Nicolas Calvet

List of Publications by Year
in descending order

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49 papers	1,358 citations	430874 18 h-index	345221 36 g-index
49 all docs	49 docs citations	49 times ranked	1047 citing authors

#	Article	IF	Citations
1	Corrosion effects between molten salts and thermal storage material for concentrated solar power plants. Applied Energy, 2012, 94, 174-181.	10.1	184
2	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.	16.4	109
3	Thermophysical characterization of a by-product from the steel industry to be used as a sustainable and low-cost thermal energy storage material. Energy, 2015, 89, 601-609.	8.8	108
4	Recycled Material for Sensible Heat Based Thermal Energy Storage to be Used in Concentrated Solar Thermal Power Plants. Journal of Solar Energy Engineering, Transactions of the ASME, 2011, 133, .	1.8	101
5	Characterization of desert sand to be used as a high-temperature thermal energy storage medium in particle solar receiver technology. Applied Energy, 2018, 216, 402-413.	10.1	98
6	Compatibility of a post-industrial ceramic with nitrate molten salts for use as filler material in a thermocline storage system. Applied Energy, 2013, 109, 387-393.	10.1	86
7	Ca(NO3)2â€”NaNO3â€”KNO3 Molten Salt Mixtures for Direct Thermal Energy Storage Systems in Parabolic Trough Plants. Journal of Solar Energy Engineering, Transactions of the ASME, 2013, 135, .	1.8	71
8	Enhanced performances of macro-encapsulated phase change materials (PCMs) by intensification of the internal effective thermal conductivity. Energy, 2013, 55, 956-964.	8.8	68
9	Long-term performance results of concrete-based modular thermal energy storage system. Journal of Energy Storage, 2019, 24, 100735.	8.1	59
10	Sustainable applications utilizing sulfur, a by-product from oil and gas industry: A state-of-the-art review. Waste Management, 2019, 95, 78-89.	7.4	51
11	New Concentrating Solar Power Facility for Testing High Temperature Concrete Thermal Energy Storage. Energy Procedia, 2015, 75, 2144-2149.	1.8	43
12	Gravity-fed Combined Solar Receiver/Storage System Using Sand Particles as Heat Collector, Heat Transfer and Thermal Energy Storage Media. Energy Procedia, 2015, 69, 802-811.	1.8	37
13	Characterization of Desert Sand for its Feasible use as Thermal Energy Storage Medium. Energy Procedia, 2015, 75, 2113-2118.	1.8	33
14	Preliminary Optical, Thermal and Structural Design of a 100 kWth CSPonD Beam-down On-sun Demonstration Plant. Energy Procedia, 2015, 75, 2163-2168.	1.8	28
15	Techno-economic analysis of concentrated solar power plants in terms of levelized cost of electricity. AIP Conference Proceedings, 2017, , .	0.4	27
16	Industrial Waste Produced in the UAE, Valuable High-temperature Materials for Thermal Energy Storage Applications. Energy Procedia, 2015, 75, 2087-2092.	1.8	25
17	Demonstration of EnergyNest thermal energy storage (TES) technology. AIP Conference Proceedings, 2017, , .	0.4	22
18	The Masdar Institute solar platform: A new research facility in the UAE for development of CSP components and thermal energy storage systems. AIP Conference Proceedings, 2016, , .	0.4	20

#	Article	IF	Citations
19	Compatibility of an Aluminium-Silicon metal alloy-based phase change material with coated stainless-steel containers. Journal of Energy Storage, 2020, 32, 101961.	8.1	18
20	Waste From Metallurgic Industry: A Sustainable High-Temperature Thermal Energy Storage Material for Concentrated Solar Power. , 2013, , .		17
21	Net power maximization from a faceted beam-down solar concentrator. Solar Energy, 2020, 204, 476-488.	6.1	17
22	Dispatchable solar power using molten salt directly irradiated from above. Solar Energy, 2021, 220, 217-229.	6.1	15
23	Characterization of desert sand as a sensible thermal energy storage medium. AIP Conference Proceedings, 2016, , .	0.4	12
24	Thermomechanical Characterization of Waste Based TESM and Assessment of Their Resistance to Thermal Cycling up to 1000ÂÂ°C. Waste and Biomass Valorization, 2016, 7, 9-21.	3.4	11
25	Energy and Exergy Analysis of a Novel Gravity-fed Solid Particle Solar Receiver. Energy Procedia, 2015, 69, 812-821.	1.8	9
26	Concentrated solar power on demand demonstration: Construction and operation of a 25 kW prototype. AIP Conference Proceedings, 2016, , .	0.4	9
27	CSPonD demonstrative project: Start-up process of a 25 kW prototype. AIP Conference Proceedings, 2017, , .	0.4	9
28	Experimental study on packed-bed thermal energy storage using recycled ceramic as filler materials. Journal of Energy Storage, 2021, 44, 103375.	8.1	9
29	Development of an electric arc furnace steel slag-based ceramic material for high temperature thermal energy storage applications. Journal of Energy Storage, 2022, 51, 104408.	8.1	9
30	Thermal modeling of a secondary concentrator integrated with an open direct-absorption molten-salt volumetric receiver in a beam-down tower system. AIP Conference Proceedings, 2016, , .	0.4	6
31	Design of a 100 kW Concentrated Solar Power on Demand Volumetric Receiver With Integral Thermal Energy Storage Prototype. , 2015, , .		5
32	Numerical Modeling and Optimization of an Entrained Particle-flow Thermochemical Solar Reactor for Metal Oxide Reduction. Energy Procedia, 2015, 69, 947-956.	1.8	5
33	Optical property characterization of molten salt mixtures for thermal modeling of volumetrically absorbing solar receiver applications. AIP Conference Proceedings, 2017, , .	0.4	5
34	Industrial waste materials and by-products as thermal energy storage (TES) materials: A review. AIP Conference Proceedings, 2016, , .	0.4	4
35	Testing of a secondary concentrator integrated with a beam-down tower system under non-liquid cooling strategies. AIP Conference Proceedings, 2018, , .	0.4	4
36	Low-Cost Material for Sensible Heat Based Thermal Storage to be Used in Thermodynamic Solar Power Plants. , 2009, , .		3

#	Article	IF	Citations
37	Techno-economic optimization of a scaled-up solar concentrator combined with CSPonD thermal energy storage. AIP Conference Proceedings, 2017, , .	0.4	3
38	Reflectance degradation of a secondary concentrator by nitrate salt vapor deposition in an open volumetric receiver configuration. AIP Conference Proceedings, 2017, , .	0.4	3
39	Study and comparison of naturally-aged and As-received silvered-glass reflectors. AIP Conference Proceedings, 2018, , .	0.4	3
40	Where should beam down heliostat central rays intersect the final optical element axis?. AIP Conference Proceedings, 2018, , .	0.4	3
41	Numerical Investigation of a Metal-oxide Reduction Reactor for Thermochemical Energy Storage and Solar Fuel Production. Energy Procedia, 2014, 61, 2054-2057.	1.8	2
42	Validation of an optical model applied to the beam down CSP facility at the Masdar Institute Solar Platform. AIP Conference Proceedings, 2016, , .	0.4	2
43	An Origami-Inspired Design of a Thermal Mixing Element Within a Concentrated Solar Power System. , 2017, , .		2
44	Effect of sand and method of mixing on molten salt properties for an open direct absorption solar receiver/storage system. AIP Conference Proceedings, 2017, , .	0.4	2
45	Performance measurements of new silicon carbide coated reflectors for concentrated solar power applications. AIP Conference Proceedings, 2016, , .	0.4	1
46	Post-Industrial Ceramics Compatibility With Heat Transfer Fluids for Low-Cost Thermal Energy Storage Applications in CSP. , 2012, , .		0
47	Preface: Proceedings of the 22nd SolarPACES 2016 International Conference, Abu Dhabi, UAE. AIP Conference Proceedings, 2017, , .	0.4	0
48	Thermal modelling and control of 130kw direct contact (salt/air) heat exchanger. AIP Conference Proceedings, 2017, , .	0.4	0
49	Influencing parameters on the sintering process of steel slag-based ceramics for high-temperature thermal energy storage. AIP Conference Proceedings, 2020, , .	0.4	0