

Alasdair N Campbell

List of Publications by Year in descending order

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40
papers

1,097
citations

304743

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414414

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40
all docs

40
docs citations

40
times ranked

488
citing authors

#	ARTICLE	IF	CITATIONS
1	Numerical Study of Latent Heat Storage Unit Thermal Performance Enhancement Using Natural Inspired Fins. IOP Conference Series: Materials Science and Engineering, 2021, 1076, 012028.	0.6	7
2	Natural convection improvement of PCM melting in partition latent heat energy storage: Numerical study with experimental validation. International Communications in Heat and Mass Transfer, 2021, 126, 105463.	5.6	45
3	Numerical simulations and experimental verification of the thermal performance of phase change materials in a tube-bundle latent heat thermal energy storage system. Applied Thermal Engineering, 2021, 194, 117079.	6.0	20
4	Improved PCM melting in a thermal energy storage system of double-pipe helical-coil tube. Energy Conversion and Management, 2020, 203, 112238.	9.2	104
5	Experimental study on the melting behavior of a phase change material in a conical coil latent heat thermal energy storage unit. Applied Thermal Engineering, 2020, 175, 114684.	6.0	43
6	Numerical investigation on the effect of fin design on the melting of phase change material in a horizontal shell and tube thermal energy storage. Journal of Energy Storage, 2020, 29, 101331.	8.1	63
7	Finite element modelling of the thermal performance of salinity gradient solar ponds. Energy, 2020, 203, 117861.	8.8	18
8	Numerical study and experimental validation of the effects of orientation and configuration on melting in a latent heat thermal storage unit. Journal of Energy Storage, 2019, 23, 456-468.	8.1	79
9	Direct contact evaporation of a single two-phase bubble in a flowing immiscible liquid medium. Part I: two-phase bubble size. Heat and Mass Transfer, 2019, 55, 2593-2603.	2.1	2
10	Numerical study on the effect of the location of the phase change material in a concentric double pipe latent heat thermal energy storage unit. Thermal Science and Engineering Progress, 2019, 11, 40-49.	2.7	47
11	Experimental investigation of the thermal performance of a helical coil latent heat thermal energy storage for solar energy applications. Thermal Science and Engineering Progress, 2019, 10, 287-298.	2.7	58
12	Convective heat transfer measurements in a vapour-liquid-liquid three-phase direct contact heat exchanger. Heat and Mass Transfer, 2018, 54, 1697-1705.	2.1	12
13	Measuring the Overall Volumetric Heat Transfer Coefficient in a Vapor-Liquid-Liquid Three-Phase Direct Contact Heat Exchanger. Heat Transfer Engineering, 2018, 39, 208-216.	1.9	15
14	Behaviour of a salinity gradient solar pond during two years and the impact of zonal thickness variation on its performance. Applied Thermal Engineering, 2018, 130, 1191-1198.	6.0	31
15	New comprehensive investigation on the feasibility of the gel solar pond, and a comparison with the salinity gradient solar pond. Applied Thermal Engineering, 2018, 130, 672-683.	6.0	37
16	Regeneration of dimethyl ether as a draw solute in forward osmosis by utilising thermal energy from a solar pond. Desalination, 2017, 415, 104-114.	8.2	30
17	A comparative study of the performance of solar ponds under Middle Eastern and Mediterranean conditions with batch and continuous heat extraction. Applied Thermal Engineering, 2017, 120, 728-740.	6.0	23
18	An analytical estimation of salt concentration in the upper and lower convective zones of a salinity gradient solar pond with either a pond with vertical walls or trapezoidal cross section. Solar Energy, 2017, 158, 207-217.	6.1	25

#	ARTICLE	IF	CITATIONS
19	Experimental analysis of the temperature and concentration profiles in a salinity gradient solar pond with, and without a liquid cover to suppress evaporation. <i>Solar Energy</i> , 2017, 155, 1354-1365.	6.1	30
20	Modelling of the Thermal Performance of SGSP using COMSOL Multiphysics. <i>Computer Aided Chemical Engineering</i> , 2017, 40, 2575-2580.	0.5	2
21	Measuring the average volumetric heat transfer coefficient of a liquid-liquid vapour direct contact heat exchanger. <i>Applied Thermal Engineering</i> , 2016, 103, 47-55.	6.0	35
22	Heat transfer measurement in a three-phase spray column direct contact heat exchanger for utilisation in energy recovery from low-grade sources. <i>Energy Conversion and Management</i> , 2016, 126, 342-351.	9.2	21
23	A comprehensive transient model for the prediction of the temperature distribution in a solar pond under mediterranean conditions. <i>Solar Energy</i> , 2016, 135, 297-307.	6.1	24
24	Heat transfer measurement in a three-phase direct-contact condenser under flooding conditions. <i>Applied Thermal Engineering</i> , 2016, 95, 106-114.	6.0	20
25	New theoretical modelling of heat transfer in solar ponds. <i>Solar Energy</i> , 2016, 125, 207-218.	6.1	52
26	A new model for the drag coefficient of a swarm of condensing vapour-liquid bubbles in a third immiscible liquid phase. <i>Chemical Engineering Science</i> , 2015, 131, 76-83.	3.8	10
27	Experimental measurements and theoretical prediction for the transient characteristic of a two-phase two-component direct contact condenser. <i>Applied Thermal Engineering</i> , 2015, 87, 161-174.	6.0	22
28	Experimental measurements and theoretical prediction for the volumetric heat transfer coefficient of a three-phase direct contact condenser. <i>International Communications in Heat and Mass Transfer</i> , 2015, 66, 180-188.	5.6	24
29	The effect of external heat transfer on thermal explosion in a spherical vessel with natural convection. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 16894-16906.	2.8	12
30	Heat transfer efficiency and capital cost evaluation of a three-phase direct contact heat exchanger for the utilisation of low-grade energy sources. <i>Energy Conversion and Management</i> , 2015, 106, 101-109.	9.2	33
31	When do chemical reactions promote mixing?. <i>Chemical Engineering Journal</i> , 2011, 168, 1-14.	12.7	6
32	Turbulent plumes with internal generation of buoyancy by chemical reaction. <i>Journal of Fluid Mechanics</i> , 2010, 655, 122-151.	3.4	13
33	On the occurrence of thermal explosion in a reacting gas: The effects of natural convection and consumption of reactant. <i>Combustion and Flame</i> , 2010, 157, 230-239.	5.2	29
34	Oscillatory and nonoscillatory behavior of a simple model for cool flames, Sal'nikov's reaction, $P \rightarrow A \rightarrow B$, occurring in a spherical batch reactor with varying intensities of natural convection. <i>Combustion and Flame</i> , 2008, 154, 122-142.	5.2	10
35	Effects of natural convection on thermal explosion in a closed vessel. <i>Physical Chemistry Chemical Physics</i> , 2008, 10, 5521.	2.8	32
36	A comparison of measured temperatures with those calculated numerically and analytically for an exothermic chemical reaction inside a spherical batch reactor with natural convection. <i>Chemical Engineering Science</i> , 2007, 62, 3068-3082.	3.8	22

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37	A Scaling Analysis of the Effects of Natural Convection, when Salâ€™nikov's Reaction: $P \rightarrow A \rightarrow B$ Occurs, Together With Diffusion and Heat Transfer in a Batch Reactor. Chemical Engineering Research and Design, 2006, 84, 553-561.	5.6	8
38	The behaviour of Salâ€™nikovâ€™s reaction, $P \rightarrow A \rightarrow B$, in a spherical batch reactor with the diffusion of heat and matter. Physical Chemistry Chemical Physics, 2006, 8, 2866-2878.	2.8	8
39	concentration fields for Salâ€™nikov's reaction, $\langle \text{mm} \rangle \langle \text{math} \rangle \langle \text{img} \rangle \langle \text{si} \rangle \langle 12 \rangle \langle \text{gif} \rangle \langle \text{display} \rangle \langle \text{inline} \rangle \langle \text{overflow} \rangle \langle \text{scroll} \rangle \langle \text{xmlns:xocs} \rangle \langle \text{http://www.elsevier.com/xml/xocs/dtd} \rangle \langle \text{xmlns:xs} \rangle \langle \text{http://www.w3.org/2001/XMLSchema} \rangle \langle \text{xmlns:xsi} \rangle \langle \text{http://www.w3.org/2001/XMLSchema-instance} \rangle \langle \text{xmlns} \rangle \langle \text{http://www.elsevier.com/xml/ja/dtd} \rangle \langle \text{xmlns:ja} \rangle \langle \text{http://www.elsevier.com/xml/ja/dtd} \rangle \langle \text{xmlns:mml} \rangle \langle \text{http://www.w3.org/1998/Math/MathML} \rangle$	3.8	13
40	A scaling analysis of Sal'nikov's reaction, $P \rightarrow A \rightarrow B$, in the presence of natural convection and the diffusion of heat and matter. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 1999-2020.	2.1	12