

# Manuel Romero

## List of Publications by Year in descending order

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Version: 2024-02-01

66  
papers

3,360  
citations

236925

25  
h-index

144013

57  
g-index

66  
all docs

66  
docs citations

66  
times ranked

2752  
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermo-economic analysis of a particle-based multi-tower solar power plant using unfired combined cycle for evening peak power generation. <i>Energy</i> , 2022, 240, 122798.	8.8	15
2	Optical and thermal integration analysis of supercritical CO <sub>2</sub> Brayton cycles with a particle-based solar thermal plant based on annual performance. <i>Renewable Energy</i> , 2022, 189, 164-179.	8.9	10
3	Soiling effect in solar energy conversion systems: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 162, 112434.	16.4	36
4	Design and off-design performance comparison of supercritical carbon dioxide Brayton cycles for particle-based high temperature concentrating solar power plants. <i>Energy Conversion and Management</i> , 2021, 232, 113870.	9.2	53
5	Drift analysis in tilt-roll heliostats. <i>Solar Energy</i> , 2020, 211, 1170-1183.	6.1	6
6	Integrated solar combined cycle using particles as heat transfer fluid and thermal energy storage medium for flexible electricity dispatch. <i>AIP Conference Proceedings</i> , 2020, , .	0.4	2
7	Liquid fuels from concentrated sunlight: An overview on development and integration of a 50 kW solar thermochemical reactor and high concentration solar field for the SUN-to-LIQUID project. <i>AIP Conference Proceedings</i> , 2019, , .	0.4	13
8	Application of un-fired closed Brayton cycle with mass flow regulation and particles-based thermal energy storage systems for CSP. <i>AIP Conference Proceedings</i> , 2019, , .	0.4	7
9	Analysis of solid-state reaction in the performance of doped calcium manganites for thermal storage. <i>Solid State Ionics</i> , 2019, 338, 47-57.	2.7	12
10	Multi-Tubular Reactor for Hydrogen Production: CFD Thermal Design and Experimental Testing. <i>Processes</i> , 2019, 7, 31.	2.8	11
11	Solar Energy on Demand: A Review on High Temperature Thermochemical Heat Storage Systems and Materials. <i>Chemical Reviews</i> , 2019, 119, 4777-4816.	47.7	335
12	Performance assessment of concentrated solar power plants based on carbon and hydrogen fuel cells. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 5852-5862.	7.1	10
13	Macroencapsulation of sodium chloride as phase change materials for thermal energy storage. <i>Solar Energy</i> , 2018, 167, 1-9.	6.1	26
14	Optimization of solar aided coal-fired power plant layouts using multi-criteria assessment. <i>Applied Thermal Engineering</i> , 2018, 137, 406-418.	6.0	20
15	A new calorimetric facility to investigate radiative-convective heat exchangers for concentrated solar power applications. <i>International Journal of Energy Research</i> , 2018, 42, 966-976.	4.5	7
16	Solar-Driven Thermochemical Water-Splitting by Cerium Oxide: Determination of Operational Conditions in a Directly Irradiated Fixed Bed Reactor. <i>Energies</i> , 2018, 11, 2451.	3.1	13
17	Particles-based thermal energy storage systems for concentrated solar power. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	6
18	Annual performance of solar tower aided coal-fired power generation system. <i>Energy</i> , 2017, 119, 662-674.	8.8	49

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19	Performance comparison of different thermodynamic cycles for an innovative central receiver solar power plant. AIP Conference Proceedings, 2017, , .	0.4	24
20	Ultra-modular 500m2 heliostat field for high flux/high temperature solar-driven processes. AIP Conference Proceedings, 2017, , .	0.4	10
21	A parametric experimental study of aerothermal performance and efficiency in monolithic volumetric absorbers. AIP Conference Proceedings, 2017, , .	0.4	5
22	Heat exchanger modelling in central receiver solar power plant using dense particle suspension. AIP Conference Proceedings, 2017, , .	0.4	5
23	A new laboratory-scale experimental facility for detailed aerothermal characterizations of volumetric absorbers. AIP Conference Proceedings, 2016, , .	0.4	8
24	Numerical analysis of radiation propagation in innovative volumetric receivers based on selective laser melting techniques. AIP Conference Proceedings, 2016, , .	0.4	11
25	Numerical modelling of a 100-Wh lab-scale thermochemical heat storage system for concentrating solar power plants. AIP Conference Proceedings, 2016, , .	0.4	3
26	Thermal and hydrodynamic behavior of ceramic volumetric absorbers for central receiver solar power plants: A review. Renewable and Sustainable Energy Reviews, 2016, 57, 648-658.	16.4	66
27	Exergetic analysis of hybrid power plants with biomass and photovoltaics coupled with a solid-oxide electrolysis system. Energy, 2016, 94, 304-315.	8.8	10
28	A directly irradiated solar reactor for kinetic analysis of non-volatile metal oxides reductions. International Journal of Energy Research, 2015, 39, 1217-1228.	4.5	17
29	Part load operation of a solid oxide electrolysis system for integration with renewable energy sources. International Journal of Hydrogen Energy, 2015, 40, 8291-8303.	7.1	40
30	Numerical analysis of radiation propagation in a multi-layer volumetric solar absorber composed of a stack of square grids. Solar Energy, 2015, 121, 94-102.	6.1	37
31	Numerical Investigation of PCM-based Thermal Energy Storage System. Energy Procedia, 2015, 69, 758-768.	1.8	18
32	Analysis of glint and glare produced by the receiver of small heliostat fields integrated in building façades. Methodology applicable to conventional central receiver systems. Solar Energy, 2015, 121, 68-77.	6.1	5
33	Numerical and experimental studies on heat transfer characteristics of thermal energy storage system packed with molten salt PCM capsules. Applied Thermal Engineering, 2015, 90, 970-979.	6.0	127
34	Review of experimental investigation on directly irradiated particles solar reactors. Renewable and Sustainable Energy Reviews, 2015, 41, 53-67.	16.4	105
35	CRISPTower – A Solar Power Tower R&D Initiative in India. Energy Procedia, 2014, 57, 301-310.	1.8	3
36	Optical Analysis of a Hexagonal 42kWe High-flux Solar Simulator. Energy Procedia, 2014, 57, 590-596.	1.8	35

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37	Transient Numerical Analysis of Storage Tanks Based on Encapsulated PCMs for Heat Storage in Concentrating Solar Power Plants. <i>Energy Procedia</i> , 2014, 57, 672-681.	1.8	14
38	Phase Change and Heat Transfer Numerical Analysis during Solidification on an Encapsulated Phase Change Material. <i>Energy Procedia</i> , 2014, 57, 653-661.	1.8	9
39	Comparative System Performance Analysis of Direct Steam Generation Central Receiver Solar Thermal Power Plants in Megawatt Range. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2014, 136, .	1.8	15
40	Determination of Glint and Glare of Heliostat Fields Integrated on Building Façades.. <i>Energy Procedia</i> , 2014, 57, 331-340.	1.8	3
41	The melting process of storage materials with relatively high phase change temperatures in partially filled spherical shells. <i>Applied Energy</i> , 2014, 116, 243-252.	10.1	77
42	Analysis of solar shading caused by building-integrated Vertical Heliostat Fields. <i>Energy and Buildings</i> , 2014, 76, 199-210.	6.7	8
43	Solar thermal <sc>CSP</sc> technology. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , 2014, 3, 42-59.	4.1	109
44	Numerical analysis of charging and discharging performance of a thermal energy storage system with encapsulated phase change material. <i>Applied Thermal Engineering</i> , 2014, 71, 481-500.	6.0	99
45	Optimal integration of a solid-oxide electrolyser cell into a direct steam generation solar tower plant for zero-emission hydrogen production. <i>Applied Energy</i> , 2014, 131, 238-247.	10.1	59
46	Thermochemical energy storage at high temperature via redox cycles of Mn and Co oxides: Pure oxides versus mixed ones. <i>Solar Energy Materials and Solar Cells</i> , 2014, 123, 47-57.	6.2	137
47	Analysis of Net Zero-energy Building in Spain. Integration of PV, Solar Domestic Hot Water and Air-conditioning Systems. <i>Energy Procedia</i> , 2014, 48, 828-836.	1.8	21
48	Numerical Modeling of Solar Thermochemical Reactor for Kinetic Analysis. <i>Energy Procedia</i> , 2014, 49, 735-742.	1.8	9
49	Coupling of a Solid-oxide Cell Unit and a Linear Fresnel Reflector Field for Grid Management. <i>Energy Procedia</i> , 2014, 57, 706-715.	1.8	17
50	A Novel Lab-scale Solar Reactor for Kinetic Analysis of Non-volatile Metal Oxides Thermal Reductions. <i>Energy Procedia</i> , 2014, 57, 561-569.	1.8	11
51	Kinetics of $Mn_2O_3 \rightleftharpoons Mn_3O_4$ and $Mn_3O_4 \rightleftharpoons MnO$ Redox Reactions Performed under Concentrated Thermal Radiative Flux. <i>Energy &amp; Fuels</i> , 2013, 27, 4884-4890.	5.1	57
52	Optical performance of vertical heliostat fields integrated in building façades for concentrating solar energy uses. <i>Solar Energy</i> , 2013, 97, 447-459.	6.1	15
53	Thermal performance of lab-scale solar reactor designed for kinetics analysis at high radiation fluxes. <i>Chemical Engineering Science</i> , 2013, 101, 81-89.	3.8	28
54	Concentrating solar thermal power and thermochemical fuels. <i>Energy and Environmental Science</i> , 2012, 5, 9234.	30.8	591

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55	Solar hydrogen production by two-step thermochemical cycles: Evaluation of the activity of commercial ferrites. International Journal of Hydrogen Energy, 2009, 34, 2918-2924.	7.1	107
56	Comparison of Experimental and Numerical Air Temperature Distributions Behind a Cylindrical Volumetric Solar Absorber Module. Journal of Solar Energy Engineering, Transactions of the ASME, 2008, 130, .	1.8	8
57	Evaluation of porous silicon carbide monolithic honeycombs as volumetric receivers/collectors of concentrated solar radiation. Solar Energy Materials and Solar Cells, 2007, 91, 474-488.	6.2	185
58	Methodology for generation of heliostat field layout in central receiver systems based on yearly normalized energy surfaces. Solar Energy, 2006, 80, 861-874.	6.1	121
59	Analysis of air return alternatives for CRS-type open volumetric receiver. Energy, 2004, 29, 677-686.	8.8	30
60	An Update on Solar Central Receiver Systems, Projects, and Technologies. Journal of Solar Energy Engineering, Transactions of the ASME, 2002, 124, 98-108.	1.8	258
61	Design of "SIREC-1" Wire Mesh Open Volumetric Solar Receiver Prototype. , 2001, , .		4
62	Distributed power from solar tower systems: a MIUS approach. Solar Energy, 1999, 67, 249-264.	6.1	20
63	SOLAR PHOTOCATALYTIC DEGRADATION OF WATER AND AIR POLLUTANTS: CHALLENGES AND PERSPECTIVES. Solar Energy, 1999, 66, 169-182.	6.1	128
64	Influence of temperature on gas-phase photo-assisted mineralization of TCE using tubular and monolithic catalysts. Catalysis Today, 1999, 54, 369-377.	4.4	53
65	Recent experiences on reflectant module components for innovative heliostats. Solar Energy Materials and Solar Cells, 1991, 24, 320-332.	0.4	7
66	Performance of a CRS with stretched membrane heliostats for steam reforming of methane. Solar Energy Materials and Solar Cells, 1991, 24, 707-719.	0.4	0