

# Diego-César Alarcón-Padilla

## List of Publications by Year in descending order

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66  
papers

2,350  
citations

218592

26  
h-index

214721

47  
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66  
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66  
docs citations

66  
times ranked

1771  
citing authors

#	ARTICLE	IF	CITATIONS
1	Feasibility and practical limits of full decarbonization of the electricity market with renewable energy: Application to the Spanish power sector. <i>Energy</i> , 2022, 239, 122437.	4.5	17
2	Analysis of the Time Step Influence in the Yearly Simulation of Integrated Seawater Multi-Effect Distillation and Parabolic trough Concentrating Solar Thermal Power Plants. <i>Processes</i> , 2022, 10, 573.	1.3	4
3	A solar energy desalination analysis tool, sedat, with data and models for selecting technologies and regions. <i>Scientific Data</i> , 2022, 9, .	2.4	4
4	Multi-objective optimization of a Concentrating Solar Power+Photovoltaic+Multi-Effect Distillation plant: Understanding the impact of the solar irradiation and the plant location. <i>Energy Conversion and Management: X</i> , 2021, 11, 100088.	0.9	3
5	Comparative assessment of the annual electricity and water production by concentrating solar power and desalination plants: A case study. <i>Applied Thermal Engineering</i> , 2020, 177, 115485.	3.0	14
6	Annual thermoeconomic analysis of a Concentrating Solar Power+Photovoltaic+Multi-Effect Distillation plant in northern Chile. <i>Energy Conversion and Management</i> , 2020, 213, 112852.	4.4	19
7	Optimal operation of solar thermal desalination systems coupled to double-effect absorption heat pumps. <i>Energy Conversion and Management</i> , 2020, 210, 112705.	4.4	4
8	Assessment of a concentrating solar power plant coupled to a multi-effect distillation with an air-cooled condenser. <i>AIP Conference Proceedings</i> , 2020, , .	0.3	0
9	Exergy cost assessment of solar trigeneration plant based on a concentrated solar power plant as the prime mover. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	1
10	Performance analysis of local environment effects at different places of Chile in comparison to the Atacama Desert. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	1
11	Development of a failure detection tool using machine learning techniques for a large aperture concentrating collector at an industrial application in Chile. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	2
12	Concentrating Solar Power and Desalination Plants. <i>Green Energy and Technology</i> , 2019, , 327-340.	0.4	8
13	Parabolic trough collector field dynamic model: Validation, energetic and exergetic analyses. <i>Applied Thermal Engineering</i> , 2019, 148, 777-786.	3.0	11
14	Performance of an Organic Rankine Cycle with two expanders at off-design operation. <i>Applied Thermal Engineering</i> , 2019, 149, 688-701.	3.0	12
15	Exergy cost assessment of CSP driven multi-generation schemes: Integrating seawater desalination, refrigeration, and process heat plants. <i>Energy Conversion and Management</i> , 2019, 179, 249-269.	4.4	43
16	Techno-economic analysis of a stand-alone solar desalination plant at variable load conditions. <i>Applied Thermal Engineering</i> , 2018, 133, 659-670.	3.0	20
17	Optimal operating conditions analysis for a multi-effect distillation plant according to energetic and exergetic criteria.. <i>Desalination</i> , 2018, 435, 70-76.	4.0	29
18	Performance Analysis of a RED-MED Salinity Gradient Heat Engine. <i>Energies</i> , 2018, 11, 3385.	1.6	27

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19	Yearly simulations of the electricity and fresh water production in PT-CSP+MED-TVC plants: Case study in Almería (Spain). AIP Conference Proceedings, 2018, , .	0.3	1
20	Correlations for estimating the specific capital cost of multi-effect distillation plants considering the main design trends and operating conditions. Desalination, 2018, 447, 74-83.	4.0	24
21	Energetic evaluation of a double-effect LiBr-H <sub>2</sub> O absorption heat pump coupled to a multi-effect distillation plant at nominal and off-design conditions. Applied Thermal Engineering, 2018, 142, 543-554.	3.0	13
22	Comparison of the levelized cost and thermoeconomic methodologies “ Cost allocation in a solar polygeneration plant to produce power, desalted water, cooling and process heat. Energy Conversion and Management, 2018, 168, 215-229.	4.4	42
23	Single and dual stage closed-loop pressure retarded osmosis for power generation: Feasibility and performance. Applied Energy, 2017, 191, 328-345.	5.1	38
24	Experimental characterization of a multi-effect distillation system coupled to a flat plate solar collector field: Empirical correlations. Applied Thermal Engineering, 2017, 120, 298-313.	3.0	31
25	Thermoeconomic assessment of a solar polygeneration plant for electricity, water, cooling and heating in high direct normal irradiation conditions. Energy Conversion and Management, 2017, 151, 538-552.	4.4	49
26	Operational analysis of the coupling between a multi-effect distillation unit with thermal vapor compression and a Rankine cycle power block using variable nozzle thermocompressors. Applied Energy, 2017, 204, 690-701.	5.1	23
27	Exergy Cost Decomposition and Comparison of Integrating Seawater Desalination Plant, Refrigeration Plant, Process Heat Plant in a Concentrated Solar Power Plant. , 2017, , .		2
28	The use of solar energy for small-scale autonomous desalination. , 2017, , 13-42.		0
29	Control strategies in a thermal oil “ Molten salt heat exchanger. AIP Conference Proceedings, 2016, , .	0.3	7
30	Thermoeconomic comparison of integrating seawater desalination processes in a concentrating solar power plant of 5 MWe. Desalination, 2016, 392, 102-117.	4.0	57
31	Quasi-steady state simulations of thermal vapor compression multi-effect distillation plants coupled to parabolic trough solar thermal power plants. Desalination and Water Treatment, 2016, 57, 23085-23096.	1.0	6
32	Experimental parametric analysis of a solar pilot-scale multi-effect distillation plant. Desalination and Water Treatment, 2016, 57, 23097-23109.	1.0	8
33	Parametric study of a multi-effect distillation plant with thermal vapor compression for its integration into a Rankine cycle power block. Desalination, 2016, 394, 18-29.	4.0	58
34	Dynamic modeling and simulation of a double-effect absorption heat pump. International Journal of Refrigeration, 2016, 72, 171-191.	1.8	21
35	Large-scale solar desalination by combination with CSP: Techno-economic analysis of different options for the Mediterranean Sea and the Arabian Gulf. Desalination, 2015, 366, 130-138.	4.0	108
36	Techno-economic assessment of a pilot-scale plant for solar desalination based on existing plate and frame MD technology. Desalination, 2015, 374, 70-80.	4.0	44

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37	Characterisation of the coupling of multi-effect distillation plants to concentrating solar power plants. <i>Energy</i> , 2015, 82, 986-995.	4.5	50
38	Dynamic modeling and simulation of a solar-assisted multi-effect distillation plant. <i>Desalination</i> , 2015, 357, 65-76.	4.0	26
39	Productivity analysis of two spiral-wound membrane distillation prototypes coupled with solar energy. <i>Desalination and Water Treatment</i> , 2015, 55, 2777-2785.	1.0	37
40	Experimental Validation of MED Forward Feed Steady-state Model. <i>Energy Procedia</i> , 2014, 57, 2772-2780.	1.8	2
41	Modeling Multi Effect Distillation Powered by CSP in TRNSYS. <i>Energy Procedia</i> , 2014, 49, 2241-2250.	1.8	24
42	Forward osmosis pretreatment of seawater to thermal desalination: High temperature FO-MSF/MED hybrid system. <i>Desalination</i> , 2014, 339, 18-25.	4.0	56
43	Operational improvements to increase the efficiency of an absorption heat pump connected to a multi-effect distillation unit. <i>Applied Thermal Engineering</i> , 2014, 63, 84-96.	3.0	16
44	Steady state model for multi-effect distillation case study: Plataforma Solar de Almería MED pilot plant. <i>Desalination</i> , 2014, 337, 31-42.	4.0	70
45	Performance of a 5kWe Organic Rankine Cycle at part-load operation. <i>Applied Energy</i> , 2014, 120, 147-158.	5.1	65
46	Dynamic modeling and performance of the first cell of a multi-effect distillation plant. <i>Applied Thermal Engineering</i> , 2014, 70, 410-420.	3.0	23
47	Evaluation of cooling technologies of concentrated solar power plants and their combination with desalination in the mediterranean area. <i>Applied Thermal Engineering</i> , 2013, 50, 1514-1521.	3.0	63
48	Parametric equations for the variables of a steady-state model of a multi-effect desalination plant. <i>Desalination and Water Treatment</i> , 2013, 51, 1229-1241.	1.0	22
49	Experimental analysis of a multi-effect distillation unit operated out of nominal conditions. <i>Desalination</i> , 2012, 284, 233-237.	4.0	17
50	Simulation and evaluation of the coupling of desalination units to parabolic-trough solar power plants in the Mediterranean region. <i>Desalination</i> , 2011, 281, 379-387.	4.0	64
51	Assessment of different configurations for combined parabolic-trough (PT) solar power and desalination plants in arid regions. <i>Energy</i> , 2011, 36, 4950-4958.	4.5	106
52	Experimental analysis of an air gap membrane distillation solar desalination pilot system. <i>Journal of Membrane Science</i> , 2011, 379, 386-396.	4.1	233
53	Modeling of the heat transfer of a solar multi-effect distillation plant at the Plataforma Solar de Almería. <i>Desalination and Water Treatment</i> , 2011, 31, 257-268.	1.0	12
54	Experimental assessment of connection of an absorption heat pump to a multi-effect distillation unit. <i>Desalination</i> , 2010, 250, 500-505.	4.0	35

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55	Design recommendations for a multi-effect distillation plant connected to a double-effect absorption heat pump: A solar desalination case study. <i>Desalination</i> , 2010, 262, 11-14.	4.0	53
56	Connection of absorption heat pumps to multi-effect distillation systems: pilot test facility at the Plataforma Solar de Almería (Spain). <i>Desalination and Water Treatment</i> , 2010, 18, 126-132.	1.0	3
57	First experimental results of a new hybrid solar/gas multi-effect distillation system: the AQUASOL project. <i>Desalination</i> , 2008, 220, 619-625.	4.0	46
58	Solar field control for desalination plants. <i>Solar Energy</i> , 2008, 82, 772-786.	2.9	59
59	Modeling of a Solar Seawater Desalination Plant for Automatic Operation Purposes. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2008, 130, .	1.1	18
60	Application of absorption heat pumps to multi-effect distillation: a case study of solar desalination. <i>Desalination</i> , 2007, 212, 294-302.	4.0	79
61	Assessment of an absorption heat pump coupled to a multi-effect distillation unit within AQUASOL project. <i>Desalination</i> , 2007, 212, 303-310.	4.0	41
62	Theoretical efficiencies of angular-selective non-concentrating solar thermal systems. <i>Solar Energy</i> , 2004, 76, 683-691.	2.9	19
63	Computing the solar vector. <i>Solar Energy</i> , 2001, 70, 431-441.	2.9	328
64	Energy recovery using salinity differences in a multi-effect distillation system. <i>Desalination and Water Treatment</i> , 0, , 1-8.	1.0	8
65	Opportunities of improvement of the MED seawater desalination process by pretreatments allowing high-temperature operation. , 0, 97, 94-108.		24
66	Preliminary evaluation of the use of vacuum membrane distillation for the production of drinking water in Arica (Chile). , 0, 61, 160-169.		0