

# Selvan Bellan

## List of Publications by Year in descending order

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52  
papers

792  
citations

516710

16  
h-index

501196

28  
g-index

52  
all docs

52  
docs citations

52  
times ranked

626  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fluidization behavior of redox metal oxide and spinel particles to develop high-energy-density thermal energy storage system for concentrated solar power applications. <i>Journal of Thermal Science and Technology</i> , 2022, 17, 22-00061-22-00061.	1.1	1
2	Conjugate radiation-convection-conduction simulation of cubic lattice solar receiver with high porosity for high-temperature heat absorption. <i>Journal of Thermal Science and Technology</i> , 2022, 17, 22-00057-22-00057.	1.1	3
3	Hydrogen production by solar fluidized bed reactor using ceria: Euler-Lagrange modelling of gas-solid flow to optimize the internally circulating fluidized bed. <i>Journal of Thermal Science and Technology</i> , 2022, 17, 22-00076-22-00076.	1.1	2
4	A review on high-temperature thermochemical heat storage: Particle reactors and materials based on solid-gas reactions. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , 2022, 11, .	4.1	9
5	Phase Change Material of Copper-Germanium Alloy as Solar Latent Heat Storage at High Temperatures. <i>Frontiers in Energy Research</i> , 2021, 9, .	2.3	7
6	Direct simulation of a volumetric solar receiver with different cell sizes at high outlet temperatures (1,000-1,500°C). <i>Renewable Energy</i> , 2020, 146, 1143-1152.	8.9	19
7	Thermal charge/discharge performance of iron-germanium alloys as phase change materials for solar latent heat storage at high temperatures. <i>Journal of Energy Storage</i> , 2020, 30, 101420.	8.1	10
8	Thermochemical two-step CO <sub>2</sub> splitting using La <sub>0.7</sub> Sr <sub>0.3</sub> Mn <sub>0.9</sub> Cr <sub>0.1</sub> O <sub>3</sub> of perovskite oxide for solar fuel production. <i>AIP Conference Proceedings</i> , 2020, , .	0.4	4
9	Chemical compatibility of Cu-Ge alloy with container materials for latent heat storage system. <i>AIP Conference Proceedings</i> , 2020, , .	0.4	0
10	Thermochemical H <sub>2</sub> O splitting using LaSrMnCrO <sub>3</sub> of perovskite oxides for solar hydrogen production. <i>AIP Conference Proceedings</i> , 2020, , .	0.4	4
11	Experimental study of Mn-CeO <sub>2</sub> coated ceramic foam device for two-step water splitting cycle hydrogen production with 3kW sun-simulator. <i>AIP Conference Proceedings</i> , 2020, , .	0.4	1
12	Numerical analysis on solidification process of PCM in triplex-tube thermal energy storage system. <i>AIP Conference Proceedings</i> , 2020, , .	0.4	1
13	Loop thermosiphon thermal collector for waste heat recovery power generation. <i>Experimental Heat Transfer</i> , 2019, 32, 201-218.	3.2	8
14	Direct Simulation of Volumetric Solar Receiver with Highly Concentrated Radiation. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 556, 012060.	0.6	1
15	Heat transfer and fluid flow analysis of a fluidized bed reactor for beam-down optics. <i>AIP Conference Proceedings</i> , 2019, , .	0.4	0
16	Fe-doped manganese oxide redox material for thermochemical energy storage at high-temperatures. <i>AIP Conference Proceedings</i> , 2019, , .	0.4	5
17	Thermochemical two-step water splitting cycle using perovskite oxides based on LaSrMnO <sub>3</sub> redox system for solar H <sub>2</sub> production. <i>Thermochimica Acta</i> , 2019, 680, 178374.	2.7	26
18	Particles fluidized bed receiver/reactor with a beam-down solar concentrating optics: First performance test on two-step water splitting with ceria using a Miyazaki solar concentrating system. <i>AIP Conference Proceedings</i> , 2019, , .	0.4	6

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19	Thermochemical behavior of perovskite oxides based on $\text{La}_x\text{Sr}_{1-x}(\text{Mn, Fe, Co})\text{O}_{3-\delta}$ and $\text{Ba}_y\text{Sr}_{1-y}\text{CoO}_{3-\delta}$ redox system for thermochemical energy storage at high temperatures. <i>Energy</i> , 2019, 171, 971-980.	8.8	37
20	Efficiency and heat loss analysis of honeycomb receiver varying air mass flow rate and beam width. <i>International Journal of Heat and Mass Transfer</i> , 2019, 137, 1027-1040.	4.8	9
21	Steady-Flow-Type Particle Receiver for High-Temperature Solar Thermal Storage. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 556, 012059.	0.6	1
22	Heat transfer and particulate flow analysis of a 30 kW directly irradiated solar fluidized bed reactor for thermochemical cycling. <i>Chemical Engineering Science</i> , 2019, 203, 511-525.	3.8	23
23	Thermal performance of a 30 kW fluidized bed reactor for solar gasification: A CFD-DEM study. <i>Chemical Engineering Journal</i> , 2019, 360, 1287-1300.	12.7	33
24	Development of a 5 kWth internally circulating fluidized bed reactor containing quartz sand for continuously-fed coal-coke gasification and a beam-down solar concentrating system. <i>Energy</i> , 2019, 166, 1-16.	8.8	25
25	A CFD-DEM study of hydrodynamics with heat transfer in a gas-solid fluidized bed reactor for solar thermal applications. <i>International Journal of Heat and Mass Transfer</i> , 2018, 116, 377-392.	4.8	53
26	CFD-DEM investigation on flow and temperature distribution of ceria particles in a beam-down fluidized bed reactor. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	1
27	Particle fluidized bed receiver/reactor with a beam-down solar concentrating optics: Performance test of two-step water splitting with ceria particles using 30-kWth sun-simulator. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	9
28	Preliminary tests of batch type fluidized bed reactor for development of continuously-feeding fluidized bed reactor - An elevated temperature and gasification processes. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	1
29	Conjugate radiation-convection-conduction simulation of volumetric solar receivers with cut-back inlets. <i>Solar Energy</i> , 2018, 170, 606-617.	6.1	27
30	Numerical and experimental study on granular flow and heat transfer characteristics of directly-irradiated fluidized bed reactor for solar gasification. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 16443-16457.	7.1	23
31	Heat transfer analysis of 5 kWth circulating fluidized bed reactor for solar gasification using concentrated Xe light radiation. <i>Energy</i> , 2018, 160, 245-256.	8.8	23
32	GAS-SOLID FLOW AND HEAT TRANSFER CHARACTERISTICS OF A FLUIDIZED BED REACTOR FOR SOLAR THERMAL APPLICATIONS. , 2018, , .		0
33	Melting of PCM in Capsule by Forced Convection for Packed Bed Latent Heat Storage System.. <i>The Proceedings of the Thermal Engineering Conference</i> , 2018, 2018, 0061.	0.0	0
34	CONJUGATED RADIATION-CONVECTION-CONDUCTION HEAT TRANSFER ANALYSIS OF VOLUMETRIC RECEIVER WITH HIGHLY CONCENTRATED RADIATION. , 2018, , .		0
35	Melting Process of PCM in Cylindrical Ceramic Capsule for Solar Thermal Storage. <i>The Proceedings of the Thermal Engineering Conference</i> , 2018, 2018, 0060.	0.0	0
36	Numerical analysis of latent heat storage system with encapsulated phase change material in spherical capsules. <i>Renewable Energy and Environmental Sustainability</i> , 2017, 2, 3.	1.4	4

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37	Particle reactors for solar thermochemical processes. Solar Energy, 2017, 156, 113-132.	6.1	74
38	Numerical analysis of fluid flow and heat transfer during melting inside a cylindrical container for thermal energy storage system. AIP Conference Proceedings, 2017, , .	0.4	1
39	CFD-DEM investigation of particles circulation pattern of two-tower fluidized bed reactor for beam-down solar concentrating system. Powder Technology, 2017, 319, 228-237.	4.2	26
40	Buoyancy-opposed volumetric solar receiver with beam-down optics irradiation. Energy, 2017, 141, 2337-2350.	8.8	14
41	Thermal storage/discharge performances of Cu-Si alloy for solar thermochemical process. AIP Conference Proceedings, 2017, , .	0.4	1
42	Numerical modelling of a 100-Wh lab-scale thermochemical heat storage system for concentrating solar power plants. AIP Conference Proceedings, 2016, , .	0.4	3
43	Development of a Solarized Rotary Kiln for High-Temperature Chemical Processes. , 2016, , .		0
44	Numerical Investigation of PCM-based Thermal Energy Storage System. Energy Procedia, 2015, 69, 758-768.	1.8	18
45	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
46	Comparison of an Experimental and Numerical Investigation of a Packed-Bed Latent Heat Thermal Storage System with Encapsulated Phase Change Material. , 2015, , .		0
47	Numerical Modeling of Thermal Energy Storage System. , 2014, , .		2
48	Transient Numerical Analysis of Storage Tanks Based on Encapsulated PCMs for Heat Storage in Concentrating Solar Power Plants. Energy Procedia, 2014, 57, 672-681.	1.8	14
49	Numerical analysis of charging and discharging performance of a thermal energy storage system with encapsulated phase change material. Applied Thermal Engineering, 2014, 71, 481-500.	6.0	99
50	Numerical Modeling of Solar Thermochemical Reactor for Kinetic Analysis. Energy Procedia, 2014, 49, 735-742.	1.8	9
51	Numerical Study of a Beam-Down Solar Thermochemical Reactor for Chemical Kinetics Analysis. , 2014, , .		0
52	Thermal performance of lab-scale solar reactor designed for kinetics analysis at high radiation fluxes. Chemical Engineering Science, 2013, 101, 81-89.	3.8	28