Luisa F Cabeza

List of Publications by Citations

422 papers	22,100 citations	69 h-index	136 g-index
434 ext. papers	25,909 ext. citations	7.1 avg, IF	7.61 L-index

#	Paper	IF	Citations
422	Review on thermal energy storage with phase change: materials, heat transfer analysis and applications. *Applied Thermal Engineering*, **2003**, 23, 251-283	5.8	3139
421	State of the art on high temperature thermal energy storage for power generation. Part 1Concepts, materials and modellization. *Renewable and Sustainable Energy Reviews*, **2010**, 14, 31-55	16.2	1116
420	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	16.2	739
419	Use of microencapsulated PCM in concrete walls for energy savings. *Energy and Buildings*, **2007**, 39, 113-119	3.7	566
418	Heating and cooling energy trends and drivers in buildings. *Renewable and Sustainable Energy Reviews*, **2015**, 41, 85-98	16.2	464
417	State of the art on high-temperature thermal energy storage for power generation. Part 2Case studies. *Renewable and Sustainable Energy Reviews*, **2010**, 14, 56-72	16.2	449
416	Phase change materials and thermal energy storage for buildings. *Energy and Buildings*, **2015**, 103, 414-419	3.7	361
415	Heat and cold storage with PCM. *Heat and Mass Transfer*, **2008**,	0.3	315
414	Types, methods, techniques, and applications for microencapsulated phase change materials (MPCM): A review. *Renewable and Sustainable Energy Reviews*, **2016**, 53, 1059-1075	16.2	286
413	Experimental evaluation of commercial heat exchangers for use as PCM thermal storage systems. *Applied Energy*, **2009**, 86, 2047-2055	10.7	286
412	Thermal energy storage (TES) for industrial waste heat (IWH) recovery: A review. *Applied Energy*, **2016**, 179, 284-301	10.7	278
411	Industrial waste heat recovery technologies: An economic analysis of heat transformation technologies. *Applied Energy*, **2015**, 151, 157-167	10.7	257
410	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	16.2	248
409	Free-cooling of buildings with phase change materials. *International Journal of Refrigeration*, **2004**, 27, 839-849	3.8	241
408	Green vertical systems for buildings as passive systems for energy savings. *Applied Energy*, **2011**, 88, 4854-4859	10.7	229
407	Review of technology: Thermochemical energy storage for concentrated solar power plants. *Renewable and Sustainable Energy Reviews*, **2016**, 60, 909-929	16.2	218
406	Vertical Greenery Systems (VGS) for energy saving in buildings: A review. *Renewable and Sustainable Energy Reviews*, **2014**, 39, 139-165	16.2	213

405	Low carbon and low embodied energy materials in buildings: A review. *Renewable and Sustainable Energy Reviews*, **2013**, 23, 536-542	16.2	201
404	Experimentation with a water tank including a PCM module. *Solar Energy Materials and Solar Cells*, **2006**, 90, 1273-1282	6.4	180
403	Thermal energy storage in building integrated thermal systems: A review. Part 1. active storage systems. *Renewable Energy*, **2016**, 88, 526-547	8.1	178
402	Utilization of phase change materials in solar domestic hot water systems. *Renewable Energy*, **2009**, 34, 1639-1643	8.1	175
401	Vertical greenery systems for energy savings in buildings: A comparative study between green walls and green facades. *Building and Environment*, **2017**, 111, 228-237	6.5	164
400	Thermal energy storage in building integrated thermal systems: A review. Part 2. Integration as passive system. *Renewable Energy*, **2016**, 85, 1334-1356	8.1	155
399	Simulation-based optimization of PCM melting temperature to improve the energy performance in buildings. *Applied Energy*, **2017**, 202, 420-434	10.7	153
398	Improvement of a thermal energy storage using plates with paraffin–graphite composite. *International Journal of Heat and Mass Transfer*, **2005**, 48, 2561-2570	4.9	152
397	Stability of sugar alcohols as PCM for thermal energy storage. *Solar Energy Materials and Solar Cells*, **2014**, 126, 125-134	6.4	143
396	Determination of enthalpy–temperature curves of phase change materials with the temperature-history method: improvement to temperature dependent properties. *Measurement Science and Technology*, **2003**, 14, 184-189	2	142
395	Natural convection heat transfer coefficients in phase change material (PCM) modules with external vertical fins. *Applied Thermal Engineering*, **2008**, 28, 1676-1686	5.8	131
394	Overview of thermal energy storage (TES) potential energy savings and climate change mitigation in Spain and Europe. *Applied Energy*, **2011**, 88, 2764-2774	10.7	129
393	Passive cooling of buildings with phase change materials using whole-building energy simulation tools: A review. *Renewable and Sustainable Energy Reviews*, **2017**, 80, 1239-1255	16.2	128
392	Thermal performance of sodium acetate trihydrate thickened with different materials as phase change energy storage material. *Applied Thermal Engineering*, **2003**, 23, 1697-1704	5.8	128
391	State of the art on gas–solid thermochemical energy storage systems and reactors for building applications. *Renewable and Sustainable Energy Reviews*, **2015**, 47, 386-398	16.2	126
390	Review on sorption materials and technologies for heat pumps and thermal energy storage. *Renewable Energy*, **2017**, 110, 3-39	8.1	126
389	Supercritical CO2 as heat transfer fluid: A review. *Applied Thermal Engineering*, **2017**, 125, 799-810	5.8	119
388	Experimental evaluation at pilot plant scale of multiple PCMs (cascaded) vs. single PCM configuration for thermal energy storage. *Renewable Energy*, **2015**, 83, 729-736	8.1	116

387	Energy savings due to the use of PCM for relocatable lightweight buildings passive heating and cooling in different weather conditions. *Energy and Buildings*, **2016**, 129, 274-283	7	115
386	Review of the T-history method to determine thermophysical properties of phase change materials (PCM). *Renewable and Sustainable Energy Reviews*, **2013**, 26, 425-436	16.2	113
385	Comparative life cycle assessment of thermal energy storage systems for solar power plants. *Renewable Energy*, **2012**, 44, 166-173	8.1	112
384	Thermal assessment of extensive green roofs as passive tool for energy savings in buildings. *Renewable Energy*, **2016**, 85, 1106-1115	8.1	110
383	Economic impact of integrating PCM as passive system in buildings using Fanger comfort model. *Energy and Buildings*, **2016**, 112, 159-172	7	109
382	Intercomparative tests on phase change materials characterisation with differential scanning calorimeter. *Applied Energy*, **2013**, 109, 415-420	10.7	104
381	Mainstreaming commercial CSP systems: A technology review. *Renewable Energy*, **2019**, 140, 152-176	8.1	103
380	Study on differential scanning calorimetry analysis with two operation modes and organic and inorganic phase change material (PCM). *Thermochimica Acta*, **2013**, 553, 23-26	2.9	103
379	Green facade for energy savings in buildings: The influence of leaf area index and facade orientation on the shadow effect. *Applied Energy*, **2017**, 187, 424-437	10.7	101
378	Life Cycle Assessment of the inclusion of phase change materials (PCM) in experimental buildings. *Energy and Buildings*, **2010**, 42, 1517-1523	7	101
377	Numerical simulation of a PCM packed bed system: A review. *Renewable and Sustainable Energy Reviews*, **2017**, 69, 1055-1063	16.2	100
376	Experimental study of a ventilated facade with PCM during winter period. *Energy and Buildings*, **2013**, 58, 324-332	7	100
375	An approach to the simulation of PCMs in building applications using TRNSYS. *Applied Thermal Engineering*, **2005**, 25, 1796-1807	5.8	99
374	Mapping and discussing Industrial Waste Heat (IWH) potentials for different countries. *Renewable and Sustainable Energy Reviews*, **2015**, 51, 847-855	16.2	96
373	Building integration of PCM for natural cooling of buildings. *Applied Energy*, **2013**, 109, 514-522	10.7	94
372	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	16.2	93
371	Modelization of a water tank including a PCM module. *Applied Thermal Engineering*, **2006**, 26, 1328-1333	5.8	85
370	Simulation and control of thermally activated building systems (TABS). *Energy and Buildings*, **2016**, 127, 22-42	7	85

369	Advances in the valorization of waste and by-product materials as thermal energy storage (TES) materials. *Renewable and Sustainable Energy Reviews*, **2016**, 59, 763-783	16.2	83
368	Review on system and materials requirements for high temperature thermal energy storage. Part 1: General requirements. *Renewable and Sustainable Energy Reviews*, **2017**, 75, 1320-1338	16.2	82
367	Review on the methodology used in thermal stability characterization of phase change materials. *Renewable and Sustainable Energy Reviews*, **2015**, 50, 665-685	16.2	82
366	Effect of microencapsulated phase change material in sandwich panels. *Renewable Energy*, **2010**, 35, 2370-2374	8.1	82
365	Thermal analysis of a ventilated facade with PCM for cooling applications. *Energy and Buildings*, **2013**, 65, 508-515	7	81
364	Optimized demand side management (DSM) of peak electricity demand by coupling low temperature thermal energy storage (TES) and solar PV. *Applied Energy*, **2018**, 211, 604-616	10.7	79
363	Lithium in thermal energy storage: A state-of-the-art review. *Renewable and Sustainable Energy Reviews*, **2015**, 42, 1106-1112	16.2	77
362	Thermal energy storage (TES) with phase change materials (PCM) in solar power plants (CSP). Concept and plant performance. *Applied Energy*, **2019**, 254, 113646	10.7	77
361	Use of microencapsulated PCM in buildings and the effect of adding awnings. *Energy and Buildings*, **2012**, 44, 88-93	7	77
360	PCM thermal energy storage tanks in heat pump system for space cooling. *Energy and Buildings*, **2014**, 82, 399-405	7	76
359	Methods to estimate the industrial waste heat potential of regions □A categorization and literature review. *Renewable and Sustainable Energy Reviews*, **2014**, 38, 164-171	16.2	75
358	Numerical modelling of ventilated facades: A review. *Renewable and Sustainable Energy Reviews*, **2013**, 22, 539-549	16.2	75
357	Corrosion of metal and metal alloy containers in contact with phase change materials (PCM) for potential heating and cooling applications. *Applied Energy*, **2014**, 125, 238-245	10.7	74
356	Considerations for the use of metal alloys as phase change materials for high temperature applications. *Solar Energy Materials and Solar Cells*, **2017**, 171, 275-281	6.4	72
355	Multi-objective optimization coupled with life cycle assessment for retrofitting buildings. *Energy and Buildings*, **2014**, 82, 92-99	7	70
354	Multifunctional smart concretes with novel phase change materials: Mechanical and thermo-energy investigation. *Applied Energy*, **2018**, 212, 1448-1461	10.7	69
353	Corrosion of metal containers for use in PCM energy storage. *Renewable Energy*, **2015**, 76, 465-469	8.1	68
352	Unconventional experimental technologies available for phase change materials (PCM) characterization. Part 1. Thermophysical properties. *Renewable and Sustainable Energy Reviews*, **2015**, 43, 1399-1414	16.2	65

351	Corrosion of metals and salt hydrates used for thermochemical energy storage. *Renewable Energy*, **2015**, 75, 519-523	8.1	64
350	Experimental characterization of a solid industrial by-product as material for high temperature sensible thermal energy storage (TES). *Applied Energy*, **2014**, 113, 1261-1268	10.7	64
349	Measurement of enthalpy curves of phase change materials via DSC and T-History: When are both methods needed to estimate the behaviour of the bulk material in applications?. *Thermochimica Acta*, **2014**, 596, 79-88	2.9	62
348	Improvement of the thermal inertia of building materials incorporating PCM. Evaluation in the macroscale. *Applied Energy*, **2013**, 109, 428-432	10.7	62
347	Technological options and strategies towards zero energy buildings contributing to climate change mitigation: A systematic review. *Energy and Buildings*, **2020**, 219, 110009	7	62
346	New proposed methodology for specific heat capacity determination of materials for thermal energy storage (TES) by DSC. *Journal of Energy Storage*, **2017**, 11, 1-6	7.8	60
345	Enhanced thermal energy supply via central solar heating plants with seasonal storage: A multi-objective optimization approach. *Applied Energy*, **2016**, 181, 549-561	10.7	60
344	Modeling phase change materials behavior in building applications: Comments on material characterization and model validation. *Renewable Energy*, **2014**, 61, 132-135	8.1	60
343	Review of Solar Thermal Storage Techniques and Associated Heat Transfer Technologies. *Proceedings of the IEEE*, **2012**, 100, 525-538	14.3	60
342	Numerical study on the thermal performance of a ventilated facade with PCM. *Applied Thermal Engineering*, **2013**, 61, 372-380	5.8	60
341	Integration of renewable technologies in historical and heritage buildings: A review. *Energy and Buildings*, **2018**, 177, 96-111	7	59
340	Corrosion of metal and polymer containers for use in PCM cold storage. *Applied Energy*, **2013**, 109, 449-453	10.7	59
339	Experimental analysis of hydroquinone used as phase change material (PCM) to be applied in solar cooling refrigeration. *International Journal of Refrigeration*, **2014**, 39, 95-103	3.8	59
338	Thermal analysis of a low temperature storage unit using phase change materials without refrigeration system. *International Journal of Refrigeration*, **2012**, 35, 1709-1714	3.8	59
337	Material selection and testing for thermal energy storage in solar cooling. *Renewable Energy*, **2013**, 57, 366-371	8.1	59
336	Acoustic insulation capacity of Vertical Greenery Systems for buildings. *Applied Acoustics*, **2016**, 110, 218-226	3.1	59
335	PCM incorporation in a concrete core slab as a thermal storage and supply system: Proof of concept. *Energy and Buildings*, **2015**, 103, 70-82	7	58
334	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	10.7	58

333	Life Cycle Assessment of alveolar brick construction system incorporating phase change materials (PCMs). *Applied Energy*, **2013**, 101, 600-608	10.7	58
332	Physico-chemical and mechanical properties of microencapsulated phase change material. *Applied Energy*, **2013**, 109, 441-448	10.7	58
331	Comparison of three different devices available in Spain to test thermal properties of building materials including phase change materials. *Applied Energy*, **2013**, 109, 421-427	10.7	55
330	Energy performance of a ventilated double skin facade with PCM under different climates. *Energy and Buildings*, **2015**, 91, 37-42	7	55
329	Evaluation of the environmental impact of experimental cubicles using Life Cycle Assessment: A highlight on the manufacturing phase. *Applied Energy*, **2012**, 92, 534-544	10.7	54
328	Corrosion testing device for in-situ corrosion characterization in operational molten salts storage tanks: A516 Gr70 carbon steel performance under molten salts exposure. *Solar Energy Materials and Solar Cells*, **2016**, 157, 383-392	6.4	51
327	Use of rubber crumbs as drainage layer in green roofs as potential energy improvement material. *Applied Energy*, **2012**, 97, 347-354	10.7	51
326	Stratification analysis in packed bed thermal energy storage systems. *Applied Energy*, **2013**, 109, 476-487	10.7	50
325	Multi-objective optimization of thermal modelled cubicles considering the total cost and life cycle environmental impact. *Energy and Buildings*, **2015**, 88, 335-346	7	49
324	Life Cycle Assessment of experimental cubicles including PCM manufactured from natural resources (esters): A theoretical study. *Renewable Energy*, **2013**, 51, 398-403	8.1	49
323	Embodied energy and cost of high temperature thermal energy storage systems for use with concentrated solar power plants. *Applied Energy*, **2016**, 180, 586-597	10.7	49
322	Key performance indicators in thermal energy storage: Survey and assessment. *Renewable Energy*, **2015**, 83, 820-827	8.1	48
321	Materials and system requirements of high temperature thermal energy storage systems: A review. Part 2: Thermal conductivity enhancement techniques. *Renewable and Sustainable Energy Reviews*, **2016**, 60, 1584-1601	16.2	48
320	Environmental performance of recycled rubber as drainage layer in extensive green roofs. A comparative Life Cycle Assessment. *Building and Environment*, **2014**, 74, 22-30	6.5	47
319	Thermophysical characterization of a by-product from the non-metallic industry as inorganic PCM. *Solar Energy Materials and Solar Cells*, **2015**, 132, 385-391	6.4	46
318	Thermal behaviour of d-mannitol when used as PCM: Comparison of results obtained by DSC and in a thermal energy storage unit at pilot plant scale. *Applied Energy*, **2013**, 111, 1107-1113	10.7	46
317	Energy management and CO2 mitigation using phase change materials (PCM) for thermal energy storage (TES) in cold storage and transport. *International Journal of Refrigeration*, **2014**, 42, 26-35	3.8	46
316	Experimental study of an active slab with PCM coupled to a solar air collector for heating purposes. *Energy and Buildings*, **2016**, 128, 12-21	7	45

315	Effect of d-mannitol polymorphism in its thermal energy storage capacity when it is used as PCM. *Solar Energy*, **2013**, 94, 344-351	6.8	45
314	Performance comparison of a group of thermal conductivity enhancement methodology in phase change material for thermal storage application. *Renewable Energy*, **2016**, 97, 434-443	8.1	44
313	Investigating greenhouse challenge from growing trends of electricity consumption through home appliances in buildings. *Renewable and Sustainable Energy Reviews*, **2014**, 36, 188-193	16.2	44
312	Multi-objective design of reverse osmosis plants integrated with solar Rankine cycles and thermal energy storage. *Applied Energy*, **2013**, 102, 1137-1147	10.7	44
311	Heating and cooling energy trends and drivers in Europe. *Energy*, **2017**, 119, 425-434	7.9	43
310	Experimental evaluation of the use of fins and metal wool as heat transfer enhancement techniques in a latent heat thermal energy storage system. *Energy Conversion and Management*, **2019**, 184, 530-538	10.6	43
309	Embodied energy in thermal energy storage (TES) systems for high temperature applications. *Applied Energy*, **2015**, 137, 793-799	10.7	43
308	Comparative study of different numerical models of packed bed thermal energy storage systems. *Applied Thermal Engineering*, **2013**, 50, 384-392	5.8	43
307	Life cycle assessment of a ventilated facade with PCM in its air chamber. *Solar Energy*, **2014**, 104, 115-123	3.8	42
306	Experimental analysis of the effectiveness of a high temperature thermal storage tank for solar cooling applications. *Applied Thermal Engineering*, **2013**, 54, 521-527	5.8	42
305	Multi-objective optimisation of bio-based thermal insulation materials in building envelopes considering condensation risk. *Applied Energy*, **2018**, 224, 602-614	10.7	42
304	CO 2 mitigation accounting for Thermal Energy Storage (TES) case studies. *Applied Energy*, **2015**, 155, 365-377	10.7	41
303	Thermal stress reduction in cool roof membranes using phase change materials (PCM). *Energy and Buildings*, **2018**, 158, 1097-1105	7	41
302	Health hazard, cycling and thermal stability as key parameters when selecting a suitable phase change material (PCM). *Thermochimica Acta*, **2016**, 627-629, 39-47	2.9	41
301	Thermophysical characterization and thermal cycling stability of two TCM: CaCl2 and zeolite. *Applied Energy*, **2015**, 137, 726-730	10.7	41
300	Review of Reactors with Potential Use in Thermochemical Energy Storage in Concentrated Solar Power Plants. *Energies*, **2018**, 11, 2358	3.1	41
299	Molten salt corrosion mechanisms of nitrate based thermal energy storage materials for concentrated solar power plants: A review. *Solar Energy Materials and Solar Cells*, **2019**, 194, 160-165	6.4	40
298	Characterization of wastes based on inorganic double salt hydrates as potential thermal energy storage materials. *Solar Energy Materials and Solar Cells*, **2017**, 170, 149-159	6.4	39

297	New database to select phase change materials: Chemical nature, properties, and applications. *Journal of Energy Storage*, **2015**, 3, 18-24	7.8	39
296	Development and characterization of new shape-stabilized phase change material (PCM)Polymer including electrical arc furnace dust (EAFD), for acoustic and thermal comfort in buildings. *Energy and Buildings*, **2013**, 61, 210-214	7	39
295	Requirements to consider when choosing a thermochemical material for solar energy storage. *Solar Energy*, **2013**, 97, 398-404	6.8	39
294	Optimal control of natural ventilation as passive cooling strategy for improving the energy performance of building envelope with PCM integration. *Renewable Energy*, **2020**, 162, 171-181	8.1	39
293	PCM for improving polyurethane-based cool roof membranes durability. *Solar Energy Materials and Solar Cells*, **2017**, 160, 34-42	6.4	38
292	Polymeric interlayer materials for laminated glass: A review. *Construction and Building Materials*, **2020**, 230, 116897	6.7	38
291	Thermal energy storage evaluation in direct steam generation solar plants. *Solar Energy*, **2018**, 159, 501-509	5.8	38
290	Comparative Analysis of Web of Science and Scopus on the Energy Efficiency and Climate Impact of Buildings. *Energies*, **2020**, 13, 409	3.1	37
289	Experimental analysis of the effective thermal conductivity enhancement of PCM using finned tubes in high temperature bulk tanks. *Applied Thermal Engineering*, **2018**, 142, 736-744	5.8	37
288	Experimental study on the selection of phase change materials for low temperature applications. *Renewable Energy*, **2013**, 57, 130-136	8.1	37
287	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	7.8	37
286	Comparative study of the thermal performance of four different shell-and-tube heat exchangers used as latent heat thermal energy storage systems. *Renewable Energy*, **2017**, 114, 934-944	8.1	37
285	Thermochemical energy storage by consecutive reactions for higher efficient concentrated solar power plants (CSP): Proof of concept. *Applied Energy*, **2017**, 185, 836-845	10.7	37
284	Advances Toward a Net-Zero Global Building Sector. *Annual Review of Environment and Resources*, **2020**, 45, 227-269	17.2	37
283	MgSO4□7H2O filled macro cellular foams: An innovative composite sorbent for thermo-chemical energy storage applications for solar buildings. *Solar Energy*, **2018**, 173, 1278-1286	6.8	37
282	Experimental set-up for testing active and passive systems for energy savings in buildings □Lessons learnt. *Renewable and Sustainable Energy Reviews*, **2018**, 82, 1014-1026	16.2	36
281	Affordable construction towards sustainable buildings: review on embodied energy in building materials. *Current Opinion in Environmental Sustainability*, **2013**, 5, 229-236	7.2	36
280	Heat transfer enhancement of fatty acids when used as PCMs in thermal energy storage. *International Journal of Energy Research*, **2008**, 32, 135-143	4.5	36

279	In situ thermal and acoustic performance and environmental impact of the introduction of a shape-stabilized PCM layer for building applications. *Renewable Energy*, **2016**, 85, 281-286	8.1	35
278	Two-tank molten salts thermal energy storage system for solar power plants at pilot plant scale: Lessons learnt and recommendations for its design, start-up and operation. *Renewable Energy*, **2018**, 121, 236-248	8.1	35
277	Experimental investigation of the effect of dynamic melting in a cylindrical shell-and-tube heat exchanger using water as PCM. *Applied Energy*, **2017**, 185, 136-145	10.7	35
276	Thermal Energy Storage Implementation Using Phase Change Materials for Solar Cooling and Refrigeration Applications. *Energy Procedia*, **2012**, 30, 947-956	2.3	35
275	Behaviour of a concrete wall containing micro-encapsulated PCM after a decade of its construction. *Solar Energy*, **2020**, 200, 108-113	6.8	35
274	Single layer mortars with microencapsulated PCM: Study of physical and thermal properties, and fire behaviour. *Energy and Buildings*, **2016**, 111, 393-400	7	35
273	Benchmarking of useful phase change materials for a building application. *Energy and Buildings*, **2019**, 182, 45-50	7	35
272	Numerical simulation of a finned-tube LHTES system: influence of the mushy zone constant on the phase change behaviour. *Energy Procedia*, **2017**, 126, 517-524	2.3	34
271	Experimental Evaluation of a Paraffin as Phase Change Material for Thermal Energy Storage in Laboratory Equipment and in a Shell-and-Tube Heat Exchanger. *Applied Sciences (Switzerland)*, **2016**, 6, 112	2.6	33
270	Process integration of thermal energy storage systems Evaluation methodology and case studies. *Applied Energy*, **2018**, 230, 750-760	10.7	33
269	Circular economy in the building and construction sector: A scientific evolution analysis. *Journal of Building Engineering*, **2021**, 44, 102704	5.2	33
268	Thermal storage in a MW scale. Molten salt solar thermal pilot facility: Plant description and commissioning experiences. *Renewable Energy*, **2016**, 99, 852-866	8.1	32
267	A comparative life cycle assessment (LCA) of different insulation materials for buildings in the continental Mediterranean climate. *Energy and Buildings*, **2020**, 225, 110323	7	32
266	Model predictive control strategy applied to different types of building for space heating. *Applied Energy*, **2018**, 231, 959-971	10.7	32
265	Control of a PCM ventilated facade using reinforcement learning techniques. *Energy and Buildings*, **2015**, 106, 234-242	7	31
264	Design and performance of energy-efficient solar residential house in Andorra. *Applied Energy*, **2011**, 88, 1343-1353	10.7	31
263	Palm oil-based bio-PCM for energy efficient building applications: Multipurpose thermal investigation and life cycle assessment. *Journal of Energy Storage*, **2020**, 28, 101129	7.8	30
262	Renewable energy research and technologies through responsible research and innovation looking glass: Reflexions, theoretical approaches and contemporary discourses. *Applied Energy*, **2018**, 211, 792-808	10.7	30

261	Active phase change material package for thermal protection of ice cream containers. *International Journal of Refrigeration*, **2013**, 36, 102-109	3.8	30
260	Optimization of three new compositions of stabilized rammed earth incorporating PCM: Thermal properties characterization and LCA. *Construction and Building Materials*, **2013**, 47, 872-878	6.7	29
259	New equipment for testing steady and transient thermal performance of multilayered building envelopes with PCM. *Energy and Buildings*, **2011**, 43, 3704-3709	7	29
258	Evaluation of energy density as performance indicator for thermal energy storage at material and system levels. *Applied Energy*, **2019**, 235, 954-962	10.7	29
257	Corrosion monitoring and mitigation techniques on advanced thermal energy storage materials for CSP plants. *Solar Energy Materials and Solar Cells*, **2019**, 192, 179-187	6.4	29
256	New Green Facades as Passive Systems for Energy Savings on Buildings. *Energy Procedia*, **2014**, 57, 1851-1859	2.3	28
255	Recent developments of thermal energy storage applications in the built environment: A bibliometric analysis and systematic review. *Applied Thermal Engineering*, **2021**, 189, 116666	5.8	28
254	Molten salt facilities, lessons learnt at pilot plant scale to guarantee commercial plants; heat losses evaluation and correction. *Renewable Energy*, **2016**, 94, 175-185	8.1	28
253	Reduction of the subcooling of bischofite with the use of nucleatings agents. *Solar Energy Materials and Solar Cells*, **2016**, 157, 1011-1018	6.4	28
252	Embodied energy and embodied carbon of structural building materials: Worldwide progress and barriers through literature map analysis. *Energy and Buildings*, **2021**, 231, 110612	7	28
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250	The connection between the heat storage capability of PCM as a material property and their performance in real scale applications. *Journal of Energy Storage*, **2017**, 13, 35-39	7.8	27
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248	Experimental validation of the exact analytical solution to the steady periodic heat transfer problem in a PCM layer. *Energy*, **2017**, 140, 1131-1147	7.9	27
247	Uncovering relationships between environmental metrics in the multi-objective optimization of energy systems: A case study of a thermal solar Rankine reverse osmosis desalination plant. *Energy*, **2013**, 51, 50-60	7.9	27
246	Preparation and Characterization of Inorganic PCM Microcapsules by Fluidized Bed Method. *Materials*, **2016**, 9,	3.5	27
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244	Fatty acid eutectic mixtures and derivatives from non-edible animal fat as phase change materials. *RSC Advances*, **2017**, 7, 24133-24139	3.7	26

243	Experimental testing of cooling internal loads with a radiant wall. *Renewable Energy*, **2018**, 116, 1-8	8.1	26
242	Methodologies to estimate industrial waste heat potential by transferring key figures: A case study for Spain. *Applied Energy*, **2016**, 169, 866-873	10.7	26
241	Thermal Stability Test of Sugar Alcohols as Phase Change Materials for Medium Temperature Energy Storage Application. *Energy Procedia*, **2014**, 48, 436-439	2.3	26
240	New Database on Phase Change Materials for Thermal Energy Storage in Buildings to Help PCM Selection. *Energy Procedia*, **2014**, 57, 2408-2415	2.3	26
239	Life cycle costing as a bottom line for the life cycle sustainability assessment in the solar energy sector: A review. *Solar Energy*, **2019**, 192, 238-262	6.8	26
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