

# Albert Castell

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

65 papers	5,909 citations	37 h-index	68 g-index
68 ext. papers	6,691 ext. citations	7.7 avg, IF	5.94 L-index

#	Paper	IF	Citations
65	Design of latent heat energy storage systems using phase change materials <b>2021</b> , 331-357		1
64	Mapping Nighttime and All-Day Radiative Cooling Potential in Europe and the Influence of Solar Reflectivity. <i>Atmosphere</i> , <b>2021</b> , 12, 1119	2.7	2
63	Adaptive covers for combined radiative cooling and solar heating. A review of existing technology and materials. <i>Solar Energy Materials and Solar Cells</i> , <b>2021</b> , 230, 111275	6.4	4
62	Combined Radiative Cooling and Solar Thermal Collection: Experimental Proof of Concept. <i>Energies</i> , <b>2020</b> , 13, 893	3.1	6
61	A new flat-plate radiative cooling and solar collector numerical model: Evaluation and metamodeling. <i>Energy</i> , <b>2020</b> , 202, 117750	7.9	8
60	Energy Savings Potential of a Novel Radiative Cooling and Solar Thermal Collection Concept in Buildings for Various World Climates. <i>Energy Technology</i> , <b>2018</b> , 6, 2200-2209	3.5	14
59	Radiative cooling as low-grade energy source: A literature review. <i>Renewable and Sustainable Energy Reviews</i> , <b>2017</b> , 77, 803-820	16.2	95
58	High density polyethylene spheres with PCM for domestic hot water applications: Water tank and laboratory scale study. <i>Journal of Energy Storage</i> , <b>2017</b> , 13, 262-267	7.8	37
57	Thermal assessment of extensive green roofs as passive tool for energy savings in buildings. <i>Renewable Energy</i> , <b>2016</b> , 85, 1106-1115	8.1	110
56	Thermal energy storage in building integrated thermal systems: A review. Part 2. Integration as passive system. <i>Renewable Energy</i> , <b>2016</b> , 85, 1334-1356	8.1	155
55	Experimental study of an active slab with PCM coupled to a solar air collector for heating purposes. <i>Energy and Buildings</i> , <b>2016</b> , 128, 12-21	7	45
54	Experimental evaluation of a concrete core slab with phase change materials for cooling purposes. <i>Energy and Buildings</i> , <b>2016</b> , 116, 411-419	7	23
53	Thermal characterization of buildings from the monitoring of the AC system consumption. <i>Energy and Buildings</i> , <b>2016</b> , 116, 59-68	7	5
52	Thermal behaviour of insulation and phase change materials in buildings with internal heat loads: experimental study. <i>Energy Efficiency</i> , <b>2015</b> , 8, 895-904	3	14
51	Control of a PCM ventilated facade using reinforcement learning techniques. <i>Energy and Buildings</i> , <b>2015</b> , 106, 234-242	7	31
50	PCM incorporation in a concrete core slab as a thermal storage and supply system: Proof of concept. <i>Energy and Buildings</i> , <b>2015</b> , 103, 70-82	7	58
49	A simple model to predict the thermal performance of a ventilated facade with phase change materials. <i>Energy and Buildings</i> , <b>2015</b> , 93, 137-142	7	22

48	The thermal behaviour of extensive green roofs under low plant coverage conditions. <i>Energy Efficiency</i> , <b>2015</b> , 8, 881-894	3	17
47	An overview on design methodologies for liquid-solid PCM storage systems. <i>Renewable and Sustainable Energy Reviews</i> , <b>2015</b> , 52, 289-307	16.2	27
46	Energy performance of a ventilated double skin facade with PCM under different climates. <i>Energy and Buildings</i> , <b>2015</b> , 91, 37-42	7	55
45	Numerical model evaluation of a PCM cold storage tank and uncertainty analysis of the parameters. <i>Applied Thermal Engineering</i> , <b>2014</b> , 67, 16-23	5.8	17
44	Modeling phase change materials behavior in building applications: Comments on material characterization and model validation. <i>Renewable Energy</i> , <b>2014</b> , 61, 132-135	8.1	60
43	Life cycle assessment of a ventilated facade with PCM in its air chamber. <i>Solar Energy</i> , <b>2014</b> , 104, 115-123	3.8	42
42	Environmental performance of recycled rubber as drainage layer in extensive green roofs. A comparative Life Cycle Assessment. <i>Building and Environment</i> , <b>2014</b> , 74, 22-30	6.5	47
41	Experimental validation of a methodology to assess PCM effectiveness in cooling building envelopes passively. <i>Energy and Buildings</i> , <b>2014</b> , 81, 59-71	7	27
40	The use of phase change materials in domestic heat pump and air-conditioning systems for short term storage: A review. <i>Renewable and Sustainable Energy Reviews</i> , <b>2014</b> , 39, 1-13	16.2	93
39	An effectiveness-NTU technique for characterising a finned tubes PCM system using a CFD model. <i>Applied Energy</i> , <b>2014</b> , 131, 377-385	10.7	55
38	PCM thermal energy storage tanks in heat pump system for space cooling. <i>Energy and Buildings</i> , <b>2014</b> , 82, 399-405	7	76
37	Green roofs as passive system for energy savings in buildings during the cooling period: use of rubber crumbs as drainage layer. <i>Energy Efficiency</i> , <b>2014</b> , 7, 841-849	3	23
36	Life cycle assessment (LCA) of phase change materials (PCMs) used in buildings <b>2014</b> , 287-310		3
35	Design of a Prefabricated Concrete Slab with PCM Inside the Hollows. <i>Energy Procedia</i> , <b>2014</b> , 57, 2324-2332	3.2	13
34	Life cycle assessment (LCA) and life cycle energy analysis (LCEA) of buildings and the building sector: A review. <i>Renewable and Sustainable Energy Reviews</i> , <b>2014</b> , 29, 394-416	16.2	739
33	Stratification analysis in packed bed thermal energy storage systems. <i>Applied Energy</i> , <b>2013</b> , 109, 476-487	10.7	50
32	Evaluation of the environmental impact of experimental buildings with different constructive systems using Material Flow Analysis and Life Cycle Assessment. <i>Applied Energy</i> , <b>2013</b> , 109, 544-552	10.7	58
31	Thermal analysis of a ventilated facade with PCM for cooling applications. <i>Energy and Buildings</i> , <b>2013</b> , 65, 508-515	7	81

30	Building integration of PCM for natural cooling of buildings. <i>Applied Energy</i> , <b>2013</b> , 109, 514-522	10.7	94
29	Numerical study on the thermal performance of a ventilated facade with PCM. <i>Applied Thermal Engineering</i> , <b>2013</b> , 61, 372-380	5.8	60
28	A correlation of the convective heat transfer coefficient between an air flow and a phase change material plate. <i>Applied Thermal Engineering</i> , <b>2013</b> , 51, 1245-1254	5.8	13
27	Life Cycle Assessment of experimental cubicles including PCM manufactured from natural resources (esters): A theoretical study. <i>Renewable Energy</i> , <b>2013</b> , 51, 398-403	8.1	49
26	Life Cycle Assessment of alveolar brick construction system incorporating phase change materials (PCMs). <i>Applied Energy</i> , <b>2013</b> , 101, 600-608	10.7	58
25	Numerical modelling of ventilated facades: A review. <i>Renewable and Sustainable Energy Reviews</i> , <b>2013</b> , 22, 539-549	16.2	75
24	Experimental study of a ventilated facade with PCM during winter period. <i>Energy and Buildings</i> , <b>2013</b> , 58, 324-332	7	100
23	Experimental analysis of the effectiveness of a high temperature thermal storage tank for solar cooling applications. <i>Applied Thermal Engineering</i> , <b>2013</b> , 54, 521-527	5.8	42
22	The use of phase change materials in fish farms: A general analysis. <i>Applied Energy</i> , <b>2013</b> , 109, 488-496	10.7	3
21	Use of microencapsulated PCM in buildings and the effect of adding awnings. <i>Energy and Buildings</i> , <b>2012</b> , 44, 88-93	7	77
20	Review of Solar Thermal Storage Techniques and Associated Heat Transfer Technologies. <i>Proceedings of the IEEE</i> , <b>2012</b> , 100, 525-538	14.3	60
19	Thermochemical energy storage and conversion: A-state-of-the-art review of the experimental research under practical conditions. <i>Renewable and Sustainable Energy Reviews</i> , <b>2012</b> , 16, 5207-5224	16.2	248
18	Review on phase change materials (PCMs) for cold thermal energy storage applications. <i>Applied Energy</i> , <b>2012</b> , 99, 513-533	10.7	667
17	Thermal loads inside buildings with phase change materials: Experimental results. <i>Energy Procedia</i> , <b>2012</b> , 30, 342-349	2.3	21
16	Green roofs as passive system for energy savings when using rubber crumbs as drainage layer. <i>Energy Procedia</i> , <b>2012</b> , 30, 452-460	2.3	15
15	Solar Absorption in a Ventilated Facade with PCM. Experimental Results. <i>Energy Procedia</i> , <b>2012</b> , 30, 986-994	2.3	13
14	Evaluation of the environmental impact of experimental cubicles using Life Cycle Assessment: A highlight on the manufacturing phase. <i>Applied Energy</i> , <b>2012</b> , 92, 534-544	10.7	54
13	Dynamic thermal performance of alveolar brick construction system. <i>Energy Conversion and Management</i> , <b>2011</b> , 52, 2495-2500	10.6	33

12	Maximisation of heat transfer in a coil in tank PCM cold storage system. <i>Applied Energy</i> , <b>2011</b> , 88, 4120-4127	10.7	102
11	Materials used as PCM in thermal energy storage in buildings: A review. <i>Renewable and Sustainable Energy Reviews</i> , <b>2011</b> , 15, 1675-1695	16.2	1068
10	Economic Viability of a Molten Carbonate Fuel Cell Working With Biogas. <i>Journal of Fuel Cell Science and Technology</i> , <b>2010</b> , 7,		7
9	Dimensionless numbers used to characterize stratification in water tanks for discharging at low flow rates. <i>Renewable Energy</i> , <b>2010</b> , 35, 2192-2199	8.1	92
8	Experimental study on the performance of insulation materials in Mediterranean construction. <i>Energy and Buildings</i> , <b>2010</b> , 42, 630-636	7	154
7	Experimental study of using PCM in brick constructive solutions for passive cooling. <i>Energy and Buildings</i> , <b>2010</b> , 42, 534-540	7	347
6	Life Cycle Assessment of the inclusion of phase change materials (PCM) in experimental buildings. <i>Energy and Buildings</i> , <b>2010</b> , 42, 1517-1523	7	101
5	Experimental Study of PCM Inclusion in Different Building Envelopes. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , <b>2009</b> , 131,	2.3	52
4	Comparison of Stratification in a Water Tank and a PCM-Water Tank. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , <b>2009</b> , 131,	2.3	13
3	Natural convection heat transfer coefficients in phase change material (PCM) modules with external vertical fins. <i>Applied Thermal Engineering</i> , <b>2008</b> , 28, 1676-1686	5.8	131
2	Energetic and exergetic analysis of a domestic water tank with phase change material. <i>International Journal of Energy Research</i> , <b>2008</b> , 32, 204-214	4.5	27
1	Economics and climate change emissions analysis of a bioclimatic institutional building with trigeneration and solar support. <i>Applied Thermal Engineering</i> , <b>2008</b> , 28, 2227-2235	5.8	19