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	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
2	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
3	Review on phase change materials (PCMs) for cold thermal energy storage applications. Applied Energy, 2012, 99, 513-533.	5.1	852
4	Experimental study of using PCM in brick constructive solutions for passive cooling. Energy and Buildings, 2010, 42, 534-540.	3.1	426
5	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
6	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
7	Experimental study on the performance of insulation materials in Mediterranean construction. Energy and Buildings, 2010, 42, 630-636.	3.1	206
8	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
9	Thermal assessment of extensive green roofs as passive tool for energy savings in buildings. Renewable Energy, 2016, 85, 1106-1115.	4.3	157
10	Radiative cooling as low-grade energy source: A literature review. Renewable and Sustainable Energy Reviews, 2017, 77, 803-820.	8.2	145
11	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
12	Experimental study of a ventilated facade with PCM during winter period. Energy and Buildings, 2013, 58, 324-332.	3.1	132
13	Life Cycle Assessment of the inclusion of phase change materials (PCM) in experimental buildings. Energy and Buildings, 2010, 42, 1517-1523.	3.1	128
14	Dimensionless numbers used to characterize stratification in water tanks for discharging at low flow rates. Renewable Energy, 2010, 35, 2192-2199.	4.3	120
15	Maximisation of heat transfer in a coil in tank PCM cold storage system. Applied Energy, 2011, 88, 4120-4127.	5.1	119
16	Building integration of PCM for natural cooling of buildings. Applied Energy, 2013, 109, 514-522.	5.1	113
17	Thermal analysis of a ventilated facade with PCM for cooling applications. Energy and Buildings, 2013, 65, 508-515.	3.1	97
18	Numerical modelling of ventilated facades: A review. Renewable and Sustainable Energy Reviews, 2013, 22, 539-549.	8.2	94

#	Article	IF	Citations
19	PCM thermal energy storage tanks in heat pump system for space cooling. Energy and Buildings, 2014, 82, 399-405.	3.1	94
20	Use of microencapsulated PCM in buildings and the effect of adding awnings. Energy and Buildings, 2012, 44, 88-93.	3.1	89
21	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
22	Stratification analysis in packed bed thermal energy storage systems. Applied Energy, 2013, 109, 476-487.	5.1	71
23	Energy performance of a ventilated double skin facade with PCM under different climates. Energy and Buildings, 2015, 91, 37-42.	3.1	71
24	Review of Solar Thermal Storage Techniques and Associated Heat Transfer Technologies. Proceedings of the IEEE, 2012, 100, 525-538.	16.4	70
25	An effectiveness-NTU technique for characterising a finned tubes PCM system using a CFD model. Applied Energy, 2014, 131, 377-385.	5.1	70
26	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
27	Modeling phase change materials behavior in building applications: Comments on material characterization and model validation. Renewable Energy, 2014, 61, 132-135.	4.3	69
28	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
29	Numerical study on the thermal performance of a ventilated facade with PCM. Applied Thermal Engineering, 2013, 61, 372-380.	3.0	65
30	Life Cycle Assessment of alveolar brick construction system incorporating phase change materials (PCMs). Applied Energy, 2013, 101, 600-608.	5.1	65
31	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
32	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
33	Experimental Study of PCM Inclusion in Different Building Envelopes. Journal of Solar Energy Engineering, Transactions of the ASME, 2009, 131, .	1.1	60
34	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
35	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
36	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

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37	Life cycle assessment of a ventilated facade with PCM in its air chamber. Solar Energy, 2014, 104, 115-123.	2.9	47
38	Control of a PCM ventilated facade using reinforcement learning techniques. Energy and Buildings, 2015, 106, 234-242.	3.1	43
39	An overview on design methodologies for liquidâ€“solid PCM storage systems. Renewable and Sustainable Energy Reviews, 2015, 52, 289-307.	8.2	40
40	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
41	Dynamic thermal performance of alveolar brick construction system. Energy Conversion and Management, 2011, 52, 2495-2500.	4.4	36
42	Experimental validation of a methodology to assess PCM effectiveness in cooling building envelopes passively. Energy and Buildings, 2014, 81, 59-71.	3.1	36
43	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
44	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
45	Experimental evaluation of a concrete core slab with phase change materials for cooling purposes. Energy and Buildings, 2016, 116, 411-419.	3.1	28
46	Thermal loads inside buildings with phase change materials: Experimental results. Energy Procedia, 2012, 30, 342-349.	1.8	27
47	The thermal behaviour of extensive green roofs under low plant coverage conditions. Energy Efficiency, 2015, 8, 881-894.	1.3	25
48	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
49	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
50	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
51	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
52	Green roofs as passive system for energy savings when using rubber crumbs as drainage layer. Energy Procedia, 2012, 30, 452-460.	1.8	20
53	Solar Absorption in a Ventilated Facade with PCM. Experimental Results. Energy Procedia, 2012, 30, 986-994.	1.8	17
54	Design of a Prefabricated Concrete Slab with PCM Inside the Hollows. Energy Procedia, 2014, 57, 2324-2332.	1.8	17

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55	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
56	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
57	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
58	A new flat-plate radiative cooling and solar collector numerical model: Evaluation and metamodeling. Energy, 2020, 202, 117750.	4.5	14
59	Combined Radiative Cooling and Solar Thermal Collection: Experimental Proof of Concept. Energies, 2020, 13, 893.	1.6	10
60	Mapping Nighttime and All-Day Radiative Cooling Potential in Europe and the Influence of Solar Reflectivity. Atmosphere, 2021, 12, 1119.	1.0	9
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	Life cycle assessment (LCA) of phase change materials (PCMs) used in buildings. , 2014, , 287-310.		7
63	Thermal characterization of buildings from the monitoring of the AC system consumption. Energy and Buildings, 2016, 116, 59-68.	3.1	7
64	The use of phase change materials in fish farms: A general analysis. Applied Energy, 2013, 109, 488-496.	5.1	5
65	Design of latent heat energy storage systems using phase change materials. , 2021, , 331-357.		4
66	Economic Viability of a Molten Carbonate Fuel Cell Working With Biogas. , 2008, , .		1
67	Thermal Behaviour of Mediterranean Buildings: Experimental Study. , 2010, , .		1
68	Dynamic Thermal Response of Composite Materials. , 2011, , .		0