Nicolas Calvet

List of Publications by Year
in descending order

49 papers	1,358 citations	489802 18 h-index	388640 36 g-index
49 all docs	49 docs citations	49 times ranked	1168 citing authors

#	Article	IF	Citations
1	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.	3.9	9
2	Dispatchable solar power using molten salt directly irradiated from above. Solar Energy, 2021, 220, 217-229.	2.9	15
3	Experimental study on packed-bed thermal energy storage using recycled ceramic as filler materials. Journal of Energy Storage, 2021, 44, 103375.	3.9	9
4	Compatibility of an Aluminium-Silicon metal alloy-based phase change material with coated stainless-steel containers. Journal of Energy Storage, 2020, 32, 101961.	3.9	18
5	Net power maximization from a faceted beam-down solar concentrator. Solar Energy, 2020, 204, 476-488.	2.9	17
6	Influencing parameters on the sintering process of steel slag-based ceramics for high-temperature thermal energy storage. AIP Conference Proceedings, 2020, , .	0.3	0
7	Long-term performance results of concrete-based modular thermal energy storage system. Journal of Energy Storage, 2019, 24, 100735.	3.9	59
8	Sustainable applications utilizing sulfur, a by-product from oil and gas industry: A state-of-the-art review. Waste Management, 2019, 95, 78-89.	3.7	51
9	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.	5.1	98
10	Testing of a secondary concentrator integrated with a beam-down tower system under non-liquid cooling strategies. AIP Conference Proceedings, 2018, , .	0.3	4
11	Study and comparison of naturally-aged and As-received silvered-glass reflectors. AIP Conference Proceedings, 2018, , .	0.3	3
12	Where should beam down heliostat central rays intersect the final optical element axis?. AIP Conference Proceedings, 2018, , .	0.3	3
13	Techno-economic optimization of a scaled-up solar concentrator combined with CSPonD thermal energy storage. AIP Conference Proceedings, 2017, , .	0.3	3
14	Preface: Proceedings of the 22nd SolarPACES 2016 International Conference, Abu Dhabi, UAE. AIP Conference Proceedings, 2017, , .	0.3	0
15	Techno-economic analysis of concentrated solar power plants in terms of levelized cost of electricity. AIP Conference Proceedings, 2017, , .	0.3	27
16	CSPonD demonstrative project: Start-up process of a 25 kW prototype. AIP Conference Proceedings, 2017, , .	0.3	9
17	An Origami-Inspired Design of a Thermal Mixing Element Within a Concentrated Solar Power System. , 2017, , .		2
18	Demonstration of EnergyNest thermal energy storage (TES) technology. AIP Conference Proceedings, 2017, , .	0.3	22

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19	Optical property characterization of molten salt mixtures for thermal modeling of volumetrically absorbing solar receiver applications. AIP Conference Proceedings, 2017, , .	0.3	5
20	Effect of sand and method of mixing on molten salt properties for an open direct absorption solar receiver/storage system. AIP Conference Proceedings, 2017, , .	0.3	2
21	Reflectance degradation of a secondary concentrator by nitrate salt vapor deposition in an open volumetric receiver configuration. AIP Conference Proceedings, 2017, , .	0.3	3
22	Thermal modelling and control of 130kw direct contact (salt/air) heat exchanger. AIP Conference Proceedings, 2017, , .	0.3	0
23	Performance measurements of new silicon carbide coated reflectors for concentrated solar power applications. AIP Conference Proceedings, 2016, , .	0.3	1
24	Validation of an optical model applied to the beam down CSP facility at the Masdar Institute Solar Platform. AIP Conference Proceedings, 2016, , .	0.3	2
25	Industrial waste materials and by-products as thermal energy storage (TES) materials: A review. AIP Conference Proceedings, 2016, , .	0.3	4
26	Characterization of desert sand as a sensible thermal energy storage medium. AIP Conference Proceedings, 2016, , .	0.3	12
27	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, , .	0.3	6
28	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, , .	0.3	20
29	Concentrated solar power on demand demonstration: Construction and operation of a 25 kW prototype. AIP Conference Proceedings, 2016, , .	0.3	9
30	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.	1.8	11
31	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.	8.2	109
32	Characterization of Desert Sand for its Feasible use as Thermal Energy Storage Medium. Energy Procedia, 2015, 75, 2113-2118.	1.8	33
33	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
34	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
35	Design of a 100 kW Concentrated Solar Power on Demand Volumetric Receiver With Integral Thermal Energy Storage Prototype. , 2015, , .		5
36	Industrial Waste Produced in the UAE, Valuable High-temperature Materials for Thermal Energy Storage Applications. Energy Procedia, 2015, 75, 2087-2092.	1.8	25

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37	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.	4.5	108
38	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
39	Energy and Exergy Analysis of a Novel Gravity-fed Solid Particle Solar Receiver. Energy Procedia, 2015, 69, 812-821.	1.8	9
40	New Concentrating Solar Power Facility for Testing High Temperature Concrete Thermal Energy Storage. Energy Procedia, 2015, 75, 2144-2149.	1.8	43
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	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, .	1.1	71
43	Enhanced performances of macro-encapsulated phase change materials (PCMs) by intensification of the internal effective thermal conductivity. Energy, 2013, 55, 956-964.	4.5	68
44	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.	5.1	86
45	Waste From Metallurgic Industry: A Sustainable High-Temperature Thermal Energy Storage Material for Concentrated Solar Power. , 2013, , .		17
46	Post-Industrial Ceramics Compatibility With Heat Transfer Fluids for Low-Cost Thermal Energy Storage Applications in CSP. , 2012, , .		0
47	Corrosion effects between molten salts and thermal storage material for concentrated solar power plants. Applied Energy, 2012, 94, 174-181.	5.1	184
48	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, .	1.1	101
49	Low-Cost Material for Sensible Heat Based Thermal Storage to be Used in Thermodynamic Solar Power Plants. , 2009, , .		3