Roman Bader

List of Publications by Year
in descending order

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31 papers	1,185 citations	394421 19 h-index	501196 28 g-index
31 all docs	31 docs citations	31 times ranked	933 citing authors

#	Article	IF	Citations
1	Thermodynamic Analysis of Isothermal Redox Cycling of Ceria for Solar Fuel Production. Energy & Fuels, 2013, 27, 5533-5544.	5.1	187
2	Techno-economic assessment of solidâ€“gas thermochemical energy storage systems for solar thermal power applications. Energy, 2018, 149, 473-484.	8.8	177
3	Optics of solar central receiver systems: a review. Optics Express, 2016, 24, A985.	3.4	62
4	An air-based corrugated cavity-receiver for solar parabolic trough concentrators. Applied Energy, 2015, 138, 337-345.	10.1	61
5	Experimental and numerical characterization of a new 45 kW_el multisource high-flux solar simulator. Optics Express, 2016, 24, A1360.	3.4	60
6	Optical Design of Multisource High-Flux Solar Simulators. Journal of Solar Energy Engineering, Transactions of the ASME, 2015, 137, .	1.8	58
7	Towards Solar Thermochemical Carbon Dioxide Capture via Calcium Oxide Looping: A Review. Aerosol and Air Quality Research, 2014, 14, 500-514.	2.1	57
8	Design of a Solar Reactor to Split CO2 Via Isothermal Redox Cycling of Ceria. Journal of Solar Energy Engineering, Transactions of the ASME, 2015, 137, .	1.8	52
9	High-flux optical systems for solar thermochemistry. Solar Energy, 2017, 156, 133-148.	6.1	52
10	Modelling of solar thermochemical reaction systems. Solar Energy, 2017, 156, 149-168.	6.1	52
11	Efficient ceria nanostructures for enhanced solar fuel production via high-temperature thermochemical redox cycles. Journal of Materials Chemistry A, 2016, 4, 9614-9624.	10.3	49
12	Thermodynamic Analyses of Fuel Production via Solar-Driven Non-stoichiometric Metal Oxide Redox Cycling. Part 2. Impact of Solidâ€“Gas Flow Configurations and Active Material Composition on System-Level Efficiency. Energy & Fuels, 2018, 32, 10848-10863.	5.1	35
13	A solar dish concentrator based on ellipsoidal polyester membrane facets. Solar Energy, 2012, 86, 40-47.	6.1	34
14	Optical Design of a Novel Two-Stage Solar Trough Concentrator Based on Pneumatic Polymeric Structures. Journal of Solar Energy Engineering, Transactions of the ASME, 2009, 131, .	1.8	31
15	An Air-Based Cavity-Receiver for Solar Trough Concentrators. Journal of Solar Energy Engineering, Transactions of the ASME, 2010, 132, .	1.8	29
16	A 9-m-Aperture Solar Parabolic Trough Concentrator Based on a Multilayer Polymer Mirror Membrane Mounted on a Concrete Structure. Journal of Solar Energy Engineering, Transactions of the ASME, 2011, 133, .	1.8	28
17	Thermal Model of a Solar Thermochemical Reactor for Metal Oxide Reduction. Journal of Solar Energy Engineering, Transactions of the ASME, 2020, 142, .	1.8	22
18	Experimental and Numerical Heat Transfer Analysis of an Air-Based Cavity-Receiver for Solar Trough Concentrators. Journal of Solar Energy Engineering, Transactions of the ASME, 2012, 134, .	1.8	21

#	Article	IF	Citations
19	Transient heat and mass transfer analysis in a porous ceria structure ofÂa novel solar redox reactor. International Journal of Thermal Sciences, 2015, 92, 138-149.	4.9	21
20	Progress in thermal transport modeling of carbonate-based reacting systems. International Journal of Numerical Methods for Heat and Fluid Flow, 2017, 27, 1098-1107.	2.8	15
21	Reflective optics for redirecting convergent radiative beams in concentrating solar applications. Solar Energy, 2019, 191, 707-718.	6.1	12
22	Concentrating collector systems for solar thermal and thermochemical applications. Advances in Chemical Engineering, 2021, 58, 1-53.	0.9	11
23	THERMAL TRANSPORT MODEL OF A PACKED-BED REACTOR FOR SOLAR THERMOCHEMICAL CO2 CAPTURE. Special Topics and Reviews in Porous Media, 2015, 6, 197-209.	1.1	10
24	High-flux solar simulator technology. , 2016, , .		9
25	A Solar Reactor Design for Research on Calcium Oxide-Based Carbon Dioxide Capture. Journal of Solar Energy Engineering, Transactions of the ASME, 2017, 139, .	1.8	9
26	Unsteady Radiative Heat Transfer Model of a Ceria Particle Suspension Undergoing Solar Thermochemical Reduction. Journal of Thermophysics and Heat Transfer, 2019, 33, 63-77.	1.6	9
27	Optical analysis of a multi-aperture solar central receiver system for high-temperature concentrating solar applications. Optics Express, 2020, 28, 37654.	3.4	9
28	A Solar Trough Concentrator for Pill-Box Flux Distribution Over a CPV Panel. Journal of Solar Energy Engineering, Transactions of the ASME, 2010, 132, .	1.8	7
29	Solar Thermochemical Processes. World Scientific Series in Current Energy Issues, 2016, , 345-394.	0.1	6
30	An Air-Based Cavity-Receiver for Solar Trough Concentrators. , 2010, , .		0
31	Optical analyses of multi-aperture solar central receiver systems for high-temperature concentrating solar applications. , 2020, , .		0