Edmond J Walsh

List of Publications by Year
in descending order

57 papers	1,011 citations	471061 17 h-index	454577 30 g-index
61 all docs	61 docs citations	61 times ranked	941 citing authors

#	Article	IF	Citations
1	Microfluidics with fluid walls. Nature Communications, 2017, 8, 816.	5.8	96
2	Pressure drop in two phase slug/bubble flows in mini scale capillaries. International Journal of Multiphase Flow, 2009, 35, 879-884.	1.6	94
3	Heat transfer model for gasâ€“liquid slug flows under constant flux. International Journal of Heat and Mass Transfer, 2010, 53, 3193-3201.	2.5	82
4	PIV measurements of flow within plugs in a microchannel. Microfluidics and Nanofluidics, 2007, 3, 463-472.	1.0	78
5	Active cooling of a mobile phone handset. Applied Thermal Engineering, 2010, 30, 2363-2369.	3.0	56
6	Quadrant analysis of a transitional boundary layer subject to free-stream turbulence. Journal of Fluid Mechanics, 2010, 658, 310-335.	1.4	52
7	Microfluidic chambers using fluid walls for cell biology. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E5926-E5933.	3.3	47
8	Prandtl and capillary effects on heat transfer performance within laminar liquidâ€“gas slug flows. International Journal of Heat and Mass Transfer, 2011, 54, 4752-4761.	2.5	43
9	Experimental investigation into the routes to bypass transition and the shear-sheltering phenomenon. Journal of Fluid Mechanics, 2007, 591, 461-479.	1.4	42
10	Raising fluid walls around living cells. Science Advances, 2019, 5, eaav8002.	4.7	32
11	Effects of pressure gradients on entropy generation in the viscous layers of turbulent wall flows. International Journal of Heat and Mass Transfer, 2008, 51, 1104-1114.	2.5	29
12	Interaction of quantitative PCR components with polymeric surfaces. Biomedical Microdevices, 2007, 9, 261-266.	1.4	26
13	Entropy Generation in the Viscous Parts of Turbulent Boundary Layers. Journal of Fluids Engineering, Transactions of the ASME, 2008, 130, .	0.8	23
14	Review and extension of pressure drop models applied to Taylor flow regimes. International Journal of Multiphase Flow, 2015, 68, 1-9.	1.6	23
15	Profile Scaling of Miniature Centrifugal Fans. Heat Transfer Engineering, 2009, 30, 130-137.	1.2	22
16	Novel micro-PIV study enables a greater understanding of nanoparticle suspension flows: nanofluids. Microfluidics and Nanofluidics, 2010, 8, 837-842.	1.0	22
17	Biocompatibility of fluids for multiphase drops-in-drops microfluidics. Biomedical Microdevices, 2016, 18, 114.	1.4	19
18	Entropy Generation in a Boundary Layer Transitioning Under the Influence of Freestream Turbulence. Journal of Fluids Engineering, Transactions of the ASME, 2011, 133, .	0.8	18

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19	Jetâ€Printing Microfluidic Devices on Demand. Advanced Science, 2020, 7, 2001854.	5.6	17
20	Local heat transfer performance and exit flow characteristics of a miniature axial fan. International Journal of Heat and Fluid Flow, 2010, 31, 952-960.	1.1	15
21	Influence of segmenting fluids on efficiency, crossing point and fluorescence level in real time quantitative PCR. Biomedical Microdevices, 2006, 8, 59-64.	1.4	13
22	Heat Transfer From Novel Target Surface Structures to a Normally Impinging, Submerged and Confined Water Jet. Journal of Thermal Science and Engineering Applications, 2009, 1, .	0.8	13
23	Pool boiling of resin-impregnated motor windings geometry. Applied Thermal Engineering, 2018, 130, 854-864.	3.0	13
24	Segmenting Fluid Effect on PCR Reactions in Microfluidic Platforms. Biomedical Microdevices, 2005, 7, 269-272.	1.4	12
25	Growth of boundary-layer streaks due to free-stream turbulence. International Journal of Heat and Fluid Flow, 2016, 61, 272-283.	1.1	9
26	Guidelines for developing efficient thermal conduction and storage models within building energy simulations. Energy, 2017, 125, 211-222.	4.5	9
27	Using Fluid Walls for Single-Cell Cloning Provides Assurance in Monoclonality. SLAS Technology, 2020, 25, 267-275.	1.0	9
28	Predicting flows through microfluidic circuits with fluid walls. Microsystems and Nanoengineering, 2021, 7, 93.	3.4	9
29	Predicting Entropy Generation Rates in Transitional Boundary Layers Based on Intermittency. Journal of Turbomachinery, 2007, 129, 512-517.	0.9	8
30	Enhanced energy dissipation rates in laminar boundary layers subjected to elevated levels of freestream turbulence. Fluid Dynamics Research, 2007, 39, 305-319.	0.6	7
31	A study on the flow field and local heat transfer performance due to geometric scaling of centrifugal fans. International Journal of Heat and Fluid Flow, 2011, 32, 1160-1172.	1.1	7
32	Formation of droplet interface bilayers in a Teflon tube. Scientific Reports, 2016, 6, 34355.	1.6	6
33	A New Correlation for Entropy Generation in Low Reynolds Number Turbulent Shear Layers. International Journal of Fluid Mechanics Research, 2009, 36, 566-572.	0.4	6
34	Conditionally-Sampled Turbulent and Nonturbulent Measurements of Entropy Generation Rate in the Transition Region of Boundary Layers. Journal of Fluids Engineering, Transactions of the ASME, 2007, 129, 659-664.	0.8	5
35	Bubble nucleators to enhance external pool boiling from the bottom row of a tube bundle. Applied Thermal Engineering, 2020, 178, 115544.	3.0	5
36	Film Thickness for Two Phase Flow in a Microchannel. , 2006, , 207.		4

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37	Heat Transfer From Novel Target Surface Structures to a 3Ã—3 Array of Normally Impinging Water Jets. Journal of Thermal Science and Engineering Applications, 2010, 2, .	0.8	4
38	Creating wounds in cell monolayers using micro-jets. Biomicrofluidics, 2021, 15, 014108.	1.2	4
39	Microfluidics on Standard Petri Dishes for Bioscientists. Small Methods, 2021, 5, 2100724.	4.6	4
40	On The Use of Entropy to Predict Boundary Layer Stability. Entropy, 2004, 6, 375-387.	1.1	3
41	Pool boiling of horizontal mini-tubes in unconfined and confined columns. International Journal of Heat and Mass Transfer, 2019, 145, 118733.	2.5	3
42	An Investigation Using Wavelet Analysis Into Velocity Perturbations Under the Influence of Elevated Freestream Turbulence at Transition Onset. , 2006, , 1475.		2
43	PIV Measurements of the Effects of Geometric Scale on Electronics Cooling Axial Fan Flow. , 2007, , .		2
44	An Investigation of the Pressure Drop Associated With Liquid-Liquid Slug Flows. , 2013, , .		2
45	Entropy Generation in Steady Laminar Boundary Layers with Pressure Gradients. Entropy, 2014, 16, 3808-3812.	1.1	2
46	Visualization of the vortex and reverse-flow structure of a separation bubble. Journal of Visualization, 2016, 19, 175-177.	1.1	2
47	On the Performance of Miniature Centrifugal Fans With Varying Blade Cord Length. , 2008, , .		1
48	Simple Models for Laminar Thermally Developing Slug Flow in Non-Circular Ducts and Channels. , 2009, , .		1
49	Heat transfer enhancement with laminar liquid-gas slug flows. , 2010, , .		1
50	An optimised logarithmic discretisation approach for accurate and efficient compact thermal models. Energy, 2018, 147, 995-1006.	4.5	1
51	Reconfigurable Microfluidic Circuits for Isolating and Retrieving Cells of Interest. ACS Applied Materials & Interfaces, 2022, 14, 25209-25219.	4.0	1
52	Thermal Performance of Two and Three Dimensional Radial Flow Heat Sinks. , 2009, , .		0
53	Flow Characteristics of Aluminium Oxide Nanofluids. , 2009, , .		0
54	Temperature distribution on an isoflux surface cooled by an impinging liquid jet with a 40Â° Wall Jet Swirl Generator. Journal of Visualization, 2010, 13, 177-178.	1.1	0

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55	Criteria for Boundary Layer Transition. , 2011, , .		0
56	Biocompatibility of Sessile Drops as Chambers for Cell Culture. , 2019, , .		0
57	An Automated Approach to Developing Compact and Accurate Building Models Utilising an Inverse Heat Transfer Approach. , 2013, , .		0