

# Vincent M Wheeler

## List of Publications by Year in descending order

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41  
papers

1,314  
citations

394421

19  
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345221

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g-index

42  
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42  
docs citations

42  
times ranked

998  
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermodynamic Guiding Principles for Designing Nonstoichiometric Redox Materials for Solar Thermochemical Fuel Production: Ceria, Perovskites, and Beyond. <i>Energy Technology</i> , 2022, 10, 2000925.	3.8	17
2	Thermodynamic Guiding Principles for Designing Nonstoichiometric Redox Materials for Solar Thermochemical Fuel Production: Ceria, Perovskites, and Beyond. <i>Energy Technology</i> , 2022, 10, 2270013.	3.8	1
3	Progress in heat transfer research for high-temperature solar thermal applications. <i>Applied Thermal Engineering</i> , 2021, 184, 116137.	6.0	67
4	Numerical determination of permeability and Forchheimer coefficient in dual-scale porous media. <i>International Communications in Heat and Mass Transfer</i> , 2021, 122, 105089.	5.6	7
5	Thermal reduction of iron–manganese oxide particles in a high-temperature packed-bed solar thermochemical reactor. <i>Chemical Engineering Journal</i> , 2021, 412, 128255.	12.7	37
6	Optical characterisation of alumina–mullite materials for solar particle receiver applications. <i>Solar Energy Materials and Solar Cells</i> , 2021, 230, 111170.	6.2	16
7	Concentrating collector systems for solar thermal and thermochemical applications. <i>Advances in Chemical Engineering</i> , 2021, 58, 1-53.	0.9	11
8	Convective–conductive heat transfer in dual-scale porous media: Theoretical model development and numerical validation. <i>International Journal of Heat and Mass Transfer</i> , 2020, 157, 119950.	4.8	8
9	Numerical modelling of ceria undergoing reduction in a particle–gas counter-flow: Effects of chemical kinetics under isothermal conditions. <i>Chemical Engineering Science</i> , 2020, 218, 115553.	3.8	6
10	Reduction of iron–manganese oxide particles in a lab-scale packed-bed reactor for thermochemical energy storage. <i>Chemical Engineering Science</i> , 2020, 221, 115700.	3.8	19
11	Thermal Model of a Solar Thermochemical Reactor for Metal Oxide Reduction. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2020, 142, .	1.8	22
12	Detailed Balance Analysis of Photovoltaic Windows. <i>ACS Energy Letters</i> , 2019, 4, 2130-2136.	17.4	22
13	Effective thermal conductivity of a bed packed with granular iron–manganese oxide for thermochemical energy storage. <i>Chemical Engineering Science</i> , 2019, 207, 490-494.	3.8	14
14	Reflective optics for redirecting convergent radiative beams in concentrating solar applications. <i>Solar Energy</i> , 2019, 191, 707-718.	6.1	12
15	Particle design and oxidation kinetics of iron-manganese oxide redox materials for thermochemical energy storage. <i>Solar Energy</i> , 2019, 183, 17-29.	6.1	28
16	Reduction kinetics for large spherical 2:1 iron–manganese oxide redox materials for thermochemical energy storage. <i>Chemical Engineering Science</i> , 2019, 201, 74-81.	3.8	22
17	Unsteady Radiative Heat Transfer Model of a Ceria Particle Suspension Undergoing Solar Thermochemical Reduction. <i>Journal of Thermophysics and Heat Transfer</i> , 2019, 33, 63-77.	1.6	9
18	Thermodynamic Analyses of Fuel Production Via Solar-Driven Ceria-Based Nonstoichiometric Redox Cycling: A Case Study of the Isothermal Membrane Reactor System. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2019, 141, .	1.8	16

#	ARTICLE	IF	CITATIONS
19	Techno-economic assessment of solid-gas thermochemical energy storage systems for solar thermal power applications. <i>Energy</i> , 2018, 149, 473-484.	8.8	177
20	Gas-Solid Reactions: Theory, Experiments and Case Studies Relevant to Earth and Planetary Processes. <i>Reviews in Mineralogy and Geochemistry</i> , 2018, 84, 1-56.	4.8	39
21	1. Gas-Solid Reactions: Theory, Experiments and Case Studies Relevant to Earth and Planetary Processes. , 2018, , 1-56.		0
22	Thermodynamic Analyses of Fuel Production via Solar-Driven Non-stoichiometric Metal Oxide Redox Cycling. Part 1. Revisiting Flow and Equilibrium Assumptions. <i>Energy &amp; Fuels</i> , 2018, 32, 10838-10847.	5.1	28
23	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. <i>Energy &amp; Fuels</i> , 2018, 32, 10848-10863.	5.1	35
24	Effect of non-stoichiometry on optical, radiative, and thermal characteristics of ceria undergoing reduction. <i>Optics Express</i> , 2018, 26, A360.	3.4	12
25	THERMAL MODELLING OF A SOLAR THERMOCHEMICAL REACTOR FOR METAL OXIDE REDUCTION. , 2018, , .		1
26	Progress in thermal transport modeling of carbonate-based reacting systems. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2017, 27, 1098-1107.	2.8	15
27	High-flux optical systems for solar thermochemistry. <i>Solar Energy</i> , 2017, 156, 133-148.	6.1	52
28	Modelling of solar thermochemical reaction systems. <i>Solar Energy</i> , 2017, 156, 149-168.	6.1	52
29	Radiative properties of non-stoichiometrically reduced Ceria. , 2017, , .		0
30	Experimental and numerical characterization of a new 45 kW <sub>el</sub> multisource high-flux solar simulator. <i>Optics Express</i> , 2016, 24, A1360.	3.4	60
31	Optics of solar central receiver systems: a review. <i>Optics Express</i> , 2016, 24, A985.	3.4	62
32	Efficient ceria nanostructures for enhanced solar fuel production via high-temperature thermochemical redox cycles. <i>Journal of Materials Chemistry A</i> , 2016, 4, 9614-9624.	10.3	49
33	COMBINED HEAT TRANSFER IN A DIRECTLY IRRADIATED OPTICALLY-LARGE HETEROGENEOUS SPHERICAL PARTICLE. , 2016, , .		0
34	THERMAL TRANSPORT MODEL OF A PACKED-BED REACTOR FOR SOLAR THERMOCHEMICAL CO <sub>2</sub> CAPTURE. <i>Special Topics and Reviews in Porous Media</i> , 2015, 6, 197-209.	1.1	10
35	The effect of photodegradation on effective properties of polymeric thin films: A micromechanical homogenization approach. <i>International Journal of Engineering Science</i> , 2015, 94, 1-22.	5.0	11
36	Optical Design of Multisource High-Flux Solar Simulators. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2015, 137, .	1.8	58

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37	Design of a Solar Reactor to Split CO <sub>2</sub> Via Isothermal Redox Cycling of Ceria. Journal of Solar Energy Engineering, Transactions of the ASME, 2015, 137, .	1.8	52
38	Transient heat and mass transfer analysis in a porous ceria structure of a novel solar redox reactor. International Journal of Thermal Sciences, 2015, 92, 138-149.	4.9	21
39	Towards Solar Thermochemical Carbon Dioxide Capture via Calcium Oxide Looping: A Review. Aerosol and Air Quality Research, 2014, 14, 500-514.	2.1	57
40	Thermodynamic Analysis of Isothermal Redox Cycling of Ceria for Solar Fuel Production. Energy & Fuels, 2013, 27, 5533-5544.	5.1	187
41	Ubiquitous Interactive Visualization of 3-D Mantle Convection through Web Applications Using Java. Lecture Notes in Computer Science, 2008, , 1011-1021.	1.3	2