

# Aldo Steinfeld

## List of Publications by Year in descending order

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462  
papers

26,570  
citations

4942

84  
h-index

10127

140  
g-index

483  
all docs

483  
docs citations

483  
times ranked

11056  
citing authors

#	ARTICLE	IF	CITATIONS
1	Drop-in fuels from sunlight and air. <i>Nature</i> , 2022, 601, 63-68.	13.7	170
2	Solar Energy in Thermochemical Processing. , 2022, , 315-347.		1
3	High-purity nitrogen production from air by pressure swing adsorption combined with SrFeO <sub>3</sub> redox chemical looping. <i>Chemical Engineering Journal</i> , 2021, 421, 127734.	6.6	22
4	Experimental testing of a solar air cavity-receiver with reticulated porous ceramic absorbers for thermal processing at above 1000 Å°C. <i>Solar Energy</i> , 2021, 214, 72-85.	2.9	37
5	Thermodynamic comparison of solar methane reforming via catalytic and redox cycle routes. <i>Solar Energy</i> , 2021, 215, 169-178.	2.9	25
6	Reversible Phase Transformations in Novel Ce-Substituted Perovskite Oxide Composites for Solar Thermochemical Redox Splitting of CO <sub>2</sub> . <i>Advanced Energy Materials</i> , 2021, 11, 2003532.	10.2	18
7	Performance Indicators for Benchmarking Solar Thermochemical Fuel Processes and Reactors. <i>Frontiers in Energy Research</i> , 2021, 9, .	1.2	23
8	Experimental Investigation of a Thermochemical Reactor for High-Temperature Heat Storage via Carbonation-Calcination Based Cycles. <i>Frontiers in Energy Research</i> , 2021, 9, .	1.2	2
9	Thermochemical Hydrogen Storage via the Reversible Reduction and Oxidation of Metal Oxides. <i>Energy &amp; Fuels</i> , 2021, 35, 18756-18767.	2.5	9
10	Optical properties and scattering distribution of thermographic phosphors. <i>Optical Materials</i> , 2021, 122, 111741.	1.7	0
11	High redox performance of Y <sub>0.5</sub> Ba <sub>0.5</sub> CoO <sub>3</sub> for thermochemical oxygen production and separation. <i>Reaction Chemistry and Engineering</i> , 2020, 5, 685-695.	1.9	13
12	High-Temperature Thermochemical Heat Storage via the CuO/Cu <sub>2</sub> O Redox Cycle: From Material Synthesis to Packed-Bed Reactor Engineering and Cyclic Operation. <i>Energy &amp; Fuels</i> , 2020, 34, 16772-16782.	2.5	28
13	Dual Hydrogen- and Oxygen-Transport Membrane Reactor for Solar-Driven Syngas Production. <i>Frontiers in Energy Research</i> , 2020, 8, .	1.2	3
14	Isothermal relaxation kinetics for the reduction and oxidation of SrFeO <sub>3</sub> based perovskites. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 2466-2474.	1.3	24
15	Thermochemical energy storage via isothermal carbonation-calcination cycles of MgO-stabilized SrO in the range of 1000-1100 Å°C. <i>Solar Energy</i> , 2019, 188, 720-729.	2.9	24
16	Reticulated porous ceramic ceria structures with modified surface geometry for solar thermochemical splitting of water and carbon dioxide. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	5
17	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, , .	0.3	13
18	Direct absorption of concentrated solar radiation by glass above 1000 Å°C. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	0

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19	CFD modeling and experimental validation of the TES unit integrated into the world's first underground AA-CAES pilot plant. AIP Conference Proceedings, 2019, , .	0.3	2
20	Additive-Manufactured Ordered Porous Structures Made of Ceria for Concentrating Solar Applications. Energy Technology, 2019, 7, 1900484.	1.8	43
21	Concentrated solar energy – the path for efficient thermal conversion to power and fuels. Science Bulletin, 2019, 64, 485-486.	4.3	21
22	Solar-driven co-thermolysis of CO <sub>2</sub> and H <sub>2</sub> O promoted by <i>in situ</i> oxygen removal across a non-stoichiometric ceria membrane. Reaction Chemistry and Engineering, 2019, 4, 1431-1438.	1.9	28
23	Unsteady Radiative Heat Transfer Model of a Ceria Particle Suspension Undergoing Solar Thermochemical Reduction. Journal of Thermophysics and Heat Transfer, 2019, 33, 63-77.	0.9	9
24	Heat Transfer Model of a 50-kW Solar Receiver-Reactor for Thermochemical Redox Cycling Using Cerium Dioxide. Journal of Solar Energy Engineering, Transactions of the ASME, 2019, 141, .	1.1	27
25	A co-located solar receiver and thermal storage concept using silicate glass at 1000 °C and above: Experiments and modeling in the optically thick regime. Solar Energy, 2019, 177, 553-560.	2.9	6
26	A Pressurized High-Flux Solar Reactor for the Thermochemical Gasification of Charcoal Slurry-Two-Phase Flow and Heat Transfer Analysis. Journal of Heat Transfer, 2019, 142, .	1.2	2
27	Modelling and Experimental Testing of a Tubular Thermochemical Reactor. , 2019, , .		1
28	Solar-Driven Thermochemical Production of Sustainable Liquid Fuels from H <sub>2</sub> O and CO <sub>2</sub> in a Heliostat Field. , 2019, , .		6
29	Solar Thermochemical Splitting of CO <sub>2</sub> in a Modular Solar Dish-Reactor System. , 2019, , .		3
30	Pilot-scale demonstration of advanced adiabatic compressed air energy storage, Part 1: Plant description and tests with sensible thermal-energy storage. Journal of Energy Storage, 2018, 17, 129-139.	3.9	113
31	Constrained multi-objective optimization of thermocline packed-bed thermal-energy storage. Applied Energy, 2018, 216, 694-708.	5.1	48
32	Mimicking tetravalent dopant behavior using paired charge compensating dopants to improve the redox performance of ceria for thermochemically splitting H <sub>2</sub> O and CO <sub>2</sub> . Acta Materialia, 2018, 144, 728-737.	3.8	26
33	Pilot-scale demonstration of advanced adiabatic compressed air energy storage, Part 2: Tests with combined sensible/latent thermal-energy storage. Journal of Energy Storage, 2018, 17, 140-152.	3.9	61
34	Reactive stability of promising scalable doped ceria materials for thermochemical two-step CO <sub>2</sub> dissociation. Journal of Materials Chemistry A, 2018, 6, 5807-5816.	5.2	23
35	Investigation of Na <sub>2</sub> SO <sub>4</sub> removal from a supercritical aqueous solution in a dip-tube salt separator. Journal of Supercritical Fluids, 2018, 133, 146-155.	1.6	6
36	Solar thermal hybrids for combustion power plant: A growing opportunity. Progress in Energy and Combustion Science, 2018, 64, 4-28.	15.8	110

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37	Co-production of syngas and potassium-based fertilizer by solar-driven thermochemical conversion of crop residues. <i>Fuel Processing Technology</i> , 2018, 171, 89-99.	3.7	22
38	Solar thermochemical reactor technology for splitting CO <sub>2</sub> . <i>AIP Conference Proceedings</i> , 2018, , .	0.3	7
39	Development of a 5 kWth windowless packed-bed reactor for high-temperature solar thermochemical processing. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	2
40	Comparing the solar-to-fuel energy conversion efficiency of ceria and perovskite based thermochemical redox cycles for splitting H <sub>2</sub> O and CO <sub>2</sub> . <i>International Journal of Hydrogen Energy</i> , 2018, 43, 18814-18831.	3.8	85
41	Optical design and experimental characterization of a solar concentrating dish system for fuel production via thermochemical redox cycles. <i>Solar Energy</i> , 2018, 170, 568-575.	2.9	63
42	Solar concentrating dishes based on elastic and elasto-plastic membranes. , 2018, , .		0
43	A pressurized high-flux solar reactor for the efficient thermochemical gasification of carbonaceous feedstock. <i>Fuel</i> , 2017, 193, 432-443.	3.4	61
44	High Redox Capacity of Al <sup>3+</sup> -Doped La <sub>1-x</sub> Sr <sub>x</sub> MnO <sub>3-y</sub> Perovskites for Splitting CO <sub>2</sub> and H <sub>2</sub> O at Mn-Enriched Surfaces. <i>ChemSusChem</i> , 2017, 10, 1517-1525.	3.6	34
45	Coupled Concentrating Optics, Heat Transfer, and Thermochemical Modeling of a 100-kWth High-Temperature Solar Reactor for the Thermal Dissociation of ZnO. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2017, 139, .	1.1	14
46	Solar thermochemical splitting of CO <sub>2</sub> into separate streams of CO and O <sub>2</sub> with high selectivity, stability, conversion, and efficiency. <i>Energy and Environmental Science</i> , 2017, 10, 1142-1149.	15.6	360
47	Computational screening of perovskite redox materials for solar thermochemical ammonia synthesis from N <sub>2</sub> and H <sub>2</sub> O. <i>Catalysis Today</i> , 2017, 286, 124-130.	2.2	29
48	Optimal solar dish field layouts for maximum collection and shading efficiencies. <i>Solar Energy</i> , 2017, 144, 286-294.	2.9	6
49	Exploiting kinetics to unravel the role of a ZnO diluent in the production of CO via oxidizing Zn particles with CO <sub>2</sub> . <i>Chemical Engineering Science</i> , 2017, 165, 96-107.	1.9	3
50	Tunable thermodynamic activity of La <sub>x</sub> Sr <sub>1-x</sub> Mn <sub>y</sub> Al <sub>y</sub> O <sub>3-y</sub> (0 ≤ x ≤ 1, 0 ≤ y ≤ 1) perovskites for solar thermochemical fuel synthesis. <i>Journal of Materials Chemistry A</i> , 2017, 5, 4172-4182.	3.2	64
51	Upgrading sensible-heat storage with a thermochemical storage section operated at variable pressure: An effective way toward active control of the heat-transfer fluid outflow temperature. <i>Applied Energy</i> , 2017, 196, 51-61.	5.1	26
52	Integration of a Pressurized-Air Solar Receiver Array to a Gas Turbine Power Cycle for Solar Tower Applications. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2017, 139, .	1.1	9
53	Solar-driven alumina calcination for CO <sub>2</sub> mitigation and improved product quality. <i>Green Chemistry</i> , 2017, 19, 2992-3005.	4.6	34
54	Experimental investigation of the thermal and mechanical stability of rocks for high-temperature thermal-energy storage. <i>Applied Energy</i> , 2017, 203, 373-389.	5.1	111

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55	Splitting CO <sub>2</sub> with a ceria-based redox cycle in a solar-driven thermogravimetric analyzer. <i>AIChE Journal</i> , 2017, 63, 1263-1271.	1.8	20
56	Reticulated porous ceria undergoing thermochemical reduction with high-flux irradiation. <i>International Journal of Heat and Mass Transfer</i> , 2017, 107, 439-449.	2.5	78
57	Thermodynamics of paired charge-compensating doped ceria with superior redox performance for solar thermochemical splitting of H <sub>2</sub> O and CO <sub>2</sub> . <i>Journal of Materials Chemistry A</i> , 2017, 5, 19476-19484.	5.2	42
58	Trends in the phase stability and thermochemical oxygen exchange of ceria doped with potentially tetravalent metals. <i>Journal of Materials Chemistry A</i> , 2017, 5, 19901-19913.	5.2	32
59	Solar-Driven Thermochemical Splitting of CO <sub>2</sub> and In Situ Separation of CO and O <sub>2</sub> across a Ceria Redox Membrane Reactor. <i>Joule</i> , 2017, 1, 146-154.	11.7	120
60	Combined Ceria Reduction and Methane Reforming in a Solar-Driven Particle-Transport Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , 2017, 56, 10300-10308.	1.8	38
61	Solar kerosene from H <sub>2</sub> O and CO <sub>2</sub> . <i>AIP Conference Proceedings</i> , 2017, , .	0.3	11
62	Does the \$20 Million Carbon XPRIZE Exclude Solar Technologies?. <i>Energy Technology</i> , 2017, 5, 773-774.	1.8	1
63	Fuels from water, CO <sub>2</sub> and solar energy. <i>Science Bulletin</i> , 2017, 62, 1099-1101.	4.3	31
64	Assessment of Heat Exchangers for the Integration of Concentrated Solar Energy into the Catalytic Hydrothermal Gasification of Biomass. <i>Energy Technology</i> , 2017, 5, 2086-2099.	1.8	7
65	High-temperature thermocline TES combining sensible and latent heat - CFD modeling and experimental validation. <i>AIP Conference Proceedings</i> , 2017, , .	0.3	6
66	Design principles of perovskites for solar-driven thermochemical splitting of CO <sub>2</sub> . <i>Journal of Materials Chemistry A</i> , 2017, 5, 15105-15115.	5.2	38
67	Principles of doping ceria for the solar thermochemical redox splitting of H <sub>2</sub> O and CO <sub>2</sub> . <i>Journal of Materials Chemistry A</i> , 2017, 5, 15578-15590.	5.2	73
68	On-sun optical characterization of a solar dish concentrator based on elliptical vacuum membrane facets. <i>Solar Energy</i> , 2017, 153, 732-743.	2.9	18
69	A 6-focus high-concentration photovoltaic-thermal dish system. <i>Solar Energy</i> , 2017, 155, 445-463.	2.9	24
70	Spectral hemispherical reflectivity of nonstoichiometric cerium dioxide. <i>Solar Energy Materials and Solar Cells</i> , 2017, 159, 167-171.	3.0	12
71	Nonimaging polygonal mirrors achieving uniform irradiance distributions on concentrating photovoltaic cells. <i>Applied Optics</i> , 2017, 56, 3035.	2.1	6
72	Experimental observation of transient &lt;i>H<sub>2</sub>O</i> interaction between snow and advective airflow under various temperature gradient conditions. <i>Cryosphere</i> , 2017, 11, 1733-1743.	1.5	22

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73	A High-Flux Solar Parabolic Dish System for Continuous Thermochemical Fuel Production. , 2017, , .		1
74	Metamorphism during temperature gradient with undersaturated advective airflow in a snow sample. Cryosphere, 2016, 10, 791-797.	1.5	11
75	SolarSyngas: Results from a virtual institute developing materials and key components for solar thermochemical fuel production. AIP Conference Proceedings, 2016, , .	0.3	2
76	Analysis of industrial-scale high-temperature combined sensible/latent thermal energy storage. Applied Thermal Engineering, 2016, 101, 657-668.	3.0	78
77	A packed-bed solar reactor for the carbothermal zinc production – dynamic modelling and experimental validation. AIChE Journal, 2016, 62, 4586-4594.	1.8	2
78	Experimental Demonstration of the Thermochemical Reduction of Ceria in a Solar Aerosol Reactor. Industrial & Engineering Chemistry Research, 2016, 55, 10618-10625.	1.8	41
79	Experimental demonstration of high-concentration photovoltaics on a parabolic trough using tracking secondary optics. Progress in Photovoltaics: Research and Applications, 2016, 24, 1410-1426.	4.4	8
80	A 1.2 MWth solar parabolic trough system based on air as heat transfer fluid at 500 Å°C – Engineering design, modelling, construction, and testing. Solar Energy, 2016, 139, 398-411.	2.9	19
81	Impact of Daily Startup/Shutdown Conditions on the Production of Solar Methanol over a Commercial Cu/ZnO/Al <sub>2</sub> O <sub>3</sub> Catalyst. Energy Technology, 2016, 4, 565-572.	1.8	14
82	The effect of the gas/solid contacting pattern in a high-temperature thermochemical energy storage on the performance of a concentrated solar power plant. Energy and Environmental Science, 2016, 9, 1375-1389.	15.6	53
83	Oxygen nonstoichiometry, defect equilibria, and thermodynamic characterization of LaMnO <sub>3</sub> perovskites with Ca/Sr A-site and Al B-site doping. Acta Materialia, 2016, 103, 700-710.	3.8	128
84	High-concentration solar dishes based on pneumatic reflecting membranes. Solar Energy, 2016, 124, 89-100.	2.9	9
85	Spectral data of specular reflectance, narrow-angle transmittance and angle-resolved surface scattering of materials for solar concentrators. Data in Brief, 2016, 6, 184-188.	0.5	10
86	Spectral reflectance, transmittance, and angular scattering of materials for solar concentrators. Solar Energy Materials and Solar Cells, 2016, 144, 509-522.	3.0	33
87	Heat and mass transfer of temperature/vacuum swing desorption for CO <sub>2</sub> capture from air. Chemical Engineering Journal, 2016, 283, 1329-1338.	6.6	86
88	Constrained Multi-Objective Optimization of Thermocline Packed- Bed Thermal Energy Storage Systems. , 2016, , .		0
89	Two-stage solar concentrators based on parabolic troughs: asymmetric versus symmetric designs. Applied Optics, 2015, 54, 9709.	2.1	19
90	Rational design of metal nitride redox materials for solar-driven ammonia synthesis. Interface Focus, 2015, 5, 20140084.	1.5	88

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91	Tomography-based characterization of ice-air interface dynamics of temperature gradient snow metamorphism under advective conditions. <i>Journal of Geophysical Research F: Earth Surface</i> , 2015, 120, 2437-2451.	1.0	7
92	Experimental and Numerical Investigation of Combined Sensible/Latent Thermal Energy Storage for High-Temperature Applications. <i>Chimia</i> , 2015, 69, 799-803.	0.3	3
93	Lanthanum Manganite Perovskites with Ca/Sr A-site and Al B-site Doping as Effective Oxygen Exchange Materials for Solar Thermochemical Fuel Production. <i>Energy Technology</i> , 2015, 3, 1130-1142.	1.8	116
94	Physico-chemical changes in Ca, Sr and Al-doped LaMnO perovskites upon thermochemical splitting of CO <sub>2</sub> via redox cycling. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 6629-6634.	1.3	94
95	The effect of dopants on the redox performance, microstructure and phase formation of ceria. <i>Journal of Power Sources</i> , 2015, 300, 261-271.	4.0	25
96	Modular Design and Experimental Testing of a 50 kWth Pressurized-Air Solar Receiver for Gas Turbines. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2015, 137, .	1.1	38
97	Optical and Thermal Analysis of a Pressurized-Air Receiver Cluster for a 50 MWe Solar Power Tower. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2015, 137, .	1.1	12
98	Numerical Heat Transfer Analysis of a 50 kWth Pressurized-Air Solar Receiver. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2015, 137, .	1.1	11
99	An array of coiled absorber tubes for solar trough concentrators operating with air at 600 °C and above. <i>Solar Energy</i> , 2015, 111, 378-395.	2.9	20
100	Design Principles for Metal Oxide Redox Materials for Solar-Driven Isothermal Fuel Production. <i>Advanced Energy Materials</i> , 2015, 5, 1401082.	10.2	52
101	Experimental and numerical investigation of combined sensible+latent heat for thermal energy storage at 575°C and above. <i>Solar Energy</i> , 2015, 114, 77-90.	2.9	107
102	Fast and Reversible Direct CO <sub>2</sub> Capture from Air onto All-Polymer Nanofibrillated Cellulose-Polyethylenimine Foams. <i>Environmental Science &amp; Technology</i> , 2015, 49, 3167-3174.	4.6	129
103	Heat transfer and fluid flow analysis of a 4kW solar thermochemical reactor for ceria redox cycling. <i>Chemical Engineering Science</i> , 2015, 137, 373-383.	1.9	81
104	Oxygen nonstoichiometry and thermodynamic characterization of Zr doped ceria in the 1573-1773 K temperature range. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 7813-7822.	1.3	105
105	Kinetics of CO <sub>2</sub> Reduction over Nonstoichiometric Ceria. <i>Journal of Physical Chemistry C</i> , 2015, 119, 16452-16461.	1.5	114
106	Demonstration of the Entire Production Chain to Renewable Kerosene via Solar Thermochemical Splitting of H <sub>2</sub> O and CO <sub>2</sub> . <i>Energy &amp; Fuels</i> , 2015, 29, 3241-3250.	2.5	167
107	On the Development of a Zinc Vapor Condensation Process for the Solar Carbothermal Reduction of Zinc Oxide. <i>Jom</i> , 2015, 67, 1096-1109.	0.9	6
108	Design Principles of Perovskites for Thermochemical Oxygen Separation. <i>ChemSusChem</i> , 2015, 8, 1966-1971.	3.6	89

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109	A numerical investigation of gas-particle suspensions as heat transfer media for high-temperature concentrated solar power. <i>International Journal of Heat and Mass Transfer</i> , 2015, 90, 1056-1070.	2.5	26
110	Carbon Dioxide Reforming of Methane using an Isothermal Redox Membrane Reactor. <i>Energy Technology</i> , 2015, 3, 784-789.	1.8	48
111	Experimental Investigation of the Carbothermal Reduction of ZnO Using a Beam-Down, Gravity-Fed Solar Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , 2015, 54, 8319-8332.	1.8	38
112	Analysis of solar-driven gasification of biochar trickling through an interconnected porous structure. <i>AIChE Journal</i> , 2015, 61, 867-879.	1.8	13
113	A novel ventilation strategy with CO <sub>2</sub> capture device and energy saving in buildings. <i>Energy and Buildings</i> , 2015, 87, 134-141.	3.1	45
114	An air-based corrugated cavity-receiver for solar parabolic trough concentrators. <i>Applied Energy</i> , 2015, 138, 337-345.	5.1	61
115	Reforming of Blast Furnace Gas with Methane, Steam, and Lime for Syngas Production and CO <sub>2</sub> Capture: A Thermodynamic Study. <i>Mineral Processing and Extractive Metallurgy Review</i> , 2015, 36, 7-12.	2.6	7
116	Design of packed bed thermal energy storage systems for high-temperature industrial process heat. <i>Applied Energy</i> , 2015, 137, 812-822.	5.1	137
117	Tomography-based monitoring of isothermal snow metamorphism under advective conditions. <i>Cryosphere</i> , 2015, 9, 1363-1371.	1.5	15
118	Combined Experimental-Numerical Approach to Determine Radiation Properties of Particle Suspensions. <i>Journal of Heat Transfer</i> , 2014, 136, .	1.2	11
119	Morphological Characterization and Effective Thermal Conductivity of Dual-Scale Reticulated Porous Structures. <i>Materials</i> , 2014, 7, 7173-7195.	1.3	38
120	Pilot Scale Demonstration of a 100-kWth Solar Thermochemical Plant for the Thermal Dissociation of ZnO. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2014, 136, .	1.1	58
121	Dynamic Modeling of a Solar Reactor for Zinc Oxide Thermal Dissociation and Experimental Validation Using IR Thermography. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2014, 136, .	1.1	23
122	Design Point for Predicting Year-Round Performance of Solar Parabolic Trough Concentrator Systems. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2014, 136, .	1.1	16
123	CRISPTower – A Solar Power Tower R&D Initiative in India. <i>Energy Procedia</i> , 2014, 57, 301-310.	1.8	3
124	Solar Trough Concentrator Design for Uniform Radiative Flux Distribution. , 2014, , .		1
125	Mechanism of Zn Particle Oxidation by H <sub>2</sub> O and CO <sub>2</sub> in the Presence of ZnO. <i>Chemistry of Materials</i> , 2014, 26, 6486-6495.	3.2	39
126	Surpassing the 2D Limit: A 600x High-concentration PV Collector Based on a Parabolic trough with Tracking Secondary Optics. <i>Energy Procedia</i> , 2014, 57, 285-290.	1.8	8



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127	A 3 MWth parabolic trough CSP plant operating with air at up to 650 °C. , 2014, , .		6
128	Stabilization of the outflow temperature of a packed-bed thermal energy storage by combining rocks with phase change materials. Applied Thermal Engineering, 2014, 70, 316-320.	3.0	108
129	Vacuum Carbothermic Reduction of Alumina. Mineral Processing and Extractive Metallurgy Review, 2014, 35, 126-135.	2.6	28
130	Micro-Computed Tomography Based Computational Fluid Dynamics for the Determination of Shear Stresses in Scaffolds Within a Perfusion Bioreactor. Annals of Biomedical Engineering, 2014, 42, 1085-1094.	1.3	46
131	High Temperature Rock-bed TES System Suitable for Industrial-scale CSP Plant – CFD Analysis Under Charge/Discharge Cyclic Conditions. Energy Procedia, 2014, 46, 124-133.	1.8	45
132	Thermochemical CO <sub>2</sub> splitting via redox cycling of ceria reticulated foam structures with dual-scale porosities. Physical Chemistry Chemical Physics, 2014, 16, 10503-10511.	1.3	171
133	Experimental Determination of the Radiative Properties of Particle Suspensions for High-Temperature Solar Receiver Applications. Heat Transfer Engineering, 2014, 35, 272-280.	1.2	18
134	Thermal Reduction of Ceria within an Aerosol Reactor for H <sub>2</sub> O and CO <sub>2</sub> Splitting. Industrial & Engineering Chemistry Research, 2014, 53, 2175-2182.	1.8	75
135	Single-Component and Binary CO <sub>2</sub> and H <sub>2</sub> O Adsorption of Amine-Functionalized Cellulose. Environmental Science & Technology, 2014, 48, 2497-2504.	4.6	138
136	Potential improvements in the optical and thermal efficiencies of parabolic trough concentrators. Solar Energy, 2014, 107, 398-414.	2.9	95
137	Transient discrete-granule packed-bed reactor model for thermochemical energy storage. Chemical Engineering Science, 2014, 117, 465-478.	1.9	21
138	Design of a 100 MWhth Packed-bed Thermal Energy Storage. Energy Procedia, 2014, 49, 1071-1077.	1.8	29
139	Pore-level engineering of macroporous media for increased performance of solar-driven thermochemical fuel processing. International Journal of Heat and Mass Transfer, 2014, 78, 688-698.	2.5	73
140	Nonparabolic solar concentrators matching the parabola. Optics Letters, 2014, 39, 4301.	1.7	9
141	Tomography-based determination of porosity, specific area and permeability of snow and comparison with measurements. Cold Regions Science and Technology, 2014, 97, 33-40.	1.6	25
142	Oxygen exchange materials for solar thermochemical splitting of H <sub>2</sub> O and CO <sub>2</sub> : a review. Materials Today, 2014, 17, 341-348.	8.3	322
143	Diffusion of Oxygen in Ceria at Elevated Temperatures and Its Application to H <sub>2</sub> O/CO <sub>2</sub> Splitting Thermochemical Redox Cycles. Journal of Physical Chemistry C, 2014, 118, 5216-5225.	1.5	119
144	A Pressurized Air Receiver for Solar-driven Gas Turbines. Energy Procedia, 2014, 49, 498-503.	1.8	40

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145	Towards a Commercial Parabolic Trough CSP System Using Air as Heat Transfer Fluid. Energy Procedia, 2014, 49, 381-385.	1.8	40
146	A two-zone solar-driven gasifier concept: Reactor design and experimental evaluation with bagasse particles. Fuel, 2014, 117, 680-687.	3.4	47
147	Transient radiative heat transfer in a suspension of ceria particles undergoing non-stoichiometric reduction. , 2014, , .		0
148	An instrumented sample holder for time-lapse microtomography measurements of snow under advective airflow. Geoscientific Instrumentation, Methods and Data Systems, 2014, 3, 179-185.	0.6	7
149	Investigations into Innovative and Sustainable Processes for the Carbothermic Production of Gaseous Aluminum. , 2014, , 771-776.		0
150	Surface Modification of Graphite Particles Coated by Atomic Layer Deposition and Advances in Ceramic Composites. International Journal of Applied Ceramic Technology, 2013, 10, 257-265.	1.1	16
151	Review of Heat Transfer Research for Solar Thermochemical Applications. Journal of Thermal Science and Engineering Applications, 2013, 5, .	0.8	66
152	Stability of Amine-Functionalized Cellulose during Temperature-Vacuum-Swing Cycling for CO <sub>2</sub> Capture from Air. Environmental Science & Technology, 2013, 47, 10063-10070.	4.6	111
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