2227-2235.	3.0	22
68	Economic Viability of a Molten Carbonate Fuel Cell Working With Biogas. , 2008, , .		1