Cristina Prieto RÃ-os

List of Publications by Year
in descending order

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54 papers	1,969 citations	279798 23 h-index	243625 44 g-index
55 all docs	55 docs citations	55 times ranked	1628 citing authors

#	Article	IF	Citations
1	Review of commercial thermal energy storage in concentrated solar power plants: Steam vs. molten salts. Renewable and Sustainable Energy Reviews, 2017, 80, 133-148.	16.4	365
2	Review of technology: Thermochemical energy storage for concentrated solar power plants. Renewable and Sustainable Energy Reviews, 2016, 60, 909-929.	16.4	297
3	Thermal energy storage (TES) with phase change materials (PCM) in solar power plants (CSP). Concept and plant performance. Applied Energy, 2019, 254, 113646.	10.1	138
4	High temperature systems using solid particles as TES and HTF material: A review. Applied Energy, 2018, 213, 100-111.	10.1	72
5	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.	6.2	63
6	Key performance indicators in thermal energy storage: Survey and assessment. Renewable Energy, 2015, 83, 820-827.	8.9	62
7	Review of Reactors with Potential Use in Thermochemical Energy Storage in Concentrated Solar Power Plants. Energies, 2018, 11, 2358.	3.1	62
8	Performance comparison of a group of thermal conductivity enhancement methodology in phase change material for thermal storage application. Renewable Energy, 2016, 97, 434-443.	8.9	59
9	Thermal energy storage evaluation in direct steam generation solar plants. Solar Energy, 2018, 159, 501-509.	6.1	53
10	Direct Steam Generation in Parabolic Trough Collectors. Energy Procedia, 2014, 49, 21-29.	1.8	51
11	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.	8.9	50
12	Thermal storage in a MW scale. Molten salt solar thermal pilot facility: Plant description and commissioning experiences. Renewable Energy, 2016, 99, 852-866.	8.9	48
13	Thermochemical energy storage by consecutive reactions for higher efficient concentrated solar power plants (CSP): Proof of concept. Applied Energy, 2017, 185, 836-845.	10.1	45
14	Review of solid particle materials for heat transfer fluid and thermal energy storage in solar thermal power plants. Energy Storage, 2019, 1, e63.	4.3	42
15	Temperature distribution and heat losses in molten salts tanks for CSP plants. Solar Energy, 2016, 135, 518-526.	6.1	39
16	Materials selection for thermal energy storage systems in parabolic trough collector solar facilities using high chloride content nitrate salts. Solar Energy Materials and Solar Cells, 2017, 163, 134-147.	6.2	38
17	Carbonate molten salt solar thermal pilot facility: Plant design, commissioning and operation up to 700ÂÂ°C. Renewable Energy, 2020, 151, 528-541.	8.9	37
18	Influence of the heat transfer fluid in a CSP plant molten salts charging process. Renewable Energy, 2017, 113, 148-158.	8.9	36

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19	Effect of an increased thermal contact resistance in a salt PCM-graphite foam composite TES system. Renewable Energy, 2017, 106, 321-334.	8.9	34
20	Molten salt facilities, lessons learnt at pilot plant scale to guarantee commercial plants; heat losses evaluation and correction. Renewable Energy, 2016, 94, 175-185.	8.9	33
21	Study of corrosion by Dynamic Gravimetric Analysis (DGA) methodology. Influence of chloride content in solar salt. Solar Energy Materials and Solar Cells, 2016, 157, 526-532.	6.2	31
22	Materials selection of steam-phase change material (PCM) heat exchanger for thermal energy storage systems in direct steam generation facilities. Solar Energy Materials and Solar Cells, 2017, 159, 526-535.	6.2	28
23	Thermal energy storage with phase change materials in solar power plants. Economic analysis. Journal of Energy Storage, 2021, 43, 103184.	8.1	24
24	Experimental analysis of charging and discharging processes, with parallel and counter flow arrangements, in a molten salts high temperature pilot plant scale setup. Applied Energy, 2016, 178, 394-403.	10.1	22
25	Life Cycle Assessment (LCA) of a Concentrating Solar Power (CSP) Plant in Tower Configuration with and without Thermal Energy Storage (TES). Sustainability, 2021, 13, 3672.	3.2	22
26	Molten carbonate salts for advanced solar thermal energy power plants: Cover gas effect on fluid thermal stability. Solar Energy Materials and Solar Cells, 2018, 188, 119-126.	6.2	21
27	Performance analysis of operational strategies for monolithic receiver-reactor arrays in solar thermochemical hydrogen production plants. International Journal of Hydrogen Energy, 2020, 45, 26104-26116.	7.1	20
28	Effect of the impurity magnesium nitrate in the thermal decomposition of the solar salt. Solar Energy, 2019, 192, 186-192.	6.1	18
29	Effects of sodium nitrate concentration on thermophysical properties of solar salts and on the thermal energy storage cost. Solar Energy, 2019, 182, 57-63.	6.1	18
30	Thermochemical storage for CSP via redox structured reactors/heat exchangers: The RESTRUCTURE project. AIP Conference Proceedings, 2017, , .	0.4	16
31	A framework for sustainable evaluation of thermal energy storage in circular economy. Renewable Energy, 2021, 175, 686-701.	8.9	13
32	New phase change material storage concept including metal wool as heat transfer enhancement method for solar heat use in industry. Journal of Energy Storage, 2021, 33, 101926.	8.1	12
33	Improvement of Phase Change Materials (PCM) Used for Solar Process Heat Applications. Molecules, 2021, 26, 1260.	3.8	12
34	Improving durability of silicone-based paint coatings used in solar power plants by controlling consolidation procedures. Solar Energy, 2020, 199, 585-595.	6.1	11
35	Concentrating Solar Power Technologies: A Bibliometric Study of Past, Present and Future Trends in Concentrating Solar Power Research. Frontiers in Mechanical Engineering, 2021, 7, .	1.8	11
36	Key Challenges for High Temperature Thermal Energy Storage in Concreteâ€"First Steps towards a Novel Storage Design. Energies, 2022, 15, 4544.	3.1	11

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37	Feasibility Study of Freeze Recovery Options in Parabolic Trough Collector Plants Working with Molten Salt as Heat Transfer Fluid. Energies, 2019, 12, 2340.	3.1	10
38	Thermomechanical testing under operating conditions of A516Gr70 used for CSP storage tanks. Solar Energy Materials and Solar Cells, 2018, 174, 509-514.	6.2	7
39	TES-PS10 postmortem tests: Carbon steel corrosion performance exposed to molten salts under relevant operation conditions and lessons learnt for commercial scale-up. Journal of Energy Storage, 2019, 26, 100922.	8.1	6
40	The Role of Innovation in Industry Product Deployment: Developing Thermal Energy Storage for Concentrated Solar Power. Energies, 2020, 13, 2943.	3.1	6
41	Thermal and mechanical degradation assessment in refractory concrete as thermal energy storage container material in concentrated solar plants. Journal of Energy Storage, 2021, 40, 102790.	8.1	5
42	Advanced Concrete Steam Accumulation Tanks for Energy Storage for Solar Thermal Electricity. Energies, 2021, 14, 3896.	3.1	4
43	Thermal storage for concentrating solar power plants. , 2021, , 673-697.		3
44	Design and Start-Up of Two Pilot Plants for Molten Salts Storage Testing. , 2016, , .		2
45	Steam-PCM heat exchanger design and materials optimization by using Cr-Mo alloys. Solar Energy Materials and Solar Cells, 2018, 178, 249-258.	6.2	2
46	Regolith Packed Bed Thermal Energy Storage for Lunar Night Survival. , 2019, , .		2
47	Storing energy using molten salts. , 2022, , 445-486.		2
48	Bibliometric Map on Corrosion in Concentrating Solar Power Plants. Energies, 2022, 15, 2619.	3.1	2
49	Active Thermal Energy Storage (TES) With Phase Change Materials (PCM) for High Temperature. , 2022, , 470-478.		1
50	Advances in molten salt storage systems using other liquid sensible storage media for heat storage. , 2021, , 55-81.		1
51	Importance of Thermal Energy Storage Pilot Plant Facilities for Solar Energy Research. , 2016, , .		0
52	Ciclo de mejora en el estudio de la gestionabilidad de la tecnologÃa termosolar cilindroparabÃ³lica en el mercado energÃ©tico. , 0, , 2474-2492.		0
53	Ciclo de Mejora en el Aula (CIMA) en el estudio de la tecnologÃa de concentraciÃ³n solar como clave de la descarbonizaciÃ³n. Jornadas De FormaciÃ“n E InnovaciÃ“n Docente Del Profesorado, 2020, , 2564-2586.	0.0	0
54	Ciclo de Mejora en el Aula (CIMA) en el estudio de la tecnologÃa de concentraciÃ³n solar como clave de la descarbonizaciÃ³n. Fase II. , 0, , 2315-2331.		0