## Thermodynamics of CeO<sub>2</sub> Thermochemica

Energy & Fuels 29, 1001-1009 DOI: 10.1021/ef5019912

Citation Report

#	Article	IF	CITATIONS
1	Counter flow sweep gas demand for the ceria redox cycle. Solar Energy, 2015, 122, 1011-1022.	6.1	44
2	On the Efficiency of Solar H <sub>2</sub> and CO Production via the Thermochemical Cerium Oxide Redox Cycle: The Option of Inert-Swept Reduction. Energy & Fuels, 2015, 29, 1045-1054.	5.1	64
3	Ceria Doped with Zirconium and Lanthanide Oxides to Enhance Solar Thermochemical Production of Fuels. Journal of Physical Chemistry C, 2015, 119, 6929-6938.	3.1	71
4	Applicability of an Equilibrium Model To Predict the Conversion of CO <sub>2</sub> to CO via the Reduction and Oxidation of a Fixed Bed of Cerium Dioxide. Energy & Fuels, 2015, 29, 8168-8177.	5.1	29
5	Thermal Reduction of Iron Oxide under Reduced Pressure and Implications on Thermal Conversion Efficiency for Solar Thermochemical Fuel Production. Industrial & Engineering Chemistry Research, 2015, 54, 6793-6803.	3.7	22
6	Entropy Analysis of Solar Two-Step Thermochemical Cycles for Water and Carbon Dioxide Splitting. Entropy, 2016, 18, 24.	2.2	10
7	Demonstration of a Solar Reactor for Carbon Dioxide Splitting via the Isothermal Ceria Redox Cycle and Practical Implications. Energy & Fuels, 2016, 30, 6654-6661.	5.1	74
8	The morphological stability and fuel production of commercial fibrous ceria particles for solar thermochemical redox cycling. Solar Energy, 2016, 139, 524-532.	6.1	25
9	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
10	Particle–particle heat transfer coefficient in a binary packed bed of alumina and zirconia-ceria particles. Applied Thermal Engineering, 2016, 101, 101-111.	6.0	11
11	System efficiency for two-step metal oxide solar thermochemical hydrogen production – Part 1: Thermodynamic model and impact of oxidation kinetics. International Journal of Hydrogen Energy, 2016, 41, 19881-19893.	7.1	66
12	System efficiency for two-step metal oxide solar thermochemical hydrogen production – Part 2: Impact of gas heat recuperation and separation temperatures. International Journal of Hydrogen Energy, 2016, 41, 19894-19903.	7.1	35
13	System efficiency for two-step metal oxide solar thermochemical hydrogen production – Part 3: Various methods for achieving low oxygen partial pressures in the reduction reaction. International Journal of Hydrogen Energy, 2016, 41, 19904-19914.	7.1	45
14	Thermodynamic and efficiency analysis of solar thermochemical water splitting using Ce–Zr mixtures. Solar Energy, 2016, 135, 154-162.	6.1	18
15	Solar thermochemical hydrogen production using ceria zirconia solid solutions: Efficiency analysis. International Journal of Hydrogen Energy, 2016, 41, 19320-19328.	7.1	47
16	Oxidation and Reduction Reaction Kinetics of Mixed Cerium Zirconium Oxides. Journal of Physical Chemistry C, 2016, 120, 2027-2035.	3.1	47
17	A transient heat transfer model for high temperature solar thermochemical reactors. International Journal of Hydrogen Energy, 2016, 41, 2307-2325.	7.1	25
18	Critical limitations on the efficiency of two-step thermochemical cycles. Solar Energy, 2016, 123, 57-73.	6.1	59

TION RE

#	Article	IF	CITATIONS
19	Solar fuels via chemical-looping reforming. Solar Energy, 2017, 156, 48-72.	6.1	58
20	Advances and trends in redox materials for solar thermochemical fuel production. Solar Energy, 2017, 156, 3-20.	6.1	130
21	Isothermal redox for H 2 O and CO 2 splitting $\hat{a} \in$ " A review and perspective. Solar Energy, 2017, 156, 21-29.	6.1	58
22	Direct thermolysis of CO <sub>2</sub> into CO and O <sub>2</sub> . Chemical Communications, 2017, 53, 1188-1191.	4.1	32
23	Splitting CO <sub>2</sub> with a ceriaâ€based redox cycle in a solarâ€driven thermogravimetric analyzer. AlCHE Journal, 2017, 63, 1263-1271.	3.6	20
24	Heat transfer in a directly irradiated ceria particle bed under vacuum conditions. Solar Energy, 2017, 158, 737-745.	6.1	7
25	Applications and limitations of two step metal oxide thermochemical redox cycles; a review. Journal of Materials Chemistry A, 2017, 5, 18951-18966.	10.3	133
26	Oxygen Transport Membrane for Thermochemical Conversion of Water and Carbon Dioxide into Synthesis Gas. ACS Sustainable Chemistry and Engineering, 2017, 5, 8657-8662.	6.7	40
27	New Insights into the Dynamics That Control the Activity of Ceria–Zirconia Solid Solutions in Thermochemical Water Splitting Cycles. Journal of Physical Chemistry C, 2017, 121, 17746-17755.	3.1	26
28	Principles of doping ceria for the solar thermochemical redox splitting of H <sub>2</sub> O and CO <sub>2</sub> . Journal of Materials Chemistry A, 2017, 5, 15578-15590.	10.3	73
29	Interplay of material thermodynamics and surface reaction rate on the kinetics of thermochemical hydrogen production. International Journal of Hydrogen Energy, 2017, 42, 16932-16945.	7.1	33
30	Thermodynamic analysis and optimization of RWGS processes for solar syngas production from CO <sub>2</sub> . AICHE Journal, 2017, 63, 15-22.	3.6	34
31	Spectral hemispherical reflectivity of nonstoichiometric cerium dioxide. Solar Energy Materials and Solar Cells, 2017, 159, 167-171.	6.2	12
32	Vacuum pumping options for application in solar thermochemical redox cycles – Assessment of mechanical-, jet- and thermochemical pumping systems. Solar Energy, 2017, 141, 91-102.	6.1	74
33	Solar thermal processing. , 2017, , 403-459.		25
34	The Interaction of CO <sub>2</sub> with CeO <sub>2</sub> Powder Explored by Correlating Adsorption and Thermal Desorption Analyses. Journal of Physical Chemistry C, 2018, 122, 9947-9957.	3.1	25
35	Reactivity and Efficiency of Ceria-Based Oxides for Solar CO <sub>2</sub> Splitting via Isothermal and Near-Isothermal Cycles. Energy & Fuels, 2018, 32, 736-746.	5.1	20
36	Evaluating thermodynamic performance limits of thermochemical energy storage subsystems using reactive perovskite oxide particles for concentrating solar power. Solar Energy, 2018, 167, 179-193.	6.1	28

#	Article	IF	CITATIONS
37	Dynamic modelling of a continuous hydrogen production plant based on a CeO2 thermochemical cycle. AIP Conference Proceedings, 2018, , .	0.4	6
38	Oxygen Transport Membranes and their Role in CO2 Capture and Syngas Production. Journal of Membrane Science & Technology, 2018, 08, .	0.5	4
39	Modeling of Thermodynamic Properties of Diesel Fuel and In-Cylinder Gas for Diesel Engine Combustion Investigation. Energy & Fuels, 2018, 32, 12871-12883.	5.1	4
40	Comparing the solar-to-fuel energy conversion efficiency of ceria and perovskite based thermochemical redox cycles for splitting H2O and CO2. International Journal of Hydrogen Energy, 2018, 43, 18814-18831.	7.1	85
41	Energy analysis of solar thermochemical fuel production pathway with a focus on waste heat recuperation and vacuum generation. Solar Energy, 2018, 176, 230-240.	6.1	21
42	Thermodynamic Analyses of Fuel Production via Solar-Driven Non-stoichiometric Metal Oxide Redox Cycling. Part 1. Revisiting Flow and Equilibrium Assumptions. Energy & Fuels, 2018, 32, 10838-10847.	5.1	28
43	Thermodynamic Analyses of Fuel Production via Solar-Driven Non-stoichiometric Metal Oxide Redox Cycling. Part 2. Impact of Solid–Gas Flow Configurations and Active Material Composition on System-Level Efficiency. Energy & Fuels, 2018, 32, 10848-10863.	5.1	35
44	Defect Chemistry of Oxides for Energy Applications. Advanced Materials, 2018, 30, e1706300.	21.0	58
45	lsothermal versus two-temperature solar thermochemical fuel synthesis: A comparative study. Applied Energy, 2018, 228, 301-308.	10.1	39
46	Redox cycles with doped calcium manganites for thermochemical energy storage to 1000†°C. Applied Energy, 2018, 230, 1-18.	10.1	44
47	Thermodynamic development and design ofÂaÂconcentrating solar thermochemical water-splitting process for co-production ofÂhydrogen and electricity. International Journal of Hydrogen Energy, 2018, 43, 17574-17587.	7.1	23
48	Effect of plant location on the annual performance of a hydrogen production plant based on CeO2 thermochemical cycle. AIP Conference Proceedings, 2019, , .	0.4	2
49	Solar fuels production: Two-step thermochemical cycles with cerium-based oxides. Progress in Energy and Combustion Science, 2019, 75, 100785.	31.2	122
50	Kinetic and thermodynamic analyses of mid/low-temperature ammonia decomposition in solar-driven hydrogen permeation membrane reactor. International Journal of Hydrogen Energy, 2019, 44, 26874-26887.	7.1	43
51	Beyond Ceria: Theoretical Investigation of Isothermal and Near-Isothermal Redox Cycling of Perovskites for Solar Thermochemical Fuel Production. Energy & Fuels, 2019, 33, 12871-12884.	5.1	32
52	Lattice Expansion in Optimally Doped Manganese Oxide: An Effective Structural Parameter for Enhanced Thermochemical Water Splitting. ACS Catalysis, 2019, 9, 9880-9890.	11.2	29
53	Investigation on gaseous fuels interchangeability with an extended zero-dimensional engine model. Energy Conversion and Management, 2019, 183, 500-514.	9.2	20
54	Continuous on-sun solar thermochemical hydrogen production via an isothermal redox cycle. Applied Energy, 2019, 249, 368-376.	10.1	49

#	Article	IF	CITATIONS
55	Annual performance of a thermochemical solar syngas production plant based on non-stoichiometric CeO2. International Journal of Hydrogen Energy, 2019, 44, 1409-1424.	7.1	31
56	Moving Brick Receiver–Reactor: A Solar Thermochemical Reactor and Process Design With a Solid–Solid Heat Exchanger and On-Demand Production of Hydrogen and/or Carbon Monoxide. Journal of Solar Energy Engineering, Transactions of the ASME, 2019, 141, .	1.8	13
57	Photonâ€Induced Spintronic Polaron Channel Modulator of CeO <sub>2â€</sub> <i><sub>x</sub></i> NP Thin Films Hydrogen Evolution Cells. Advanced Electronic Materials, 2019, 5, 1800570.	5.1	9
58	High efficiency solar chemical-looping methane reforming with ceria in a fixed-bed reactor. Energy, 2019, 169, 597-612.	8.8	39
59	Thermodynamic analysis on mid/low temperature solar methane steam reforming with hydrogen permeation membrane reactors. Applied Thermal Engineering, 2019, 152, 925-936.	6.0	64
60	Oxygen pumping characteristics of YBaCo4O7+Î′ for solar thermochemical cycles. Chemical Engineering Journal, 2020, 389, 124026.	12.7	11
61	Solar thermochemical CO <sub>2</sub> splitting with doped perovskite LaCo <sub>0.7</sub> Zr <sub>0.3</sub> 3: thermodynamic performance and solar-to-fuel efficiency. RSC Advances, 2020, 10, 35740-35752.	3.6	9
62	Thermodynamic Analysis of Methylcyclohexane Dehydrogenation and Solar Energy Storage via Solar-Driven Hydrogen Permeation Membrane Reactor. Membranes, 2020, 10, 374.	3.0	11
63	Dual Hydrogen- and Oxygen-Transport Membrane Reactor for Solar-Driven Syngas Production. Frontiers in Energy Research, 2020, 8, .	2.3	3
64	First-Principles Analyses of Nanoionic Effects at Oxide–Oxide Heterointerfaces for Electrochemical Applications. Journal of Physical Chemistry C, 2020, 124, 14072-14081.	3.1	1
65	Mechanism and thermodynamic study of solar H2 production on LaFeO3 defected surface: Effect of H2O to H2 conversion ratio and kinetics on optimization of energy conversion efficiency. Journal of Cleaner Production, 2020, 268, 122293.	9.3	4
66	Oxidation kinetics of hercynite spinels for solar thermochemical fuel production. Chemical Engineering Journal, 2020, 401, 126015.	12.7	17
67	Experimental study on the high performance of Zr doped LaCoO3 for solar thermochemical CO production. Chemical Engineering Journal, 2020, 389, 124426.	12.7	38
68	Thermally-driven adsorption/desorption cycle for oxygen pumping in thermochemical fuel production. Solar Energy, 2020, 198, 578-585.	6.1	14
69	Remarkable performance of microstructured ceria foams for thermochemical splitting of H2O and CO2 in a novel high–temperature solar reactor. Chemical Engineering Research and Design, 2020, 156, 311-323.	5.6	38
70	Geographical Potential of Solar Thermochemical Jet Fuel Production. Energies, 2020, 13, 802.	3.1	16
71	A rotating fluidized bed reactor for rapid temperature ramping in two-step thermochemical water splitting. International Journal of Hydrogen Energy, 2020, 45, 8126-8138.	7.1	4
72	Efficiency assessment of solar redox reforming in comparison to conventional reforming. International Journal of Hydrogen Energy, 2020, 45, 4137-4151.	7.1	6

#	Article	IF	CITATIONS
73	Methanol production using hydrogen from concentrated solar energy. International Journal of Hydrogen Energy, 2020, 45, 26117-26125.	7.1	22
74	CeTi2O6—A Promising Oxide for Solar Thermochemical Hydrogen Production. ACS Applied Materials & Interfaces, 2020, 12, 21521-21527.	8.0	14
75	Experimental, computational and thermodynamic studies in perovskites metal oxides for thermochemical fuel production: A review. International Journal of Hydrogen Energy, 2020, 45, 12653-12679.	7.1	51
76	Innovative non–oxidative methane dehydroaromatization via solar membrane reactor. Energy, 2021, 216, 119265.	8.8	21
77	Cyclohexane Dehydrogenation in Solar-Driven Hydrogen Permeation Membrane Reactor for Efficient Solar Energy Conversion and Storage. Journal of Thermal Science, 2021, 30, 1548-1558.	1.9	10
78	A mid/low-temperature solar-driven integrated membrane reactor for the dehydrogenation of propane – A thermodynamic assessment. Applied Thermal Engineering, 2021, 193, 116952.	6.0	11
79	Mid/low-temperature solar hydrogen generation via dry reforming of methane enhanced in a membrane reactor. Energy Conversion and Management, 2021, 240, 114254.	9.2	31
80	Synergies between Direct Air Capture Technologies and Solar Thermochemical Cycles in the Production of Methanol. Energies, 2021, 14, 4818.	3.1	10
81	Hydrogen from Sunlight and Water: A Side-by-Side Comparison between Photoelectrochemical and Solar Thermochemical Water-Splitting. ACS Energy Letters, 2021, 6, 3096-3113.	17.4	45
82	Performance Analysis and Optimization of Solar Thermochemical Waterâ€Splitting Cycle with Single and Multiple Receivers. Energy Technology, 0, , 2100220.	3.8	2
83	Towards chemical equilibrium in thermochemical water splitting. Part 1: Thermal reduction. International Journal of Hydrogen Energy, 2022, 47, 10474-10482.	7.1	10
84	Demonstration of a ceria membrane solar reactor promoted by dual perovskite coatings for continuous and isothermal redox splitting of CO2 and H2O. Journal of Membrane Science, 2021, 634, 119387.	8.2	15
85	High performance solar receiver–reactor for hydrogen generation. Renewable Energy, 2021, 179, 1217-1232.	8.9	11
86	Parametric investigation of a volumetric solar receiver-reactor. Solar Energy, 2020, 204, 256-269.	6.1	11
87	Oxygen Crossover in Solid–Solid Heat Exchangers for Solar Water and Carbon Dioxide Splitting: A Thermodynamic Analysis. Journal of Energy Resources Technology, Transactions of the ASME, 2021, 143,	2.3	5
88	Real time executable model for dynamic heat flow analysis of a solar hydrogen reactor. TM Technisches Messen, 2020, 87, 360-371.	0.7	5
89	Analysis of defect chemistry and microstructural effects of non-stoichiometric ceria by the high-temperature microwave cavity perturbation method. Journal of the European Ceramic Society, 2022, 42, 499-511.	5.7	3
90	Thermodynamic Assessment of a Solar-Driven Integrated Membrane Reactor for Ethanol Steam Reforming. Molecules, 2021, 26, 6921.	3.8	2

#	Article	IF	CITATIONS
91	Theoretical Thermodynamic Efficiency Limit of Isothermal Solar Fuel Generation from H2O/CO2 Splitting in Membrane Reactors. Molecules, 2021, 26, 7047.	3.8	4
92	One-Step Thermochemical C <sub>2</sub> Splitting Enhanced by In-Situ Oxygen Separation Through CeO <sub>2</sub> and CaTiO <sub>3</sub> Membranes. SSRN Electronic Journal, 0, , .	0.4	0
93	<scp> SnO <sub>2</sub> </scp> / <scp>SnO</scp> based redox thermochemical <scp> CO <sub>2</sub> </scp> splitting cycle: Effect of inert gas flowrate, reduction temperature, and gas separation on the <scp>solarâ€toâ€fuel</scp> energy conversion efficiency. International Journal of Energy Research, 2022, 46, 9267-9280.	4.5	3
94	Optimizing the operational strategy of a solar-driven reactor for thermochemical hydrogen production. International Journal of Hydrogen Energy, 2022, 47, 14453-14468.	7.1	10
95	Holistic energy flow analysis of a solar driven thermo-chemical reactor set-up for sustainable hydrogen production. Renewable Energy, 2022, 189, 1358-1374.	8.9	8
97	Operation optimization of an array of receiver-reactors for solar fuel production. AIP Conference Proceedings, 2022, , .	0.4	1
98	Direct solar thermochemical CO2 splitting based on Ca- and Al- doped SmMnO3 perovskites: Ultrahigh CO yield within small temperature swing. Renewable Energy, 2022, 194, 482-494.	8.9	13
99	Cascade and hybrid processes for co-generating solar-based fuels and electricity via combining spectral splitting technology and membrane reactor. Renewable Energy, 2022, 196, 782-799.	8.9	10
100	Redox Cycles, Active Materials, and Reactors Applied to Water and Carbon Dioxide Splitting for Solar Thermochemical Fuel Production: A Review. Energies, 2022, 15, 7061.	3.1	11
101	Dynamic behavior of solar thermochemical reactors for fuel generation: Modeling and control strategies. Energy Conversion and Management, 2022, 270, 116232.	9.2	8
102	Solar Thermochemical CO2 Splitting Integrated with Supercritical CO2 Cycle for Efficient Fuel and Power Generation. Energies, 2022, 15, 7334.	3.1	1
103	High-temperature heat recovery from a solar reactor for the thermochemical redox splitting of H2O and CO2. Applied Energy, 2023, 329, 120211.	10.1	11
104	Reactivity and stability of Zr–doped CeO2 for solar thermochemical H2O splitting in combination with partial oxidation of methane via isothermal cycles. International Journal of Hydrogen Energy, 2023, 48, 12227-12239.	7.1	6
105	Techno-economic assessment of green hydrogen production via two-step thermochemical water splitting using microwave. International Journal of Hydrogen Energy, 2023, 48, 10706-10723.	7.1	11
107	A novel high-efficiency solar thermochemical cycle for fuel production based on chemical-looping cycle oxygen removal. Applied Energy, 2023, 343, 121161.	10.1	18
108	Physical system behavior and energy flow analysis of a solar driven hydrogen production plant based on two-step thermochemical redox cycles. International Journal of Hydrogen Energy, 2023, 48, 37564-37578.	7.1	0
109	Experimental demonstration of high-temperature heat recovery in a solar reactor. Solar Energy, 2023, 262, 111915.	6.1	0
110	Utilization of MnFe2O4 Redox Ferrite for Solar Fuel Production via CO2 Splitting: A Thermodynamic Study. Energies, 2023, 16, 5479.	3.1	0

#	Article	IF	CITATIONS
111	Solar-driven thermochemical conversion of H2O and CO2 into sustainable fuels. IScience, 2023, 26, 108127.	4.1	1
112	Optimized operational strategy of a solar reactor for thermochemical hydrogen generation. Optimization and Engineering, 2024, 25, 29-61.	2.4	1
113	Swept open moving particle reactor including heat recovery for solar thermochemical fuel production. Solar Energy, 2023, 266, 112178.	6.1	1
114	Universal expressions of solar thermochemical efficiency. Sustainable Energy Technologies and Assessments, 2023, 60, 103536.	2.7	0
115	H2 producing hybrid solar thermochemical ZnSO4/ZnO water splitting cycle: Thermodynamic efficiency analysis. International Journal of Hydrogen Energy, 2024, 49, 1584-1592.	7.1	0