Alasdair N Campbell

List of Publications by Year
in descending order

40 papers	1,097 citations	304743 22 h-index	414414 32 g-index
40 all docs	40 docs citations	40 times ranked	488 citing authors

#	Article	IF	Citations
1	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
2	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
3	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
4	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
5	New theoretical modelling of heat transfer in solar ponds. Solar Energy, 2016, 125, 207-218.	6.1	52
6	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
7	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
8	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
9	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
10	Measuring the average volumetric heat transfer coefficient of a liquidâ€"liquidâ€"vapour direct contact heat exchanger. Applied Thermal Engineering, 2016, 103, 47-55.	6.0	35
11	Heat transfer efficiency and capital cost evaluation of a three-phase direct contact heat exchanger for the utilisation of low-grade energy sources. Energy Conversion and Management, 2015, 106, 101-109.	9.2	33
12	Effects of natural convection on thermal explosion in a closed vessel. Physical Chemistry Chemical Physics, 2008, 10, 5521.	2.8	32
13	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
14	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
15	Experimental analysis of the temperature and concentration profiles in a salinity gradient solar pond with, and without a liquid cover to suppress evaporation. Solar Energy, 2017, 155, 1354-1365.	6.1	30
16	On the occurrence of thermal explosion in a reacting gas: The effects of natural convection and consumption of reactant. Combustion and Flame, 2010, 157, 230-239.	5.2	29
17	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
18	Experimental measurements and theoretical prediction for the volumetric heat transfer coefficient of a three-phase direct contact condenser. International Communications in Heat and Mass Transfer, 2015, 66, 180-188.	5.6	24

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19	A comprehensive transient model for the prediction of the temperature distribution in a solar pond under mediterranean conditions. Solar Energy, 2016, 135, 297-307.	6.1	24
20	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
21	A comparison of measured temperatures with those calculated numerically and analytically for an exothermic chemical reaction inside a spherical batch reactor with natural convection. Chemical Engineering Science, 2007, 62, 3068-3082.	3.8	22
22	Experimental measurements and theoretical prediction for the transient characteristic of a two-phase two-component direct contact condenser. Applied Thermal Engineering, 2015, 87, 161-174.	6.0	22
23	Heat transfer measurement in a three-phase spray column direct contact heat exchanger for utilisation in energy recovery from low-grade sources. Energy Conversion and Management, 2016, 126, 342-351.	9.2	21
24	Heat transfer measurement in a three-phase direct-contact condenser under flooding conditions. Applied Thermal Engineering, 2016, 95, 106-114.	6.0	20
25	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
26	Finite element modelling of the thermal performance of salinity gradient solar ponds. Energy, 2020, 203, 117861.	8.8	18
27	Measuring the Overall Volumetric Heat Transfer Coefficient in a Vapor-Liquidâ€"Liquid Three-Phase Direct Contact Heat Exchanger. Heat Transfer Engineering, 2018, 39, 208-216.	1.9	15
28	The influence of natural convection on the temporal development of the temperature and concentration fields for Salâ€™nikov's reaction, <mml:math altimg="si12.gif" display="inline" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xml	3.8	13
29	Turbulent plumes with internal generation of buoyancy by chemical reaction. Journal of Fluid Mechanics, 2010, 655, 122-151.	3.4	13
30	A scaling analysis of Sal'nikov's reaction, Pâ†’Aâ†’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
31	The effect of external heat transfer on thermal explosion in a spherical vessel with natural convection. Physical Chemistry Chemical Physics, 2015, 17, 16894-16906.	2.8	12
32	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
33	Oscillatory and nonoscillatory behavior of a simple model for cool flames, Sal'nikov's reaction, P â†’ A â†’ B, occurring in a spherical batch reactor with varying intensities of natural convection. Combustion and Flame, 2008, 154, 122-142.	5.2	10
34	A new model for the drag coefficient of a swarm of condensing vapourâ€"liquid bubbles in a third immiscible liquid phase. Chemical Engineering Science, 2015, 131, 76-83.	3.8	10
35	A Scaling Analysis of the Effects of Natural Convection, when Salâ€™nikov's Reaction: Pâ†’Aâ†’B Occurs, Together With Diffusion and Heat Transfer in a Batch Reactor. Chemical Engineering Research and Design, 2006, 84, 553-561.	5.6	8
36	The behaviour of Salâ€™nikovâ€™s reaction, P â†’ A â†’ B, in a spherical batch reactor with the diffusion of heat and matter. Physical Chemistry Chemical Physics, 2006, 8, 2866-2878.	2.8	8

#	Article	IF	Citations
37	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
38	When do chemical reactions promote mixing?. Chemical Engineering Journal, 2011, 168, 1-14.	12.7	6
39	Modelling of the Thermal Performance of SGSP using COMSOL Multiphysics. Computer Aided Chemical Engineering, 2017, 40, 2575-2580.	0.5	2
40	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