Loreto Valenzuela

List of Publications by Year
in descending order

98 papers	3,656 citations	218381 26 h-index	133063 59 g-index
98 all docs	98 docs citations	98 times ranked	2251 citing authors

#	Article	IF	Citations
1	UV degradation of primary mirrors in outdoor exposure and accelerated aging. AIP Conference Proceedings, 2022, , .	0.3	0
2	Compact system for fast on-line geometry characterization of facets for solar concentrators. AIP Conference Proceedings, 2022, , .	0.3	2
3	A dynamic model for once-through direct steam generation in linear focus solar collectors. Renewable Energy, 2021, 163, 246-261.	4.3	8
4	Modeling and Hourly Time-Scale Characterization of the Main Energy Parameters of Parabolic-Trough Solar Thermal Power Plants Using a Simplified Quasi-Dynamic Model. Energies, 2021, 14, 221.	1.6	4
5	Three-dimensional thermal modelling and heat transfer analysis in the heat collector element of parabolic-trough solar collectors. Applied Thermal Engineering, 2021, 189, 116457.	3.0	6
6	Lifetime prediction model of reflector materials for concentrating solar thermal energies in corrosive environments. Solar Energy Materials and Solar Cells, 2021, 224, 110996.	3.0	8
7	Experimental and numerical study of a solar collector using phase change material as heat storage. Journal of Energy Storage, 2020, 27, 101133.	3.9	48
8	Corrosion on silvered-glass solar reflectors exposed to accelerated aging tests with polluting gases: A microscopic study. Corrosion Science, 2020, 176, 108928.	3.0	2
9	Uncertainty Study of Reflectance Measurements for Concentrating Solar Reflectors. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 7218-7232.	2.4	12
10	Analysis of a failure mechanism in parabolic troughs receivers due to bellows cap overirradiation. Engineering Failure Analysis, 2020, 111, 104491.	1.8	10
11	Optimized design of a Linear Fresnel reflector for solar process heat applications. Renewable Energy, 2019, 131, 1089-1106.	4.3	56
12	Modelling and simulation tools for direct steam generation in parabolic-trough solar collectors: A review. Renewable and Sustainable Energy Reviews, 2019, 113, 109226.	8.2	65
13	Design, Manufacturing and Characterization of Linear Fresnel Reflectorâ€™s Facets. Energies, 2019, 12, 2795.	1.6	13
14	A new concept of solar thermal power plants with large-aperture parabolic-trough collectors and sCO2 as working fluid. Energy Conversion and Management, 2019, 199, 112030.	4.4	31
15	Radiant emittance calculated by heat transfer analysis of a PTC receiver tested with vacuum versus measurement of an absorber sample using spectrophotometer. AIP Conference Proceedings, 2019, , .	0.3	1
16	Qualification of silicone based HTF for parabolic trough collector applications. AIP Conference Proceedings, 2019, , .	0.3	4
17	Simplified heat transfer model for parabolic trough solar collectors using supercritical CO2. Energy Conversion and Management, 2019, 196, 807-820.	4.4	34
18	Influence of gaseous pollutants and their synergistic effects on the aging of reflector materials for concentrating solar thermal technologies. Solar Energy Materials and Solar Cells, 2019, 200, 109955.	3.0	11

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19	Methodology for partial vacuum pressure and heat losses analysis of parabolic troughs receivers by infrared radiometry. Infrared Physics and Technology, 2019, 98, 341-353.	1.3	10
20	Advanced Analysis of Corroded Solar Reflectors. Coatings, 2019, 9, 749.	1.2	3
21	Effects of reduced sulphur atmospheres on reflector materials for concentrating solar thermal applications. Corrosion Science, 2018, 133, 78-93.	3.0	11
22	SMALL-SIZED parabolic-trough solar collectors: Development of a test loop and evaluation of testing conditions. Energy, 2018, 152, 401-415.	4.5	17
23	A new TRNSYS component for parabolic trough collector simulation. International Journal of Sustainable Energy, 2018, 37, 209-229.	1.3	5
24	Design and experimental validation of a computational effective dynamic thermal energy storage tank model. Energy, 2018, 152, 840-857.	4.5	12
25	Heat losses model for standardized testing of receiver tubes for parabolic-troughs. AIP Conference Proceedings, 2018, , .	0.3	2
26	Numerical simulation and assessment of a 5 MWel hybrid system with a parabolic trough once-through steam generator coupled to biomass gasification. AIP Conference Proceedings, 2018, , .	0.3	1
27	Test loop for inter-connections of parabolic trough collectors. AIP Conference Proceedings, 2018, , .	0.3	2
28	Steady-state and dynamic validation of a parabolic trough collector model using the ThermoCycle Modelica library. Solar Energy, 2018, 174, 866-877.	2.9	19
29	Durability Studies of Solar Reflectors Used in Concentrating Solar Thermal Technologies under Corrosive Sulfurous Atmospheres. Sustainability, 2018, 10, 3008.	1.6	7
30	Degradation of concentrating solar thermal reflectors in acid rain atmospheres. Solar Energy Materials and Solar Cells, 2018, 186, 92-104.	3.0	8
31	Influence of the displacement of solar receiver tubes on the performance of a parabolic-trough collector. Energy, 2018, 159, 472-481.	4.5	26
32	Modeling of a small parabolic trough plant based in direct steam generation for cogeneration in the Chilean industrial sector. Energy Conversion and Management, 2018, 174, 88-100.	4.4	11
33	Optical efficiency measurement of solar receiver tubes: A testbed and case studies. Case Studies in Thermal Engineering, 2018, 12, 414-422.	2.8	16
34	Thermal hydraulic RELAP5 model for a solar direct steam generation system based on parabolic trough collectors operating in once-through mode. Energy, 2017, 133, 796-807.	4.5	27
35	Object-oriented simulation model of a parabolic trough solar collector: Static and dynamic validation. AIP Conference Proceedings, 2017, , .	0.3	0
36	Parabolic trough receiver heat loss and optical efficiency round robin 2015/2016. AIP Conference Proceedings, 2017, , .	0.3	3

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37	Simulation and comparison between fixed and sliding-pressure strategies in parabolic-trough solar power plants with direct steam generation. Applied Thermal Engineering, 2017, 125, 735-745.	3.0	14
38	Harmonization of standards for parabolic trough collector testing in solar thermal power plants. AIP Conference Proceedings, 2017, , .	0.3	3
39	Study on shell-and-tube heat exchanger models with different degree of complexity for process simulation and control design. Applied Thermal Engineering, 2017, 124, 1425-1440.	3.0	27
40	On-site parabolic-trough collector testing in solar thermal power plants: Experimental validation of a new approach developed for the IEC 62862-3-2 standard. Solar Energy, 2017, 155, 398-409.	2.9	23
41	Approaches to modelling a solar field for direct generation of industrial steam. Renewable Energy, 2017, 103, 666-681.	4.3	25
42	Thermal energy storage concepts for direct steam generation (DSG) solar plants. , 2017, , 269-289.		5
43	Advanced mirror concepts for concentrating solar thermal systems. , 2017, , 29-43.		3
44	Modified geometry of line-focus collectors with round absorbers by means of the inverse MCRT method. Solar Energy, 2016, 139, 608-621.	2.9	7
45	Towards standardization of in-site parabolic trough collector testing in solar thermal power plants. AIP Conference Proceedings, 2016, , .	0.3	8
46	Control strategies in a thermal oil â€“ Molten salt heat exchanger. AIP Conference Proceedings, 2016, , .	0.3	7
47	State of the art of performance evaluation methods for concentrating solar collectors. AIP Conference Proceedings, 2016, , .	0.3	11
48	Transient validation of RELAP5 model with the DISS facility in once through operation mode. AIP Conference Proceedings, 2016, , .	0.3	6
49	Standards for components in concentrating solar thermal power plants - status of the Spanish working group. AIP Conference Proceedings, 2016, , .	0.3	6
50	Durability studies of solar reflectors: A review. Renewable and Sustainable Energy Reviews, 2016, 62, 453-467.	8.2	77
51	Solar Thermal Collectors for Medium Temperature Applications: A Comprehensive Review and Updated Database. Energy Procedia, 2016, 91, 64-71.	1.8	11
52	Analysis and potential of once-through steam generators in line focus systems â€“ Final results of the DUKE project. AIP Conference Proceedings, 2016, , .	0.3	7
53	Test bench HEATREC for heat loss measurement on solar receiver tubes. AIP Conference Proceedings, 2016, , .	0.3	7
54	On-site comparison of flowmeters installed in a parabolic-trough solar collector test facility. Measurement: Journal of the International Measurement Confederation, 2016, 92, 271-278.	2.5	5

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55	Inverse Monte Carlo Ray-Tracing method (IMCRT) applied to line-focus reflectors. Solar Energy, 2016, 124, 184-197.	2.9	19
56	A quasi-dynamic simulation model for direct steam generation in parabolic troughs using TRNSYS. Applied Energy, 2016, 161, 133-142.	5.1	65
57	Yield Analysis of a Power Plant with Parabolic-Trough Collectors and Direct Steam Generation (DSG) Using a Quasi-Dynamic Simulation Model in TRNSYS. , 2016, , .		2
58	Optimizing Design of a Linear Fresnel Reflector for Process Heat Supply. , 2016, , .		1
59	COLECTORES CILINDRO PARABÃ“LICO A PARTIR DE MATERIAL DE BAJO COSTO (ACERO INOXIDABLE) APLICADO A UN SISTEMA HÃBRIDO DE DESHIDRATADO. Dyna (Spain), 2016, 91, 96-102.	0.1	0
60	Transient Models and Characteristics of Once-through Line Focus Systems. Energy Procedia, 2015, 69, 626-637.	1.8	20
61	Object-Oriented Modeling of a Multi-Pass Shell-and-Tube Heat Exchanger and its Application to Performance Evaluationâˆ—âˆ—This research has been funded by the EU 7thFramework Programme (Theme) Tj ETQq1 1 0.784314 rgBT Renewable Hybrid CSP Plant and the Spanish Ministry of Economy and Competitiveness through ERDF and PLAN E funds (C.N. SolarNOVA ICT-CEPU 2009-02).. IFAC-PapersOnLine, 2015, 48, 97-102.	0.5	5
62	Inverse MCRT Method for Obtaining Solar Concentrators with Quasi-Planar Flux Distribution. Energy Procedia, 2015, 69, 208-217.	1.8	3
63	Experimental Calibration of Heat Transfer and Thermal Losses in a Shell-and-Tube Heat Exchanger. , 2015, , .		6
64	Theoretical Study of Direct Steam Generation in Two Parallel Pipes. Energy Procedia, 2014, 57, 2265-2274.	1.8	13
65	Status and First Results of the DUKE Project â€“ Component Qualification of New Receivers and Collectors. Energy Procedia, 2014, 49, 1766-1776.	1.8	25
66	Modeling direct steam generation in solar collectors with multiphase CFD. Applied Energy, 2014, 113, 1338-1348.	5.1	91
67	Optical and thermal performance of large-size parabolic-trough solar collectors from outdoor experiments: A test method and a case study. Energy, 2014, 70, 456-464.	4.5	116
68	Modeling the dynamics of the multiphase fluid in the parabolic-trough solar steam generating systems. Energy Conversion and Management, 2014, 78, 393-404.	4.4	54
69	Thermal 3D model for Direct Solar Steam Generation under superheated conditions. Applied Energy, 2014, 132, 370-382.	5.1	60
70	Uncertainty and global sensitivity analysis in the design of parabolic-trough direct steam generation plants for process heat applications. Applied Energy, 2014, 121, 233-244.	5.1	36
71	Design and Simulation of a Solar Field Coupled to a Cork Boiling Plant. Energy Procedia, 2014, 48, 1134-1143.	1.8	3
72	PTTL â€“ A Life-size Test Loop for Parabolic Trough Collectors. Energy Procedia, 2014, 49, 136-144.	1.8	5

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73	Thermal analysis of solar receiver pipes with superheated steam. Applied Energy, 2013, 103, 73-84.	5.1	119
74	Impact of pressure losses in small-sized parabolic-trough collectors forÂdirect steam generation. Energy, 2013, 61, 502-512.	4.5	43
75	Geometrical Assessment of Solar Concentrators using Close-range Photogrammetry. Energy Procedia, 2012, 30, 84-90.	1.8	22
76	Sensitivity Analysis of Saturated Steam Production in Parabolic Trough Collectors. Energy Procedia, 2012, 30, 765-774.	1.8	12
77	Dimensioning a Small-Sized PTC Solar Field for Heating and Cooling of a Hotel in AlmerÃa (Spain). Energy Procedia, 2012, 30, 967-973.	1.8	7
78	Development of a Small-Sized Parabolic-Trough Collector. Final Results of Capsol Project. , 2011, , .		3
79	Modelling of a Small-Sized Parabolic-Trough Solar Collector Field for Process Heat in the Cork Industry. , 2011, , .		1
80	Pressure Losses in Small-Sized Parabolic-Trough Solar Fields for Industrial Process Heat. , 2011, , .		2
81	Parabolic-trough solar collectors and their applications. Renewable and Sustainable Energy Reviews, 2010, 14, 1695-1721.	8.2	865
82	Analysis of the experimental behaviour of a 100ÂkWth latent heat storage system for direct steam generation in solar thermal power plants. Applied Thermal Engineering, 2010, 30, 2643-2651.	3.0	107
83	Reference governor optimization and control of a distributed solar collector field. European Journal of Operational Research, 2009, 193, 709-717.	3.5	49
84	Analyzing Solar Power Plant Performance Through Data Mining. Journal of Solar Energy Engineering, Transactions of the ASME, 2008, 130, .	1.1	2
85	A survey on control schemes for distributed solar collector fields. Part II: Advanced control approaches. Solar Energy, 2007, 81, 1252-1272.	2.9	166
86	A survey on control schemes for distributed solar collector fields. Part I: Modeling and basic control approaches. Solar Energy, 2007, 81, 1240-1251.	2.9	201
87	Feedback linearization control for a distributed solar collector field. Control Engineering Practice, 2007, 15, 1533-1544.	3.2	66
88	Control scheme for direct steam generation in parabolic troughs under recirculation operation mode. Solar Energy, 2006, 80, 1-17.	2.9	57
89	FEEDBACK LINEARIZATION CONTROL FOR A DISTRIBUTED SOLAR COLLECTOR FIELD. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 356-361.	0.4	27
90	Control concepts for direct steam generation in parabolic troughs. Solar Energy, 2005, 78, 301-311.	2.9	88

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91	Explanatory Analysis of Data from a Distributed Solar Collector Field. Lecture Notes in Computer Science, 2005, , 621-626.	1.0	4
92	Hierarchical Control of a Distributed Solar Collector Field. Lecture Notes in Computer Science, 2005, , 614-620.	1.0	10
93	Direct steam generation in parabolic troughs: Final results and conclusions of the DISS project. Energy, 2004, 29, 635-644.	4.5	205
94	Direct steam generation in solar boilers. IEEE Control Systems, 2004, 24, 15-29.	1.0	59
95	Applied research concerning the direct steam generation in parabolic troughs. Solar Energy, 2003, 74, 341-351.	2.9	162
96	The DISS Project: Direct Steam Generation in Parabolic Trough Systems. Operation and Maintenance Experience and Update on Project Status. Journal of Solar Energy Engineering, Transactions of the ASME, 2002, 124, 126-133.	1.1	84
97	The DISS Project: Direct Steam Generation in Parabolic Troughs â€" Operation and Maintenance Experience â€" Update on Project Status. , 2001, , .		10
98	Multilevel linguistic equation controller applied to a 1 MW/sub t/ solar power plant. , 1998, , .		14