

David F Fletcher

List of Publications by Year in descending order

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289
papers

11,020
citations

26630
56
h-index

49909
87
g-index

297
all docs

297
docs citations

297
times ranked

6228
citing authors

#	ARTICLE	IF	CITATIONS
1	On the CFD modelling of Taylor flow in microchannels. Chemical Engineering Science, 2009, 64, 2941-2950.	3.8	303
2	Spiral wound modules and spacers. Journal of Membrane Science, 2004, 242, 129-153.	8.2	297
3	Flow boiling heat transfer of Freon R11 and HCFC123 in narrow passages. International Journal of Heat and Mass Transfer, 2000, 43, 3347-3358.	4.8	277
4	Modeling turbulent flow in stirred tanks with CFD: the influence of the modeling approach, turbulence model and numerical scheme. Experimental Thermal and Fluid Science, 2004, 28, 431-445.	2.7	209
5	Flow and mixing fields of turbulent bluff-body jets and flames. Combustion Theory and Modelling, 1998, 2, 193-219.	1.9	184
6	Effect of Design on the Performance of a Dry Powder Inhaler Using Computational Fluid Dynamics. Part 1: Grid Structure and Mouthpiece Length. Journal of Pharmaceutical Sciences, 2004, 93, 2863-2876.	3.3	169
7	Design of micromixers using CFD modelling. Chemical Engineering Science, 2005, 60, 2503-2516.	3.8	165
8	Techniques for computational fluid dynamics modelling of flow in membrane channels. Journal of Membrane Science, 2003, 211, 127-137.	8.2	158
9	Physical and numerical modelling of thunderstorm downbursts. Journal of Wind Engineering and Industrial Aerodynamics, 2001, 89, 535-552.	3.9	155
10	A New Volume of Fluid Advection Algorithm: The Stream Scheme. Journal of Computational Physics, 2000, 162, 1-32.	3.8	150
11	Influence of Air Flow on the Performance of a Dry Powder Inhaler Using Computational and Experimental Analyses. Pharmaceutical Research, 2005, 22, 1445-1453.	3.5	148
12	Local condensation heat transfer rates in fine passages. International Journal of Heat and Mass Transfer, 2003, 46, 4453-4466.	4.8	134
13	A CFD based combustion model of an entrained flow biomass gasifier. Applied Mathematical Modelling, 2000, 24, 165-182.	4.2	131
14	Taylor Flow in Microchannels: A Review of Experimental and Computational Work. Journal of Computational Multiphase Flows, 2010, 2, 1-31.	0.8	128
15	Simulation of the Flow around Spacer Filaments between Channel Walls. 2. Mass-Transfer Enhancement. Industrial & Engineering Chemistry Research, 2002, 41, 4879-4888.	3.7	126
16	CFD modelling of flow and heat transfer in the Taylor flow regime. Chemical Engineering Science, 2010, 65, 2094-2107.	3.8	119
17	Arterial Pulsation-driven Cerebrospinal Fluid Flow in the Perivascular Space: A Computational Model. Computer Methods in Biomechanics and Biomedical Engineering, 2003, 6, 235-241.	1.6	117
18	Characterization of the Mixing Quality in Micromixers. Chemical Engineering and Technology, 2003, 26, 1262-1270.	1.5	114

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19	Effect of design on the performance of a dry powder inhaler using computational fluid dynamics. Part 2: Air inlet size. Journal of Pharmaceutical Sciences, 2006, 95, 1382-1392.	3.3	114
20	Simulation of the Flow around Spacer Filaments between Narrow Channel Walls. 1. Hydrodynamics. Industrial & Engineering Chemistry Research, 2002, 41, 2977-2987.	3.7	109
21	Spray drying of food ingredients and applications of CFD in spray drying. Chemical Engineering and Processing: Process Intensification, 2001, 40, 345-354.	3.6	108
22	CFD approaches for the simulation of hydrodynamics and heat transfer in Taylor flow. Chemical Engineering Science, 2011, 66, 5575-5584.	3.8	106
23	A CFD study of unsteady flow in narrow spacer-filled channels for spiral-wound membrane modules. Desalination, 2002, 146, 195-201.	8.2	105
24	Effect of Axial Agitator Configuration (Up-Pumping, Down-Pumping, Reverse Rotation) on Flow Patterns Generated in Stirred Vessels. Chemical Engineering Research and Design, 2001, 79, 845-856.	5.6	103
25	What is important in the simulation of spray dryer performance and how do current CFD models perform?. Applied Mathematical Modelling, 2006, 30, 1281-1292.	4.2	102
26	The influence of the relative timing of arterial and subarachnoid space pulse waves on spinal perivascular cerebrospinal fluid flow as a possible factor in syrinx development. Journal of Neurosurgery, 2010, 112, 808-813.	1.6	102
27	Influence of Mouthpiece Geometry on the Aerosol Delivery Performance of a Dry Powder Inhaler. Pharmaceutical Research, 2007, 24, 1450-1456.	3.5	101
28	Validation of a CFD model of Taylor flow hydrodynamics and heat transfer. Chemical Engineering Science, 2012, 69, 541-552.	3.8	101
29	The Role of Capsule on the Performance of a Dry Powder Inhaler Using Computational and Experimental Analyses. Pharmaceutical Research, 2005, 22, 923-932.	3.5	100
30	An assessment of different turbulence models for predicting flow in a baffled tank stirred with a Rushton turbine. Chemical Engineering Science, 2011, 66, 5976-5988.	3.8	97
31	Laminar flow and heat transfer in a periodic serpentine channel with semi-circular cross-section. International Journal of Heat and Mass Transfer, 2006, 49, 2912-2923.	4.8	94
32	PIV measurements of flow in an aerated tank stirred by a down- and an up-pumping axial flow impeller. Experimental Thermal and Fluid Science, 2004, 28, 447-456.	2.7	91
33	A new volume of fluid advection algorithm: the defined donating region scheme. International Journal for Numerical Methods in Fluids, 2001, 35, 151-172.	1.6	90
34	Subcooled flow boiling heat transfer in narrow passages. International Journal of Heat and Mass Transfer, 2003, 46, 3673-3682.	4.8	89
35	A computational fluids dynamics study of buoyancy effects in reverse osmosis. Journal of Membrane Science, 2004, 245, 175-181.	8.2	89
36	Hydrodynamics of liquid-liquid Taylor flow in microchannels. Chemical Engineering Science, 2013, 92, 180-189.	3.8	86

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37	Fouling Control in a Submerged Flat Sheet Membrane System: Part II—Two-Phase Flow Characterization and CFD Simulations. Separation Science and Technology, 2006, 41, 1411-1445.	2.5	82
38	Unsteady Flows with Mass Transfer in Narrow Zigzag Spacer-Filled Channels: A Numerical Study. Industrial & Engineering Chemistry Research, 2006, 45, 6594-6603.	3.7	81
39	Numerical simulation of downburst winds. Journal of Wind Engineering and Industrial Aerodynamics, 2009, 97, 523-539.	3.9	79
40	An Integral Model for the Transient Pyrolysis of Solid Materials. Fire and Materials, 1997, 21, 7-16.	2.0	76
41	Mixing in bubble column reactors: Experimental study and CFD modeling. Chemical Engineering Journal, 2015, 264, 291-301.	12.7	76
42	Computational fluid dynamics modelling of flow and permeation for pressure-driven membrane processes. Desalination, 2002, 145, 183-186.	8.2	73
43	Steam explosion triggering: a review of theoretical and experimental investigations. Nuclear Engineering and Design, 1995, 155, 27-36.	1.7	72
44	Impact of tortuous geometry on laminar flow heat transfer in microchannels. International Journal of Heat and Mass Transfer, 2015, 83, 382-398.	4.8	72
45	Simulation of Turbulent Swirl Flow in an Axisymmetric Sudden Expansion. AIAA Journal, 2001, 39, 96-102.	2.6	70
46	A hydrodynamic and thermodynamic simulation of droplet impacts on hot surfaces, Part I: theoretical model. International Journal of Heat and Mass Transfer, 2001, 44, 2633-2642.	4.8	70
47	Lagrangian and Eulerian models for simulating turbulent dispersion and coalescence of droplets within a spray. Applied Mathematical Modelling, 2006, 30, 1196-1211.	4.2	70
48	The use of computational approaches in inhaler development. Advanced Drug Delivery Reviews, 2012, 64, 312-322.	13.7	69
49	A new correlation for bench-scale piloted ignition data of wood. Fire Safety Journal, 1997, 29, 41-59.	3.1	67
50	Numerical simulations of smoke movement from a pool fire in a ventilated tunnel. Fire Safety Journal, 1994, 23, 305-325.	3.1	66
51	Fluid Dynamics of the Cerebral Aqueduct. Pediatric Neurosurgery, 1996, 24, 229-236.	0.7	66
52	Simulation of Unsteady Flow and Vortex Shedding for Narrow Spacer-Filled Channels. Industrial & Engineering Chemistry Research, 2003, 42, 4962-4977.	3.7	66
53	A review of pressure-induced propagation models of the vapour explosion process. Progress in Nuclear Energy, 1990, 23, 137-179.	2.9	63
54	A hydrodynamic and thermodynamic simulation of droplet impacts on hot surfaces, Part II: validation and applications. International Journal of Heat and Mass Transfer, 2001, 44, 2643-2659.	4.8	61

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55	Laminar Flow and Heat Transfer in a Periodic Serpentine Channel. Chemical Engineering and Technology, 2005, 28, 353-361.	1.5	61
56	Low-Reynolds number heat transfer enhancement in sinusoidal channels. Chemical Engineering Science, 2007, 62, 694-702.	3.8	61
57	Heat transfer in well-characterised Taylor flow. Chemical Engineering Science, 2010, 65, 6379-6388.	3.8	55
58	Utilizing cavity flow within double skin façade for wind energy harvesting in buildings. Journal of Wind Engineering and Industrial Aerodynamics, 2017, 167, 114-127.	3.9	55
59	An improved mathematical model of melt/water detonations. Model formulation and example results. International Journal of Heat and Mass Transfer, 1991, 34, 2435-2448.	4.8	54
60	Simulation of the agglomeration in a spray using Lagrangian particle tracking. Applied Mathematical Modelling, 2004, 28, 273-290.	4.2	54
61	Tough and Processable Hydrogels Based on Lignin and Hydrophilic Polyurethane. ACS Applied Bio Materials, 2018, 1, 2073-2081.	4.6	52
62	Prospects for the Modelling and Design of Spray Dryers in the 21st Century. Drying Technology, 2003, 21, 197-215.	3.1	51
63	Computational Fluid Dynamics Simulations of Taylor Bubbles in Tubular Membranes. Chemical Engineering Research and Design, 2005, 83, 40-49.	5.6	51
64	Laminar flow and heat transfer in a periodic trapezoidal channel with semi-circular cross-section. International Journal of Heat and Mass Transfer, 2007, 50, 3471-3480.	4.8	51
65	Thermohydraulic performance of a periodic trapezoidal channel with a triangular cross-section. International Journal of Heat and Mass Transfer, 2008, 51, 2925-2929.	4.8	51
66	Simulation of the Effects of Inlet Swirl on Gas Flow Patterns in a Pilot-Scale Spray Dryer. Chemical Engineering Research and Design, 2004, 82, 821-833.	5.6	50
67	Particle Aerosolisation and Break-up in Dry Powder Inhalers 1: Evaluation and Modelling of Venturi Effects for Agglomerated Systems. Pharmaceutical Research, 2010, 27, 1367-1376.	3.5	50
68	Taylor flow heat transfer in microchannels. Unification of liquid-liquid and gas-liquid results. Chemical Engineering Science, 2015, 138, 140-152.	3.8	50
69	Computational fluid dynamics modelling of wood combustion. Fire Safety Journal, 1996, 27, 69-84.	3.1	49
70	Single and multiphase CFD approaches for modelling partially baffled stirred vessels: Comparison of experimental data with numerical predictions. Chemical Engineering Science, 2007, 62, 6246-6262.	3.8	49
71	Computational fluid dynamics modelling of cerebrospinal fluid pressure in Chiari malformation and syringomyelia. Journal of Biomechanics, 2013, 46, 1801-1809.	2.1	49
72	Numerical Simulation of Unsteady Turbulent Flow in Axisymmetric Sudden Expansions. Journal of Fluids Engineering, Transactions of the ASME, 2001, 123, 574-587.	1.5	48

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73	An experimental and computational study of the vortex shape in a partially baffled agitated vessel. Chemical Engineering Science, 2007, 62, 1915-1926.	3.8	48
74	Development of a CFD Model of Bubble Column Bioreactors: Part Two – Comparison of Experimental Data and CFD Predictions. Chemical Engineering and Technology, 2014, 37, 131-140.	1.5	48
75	CFD simulation of industrial bubble columns: Numerical challenges and model validation successes. Applied Mathematical Modelling, 2017, 44, 25-42.	4.2	48
76	Challenges of Simulating Droplet Coalescence within a Spray. Drying Technology, 2004, 22, 1463-1488.	3.1	47
77	The presence of arachnoiditis affects the characteristics of CSF flow in the spinal subarachnoid space: A modelling study. Journal of Biomechanics, 2012, 45, 1186-1191.	2.1	47
78	Understanding gradients in industrial bioreactors. Biotechnology Advances, 2021, 46, 107660.	11.7	47
79	An experimental study of gas-liquid flow in a narrow conduit. International Journal of Heat and Mass Transfer, 2000, 43, 2313-2324.	4.8	46
80	Focal spinal arachnoiditis increases subarachnoid space pressure: A computational study. Clinical Biomechanics, 2006, 21, 579-584.	1.2	46
81	Laminar heat transfer simulations for periodic zigzag semicircular channels: Chaotic advection and geometric effects. International Journal of Heat and Mass Transfer, 2013, 62, 391-401.	4.8	46
82	Validation of a Computationally Efficient Computational Fluid Dynamics (CFD) Model for Industrial Bubble Column Bioreactors. Industrial & Engineering Chemistry Research, 2014, 53, 14526-14543.	3.7	46
83	The health digital twin: advancing precision cardiovascular medicine. Nature Reviews Cardiology, 2021, 18, 803-804.	13.7	45
84	Computer modelling of the cerebrospinal fluid flow dynamics of aqueduct stenosis. Medical and Biological Engineering and Computing, 1999, 37, 59-63.	2.8	44
85	Film and slug behaviour in intermittent slug-annular microchannel flows. Chemical Engineering Science, 2010, 65, 5344-5355.	3.8	44
86	Effect of Flow Characteristics on Taylor Flow Heat Transfer. Industrial & Engineering Chemistry Research, 2012, 51, 2010-2020.	3.7	44
87	A Computational Fluid Dynamics Study of a Tall-Form Spray Dryer. Food and Bioprocesses Processing, 2002, 80, 163-175.	3.6	43
88	Chaotic advection in steady laminar heat transfer simulations: Periodic zigzag channels with square cross-sections. International Journal of Heat and Mass Transfer, 2013, 57, 274-284.	4.8	43
89	Transient laminar heat transfer simulations in periodic zigzag channels. International Journal of Heat and Mass Transfer, 2014, 71, 758-768.	4.8	43
90	CFD modelling of reverse osmosis membrane flow and validation with experimental results. Desalination, 2007, 217, 242-250.	8.2	42

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91	CFD simulation of precession in sudden pipe expansion flows with low inlet swirl. Applied Mathematical Modelling, 2002, 26, 1-15.	4.2	41
92	Heat transfer and pressure drop characteristics of gas-liquid Taylor flow in mini ducts of square and rectangular cross-sections. International Journal of Heat and Mass Transfer, 2016, 103, 45-56.	4.8	41
93	Experimental investigation into the impact of sparger design on bubble columns at high superficial velocities. Chemical Engineering Research and Design, 2016, 106, 205-213.	5.6	41
94	Implementation of a height function method to alleviate spurious currents in CFD modelling of annular flow in microchannels. Applied Mathematical Modelling, 2015, 39, 4665-4686.	4.2	40
95	Development of a CFD Model of Bubble Column Bioreactors: Part One – A Detailed Experimental Study. Chemical Engineering and Technology, 2013, 36, 2065-2070.	1.5	39
96	Heat and mass transfer computations for laminar flow in an axisymmetric sudden expansion. Computers and Fluids, 1985, 13, 207-221.	2.5	38
97	Thermohydraulics of square-section microchannels following a serpentine path. Microfluidics and Nanofluidics, 2006, 2, 195-204.	2.2	38
98	Computational Fluid Dynamic Analysis of Intracranial Aneurysmal Bleb Formation. Neurosurgery, 2013, 73, 1061-1069.	1.1	38
99	Hydrodynamic control of the interface between two liquids flowing through a horizontal or vertical microchannel. Lab on A Chip, 2004, 4, 121.	6.0	37
100	Numerical simulation of solid suspension via mechanical agitation: effect of the modelling approach, turbulence model and hindered settling drag law. International Journal of Computational Fluid Dynamics, 2009, 23, 173-187.	1.2	37
101	Numerical simulation of idealised three-dimensional downburst wind fields. Engineering Structures, 2010, 32, 3558-3570.	5.3	37
102	Characterizing bubble column bioreactor performance using computational fluid dynamics. Chemical Engineering Science, 2016, 144, 58-74.	3.8	36
103	A Review of Computational Modelling of Flow Boiling in Microchannels. Journal of Computational Multiphase Flows, 2014, 6, 79-110.	0.8	35
104	Tough hydrogels for soft artificial muscles. Materials and Design, 2021, 203, 109609.	7.0	35
105	Cobra probe measurements of mean velocities, Reynolds stresses and higher-order velocity correlations in pipe flow. Experimental Thermal and Fluid Science, 2000, 21, 206-217.	2.7	34
106	Numerical Simulations of Gas Flow Patterns Within a Tall-Form Spray Dryer. Chemical Engineering Research and Design, 2001, 79, 235-248.	5.6	34
107	The influence of inclined plates on expansion behaviour of solid suspensions in a liquid fluidised bed – a computational fluid dynamics study. Powder Technology, 2005, 156, 1-7.	4.2	33
108	Alternate Operating Methods for Improving the Performance of Continuous Stirred Tank Reactors. Chemical Engineering Research and Design, 2006, 84, 569-582.	5.6	33

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109	Particle size classification in a fluidized bed containing parallel inclined plates. Minerals Engineering, 2006, 19, 162-171.	4.3	32
110	Oxygen transfer in bubble columns at industrially relevant superficial velocities: Experimental work and CFD modelling. Chemical Engineering Journal, 2015, 280, 138-146.	12.7	32
111	An assessment of turbulence models applied to the simulation of a two-dimensional submerged jet. Applied Mathematical Modelling, 2001, 25, 635-653.	4.2	31
112	Experimental study of transient behaviour of laminar flow in zigzag semi-circular microchannels. Experimental Thermal and Fluid Science, 2015, 68, 644-651.	2.7	31
113	Experimental investigation into the drag volume fraction correction term for gas-liquid bubbly flows. Chemical Engineering Science, 2017, 170, 91-97.	3.8	31
114	Simulation of Gas Flow Instability in a Spray Dryer. Chemical Engineering Research and Design, 2003, 81, 631-638.	5.6	30
115	Influence of inclined plates on the expansion behaviour of particulate suspensions in a liquid fluidised bed. Chemical Engineering Science, 2004, 59, 3559-3567.	3.8	30
116	Solid fire extinguishment by a water spray. Fire Safety Journal, 1999, 32, 119-135.	3.1	29
117	Numerical investigation of the influence of topography on simulated downburst wind fields. Journal of Wind Engineering and Industrial Aerodynamics, 2010, 98, 21-33.	3.9	29
118	On the importance of upstream compressibility in microchannel boiling heat transfer. International Journal of Heat and Mass Transfer, 2013, 58, 503-512.	4.8	29
119	Wind Engineering Analysis of Parabolic Trough Collectors to Optimise Wind Loads and Heat Loss. Energy Procedia, 2015, 69, 168-177.	1.8	29
120	Hydrodynamics and mixing in continuous oscillatory flow reactorsâ€”Part I: Effect of baffle geometry. Chemical Engineering and Processing: Process Intensification, 2016, 108, 78-92.	3.6	29
121	Turbulent Shear Stress Effects on Plant Cell Suspension Cultures. Chemical Engineering Research and Design, 2001, 79, 867-875.	5.6	28
122	Numerical simulation of colloidal dispersion filtration: description of critical flux and comparison with experimental results. Desalination, 2006, 192, 74-81.	8.2	28
123	Gravitational effect on Taylor flow in horizontal microchannels. Chemical Engineering Science, 2012, 69, 553-564.	3.8	28
124	Potential application of double skin faade incorporating aerodynamic modifications for wind energy harvesting. Journal of Wind Engineering and Industrial Aerodynamics, 2018, 174, 269-280.	3.9	28
125	N95 respirator mask breathing leads to excessive carbon dioxide inhalation and reduced heat transfer in a human nasal cavity. Physics of Fluids, 2021, 33, 081913.	4.0	28
126	Development of dynamic compartment models for industrial aerobic fed-batch fermentation processes. Chemical Engineering Journal, 2021, 420, 130402.	12.7	28

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127	Measurements of no in turbulent non-premixed flames stabilized on a bluff body. Proceedings of the Combustion Institute, 1996, 26, 2191-2197.	0.3	27
128	Mass Transfer Analysis of Spinning Cone Columns Using CFD. Chemical Engineering Research and Design, 2004, 82, 752-761.	5.6	27
129	Scale-adaptive simulation (SAS) modelling of a pilot-scale spray dryer. Chemical Engineering Research and Design, 2009, 87, 1371-1378.	5.6	27
130	Impact of Surfactant Chemistry on Bubble Column Systems. Chemical Engineering and Technology, 2014, 37, 652-658.	1.5	27
131	Assessment of the impact of bubble size modelling in CFD simulations of alternative bubble column configurations operating in the heterogeneous regime. Chemical Engineering Science, 2018, 186, 88-101.	3.8	27
132	USE OF COMPUTATIONAL FLUID DYNAMICS TECHNIQUES TO ASSESS DESIGN ALTERNATIVES FOR THE PLENUM CHAMBER OF A SMALL SPRAY DRYER. Drying Technology, 2001, 19, 257-268.	3.1	26
133	Wind engineering analysis of parabolic trough solar collectors: The effects of varying the trough depth. Journal of Wind Engineering and Industrial Aerodynamics, 2014, 135, 118-128.	3.9	26
134	Simple and cost-effective powder disperser for aerosol particle size measurement. Powder Technology, 2008, 187, 27-36.	4.2	25
135	Numerical simulation of colloid dead-end filtration: Effect of membrane characteristics and operating conditions on matter accumulation. Journal of Membrane Science, 2008, 313, 52-59.	8.2	25
136	Particle Aerosolisation and Breakâ€p in Dry Powder Inhalers: Evaluation and Modelling of the Influence of Grid Structures for Agglomerated Systems. Journal of Pharmaceutical Sciences, 2011, 100, 4710-4721.	3.3	25
137	Effects of fluid structure interaction in a three dimensional model of the spinal subarachnoid space. Journal of Biomechanics, 2014, 47, 2826-2830.	2.1	25
138	Towards a CFD model of bubble columns containing significant surfactant levels. Chemical Engineering Science, 2015, 127, 189-201.	3.8	25
139	A CFD study on the effect of membrane permeance on permeate flux enhancement generated by unsteady slip velocity. Journal of Membrane Science, 2018, 556, 138-145.	8.2	25
140	Pressure distribution and flow dynamics in a nasal airway using a scale resolving simulation. Physics of Fluids, 2021, 33, .	4.0	25
141	The particle size distribution of solidified melt debris from molten fuel-coolant interaction experiments. Nuclear Engineering and Design, 1988, 105, 313-319.	1.7	24
142	A mathematical model of melt/water detonations. Applied Mathematical Modelling, 1989, 13, 339-347.	4.2	24
143	Computational fluid dynamics modelling of an entrained flow biomass gasifier. Applied Mathematical Modelling, 1998, 22, 747-757.	4.2	24
144	Simulation of the ignition of lean methane mixtures using CFD modelling and a reduced chemistry mechanism. Applied Mathematical Modelling, 2000, 24, 689-696.	4.2	24

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145	Experimental Measurement and Numerical Simulation of the Effect of Swirl on Flow Stability in Spray Dryers. Chemical Engineering Research and Design, 2001, 79, 260-268.	5.6	24
146	A Simple Kinetic Theory Treatment of Volatile Liquid-Gas Interfaces. Journal of Heat Transfer, 2001, 123, 486-491.	2.1	24
147	Towards Autonomous MAV Soaring in Cities: CFD Simulation, EFD Measurement and Flight Trials. International Journal of Micro Air Vehicles, 2015, 7, 441-448.	1.3	24
148	Impact of Surfactant Addition on Oxygen Mass Transfer in a Bubble Column. Chemical Engineering and Technology, 2015, 38, 44-52.	1.5	24
149	Scale-resolving simulation to predict the updraught regions over buildings for MAV orographic lift soaring. Journal of Wind Engineering and Industrial Aerodynamics, 2015, 140, 34-48.	3.9	24
150	Hydrodynamics and mixing in continuous oscillatory flow reactorsâ€”Part II: Characterisation methods. Chemical Engineering and Processing: Process Intensification, 2016, 102, 102-116.	3.6	24
151	CFD study of the effect of unsteady slip velocity waveform on shear stress in membrane systems. Chemical Engineering Science, 2018, 192, 16-24.	3.8	24
152	The CHYMES coarse mixing model. Progress in Nuclear Energy, 1991, 26, 31-61.	2.9	23
153	Numerical simulation of annular flow hydrodynamics in microchannels. Computers and Fluids, 2016, 133, 90-102.	2.5	23
154	Computational fluid dynamics modelling of hydrodynamics, mixing and oxygen transfer in industrial bioreactors with Newtonian broths. Biochemical Engineering Journal, 2022, 177, 108265.	3.6	23
155	Heat Transfer and Fluid Dynamic Aspects of Explosive Meltâ€”Water Interactions. Advances in Heat Transfer, 1997, , 129-213.	0.9	22
156	Laminar Flow Transitions in a 2D Channel with Circular Spacers. Industrial & Engineering Chemistry Research, 2007, 46, 5387-5396.	3.7	21
157	Particle Aerosolisation and Break-Up in Dry Powder Inhalers: Evaluation and Modelling of Impaction Effects for Agglomerated Systems. Journal of Pharmaceutical Sciences, 2011, 100, 2744-2754.	3.3	21
158	CFD Prediction of Odour Dispersion and Plume Visibility for Alumina Refinery Calciner Stacks. Chemical Engineering Research and Design, 2005, 83, 231-241.	5.6	20
159	Impact of thixotropy on flow patterns induced in a stirred tank: Numerical and experimental studies. Chemical Engineering Research and Design, 2008, 86, 545-553.	5.6	20
160	CFD simulation of Taylor flow: Should the liquid film be captured or not?. Chemical Engineering Science, 2017, 167, 334-335.	3.8	20
161	Process Intensification in Spray Dryers by Turbulence Enhancement. Chemical Engineering Research and Design, 1999, 77, 189-205.	5.6	19
162	Chiari malformation may increase perivascular cerebrospinal fluid flow into the spinal cord: A subject-specific computational modelling study. Journal of Biomechanics, 2017, 65, 185-193.	2.1	19

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163	CFD study of the effect of perforated spacer on pressure loss and mass transfer in spacer-filled membrane channels. Chemical Engineering Science, 2020, 222, 115704.	3.8	19
164	Tough hydrophilic polyurethane-based hydrogels with mechanical properties similar to human soft tissues. Journal of Materials Chemistry B, 2019, 7, 3512-3519.	5.8	18
165	In-vitro and particle image velocimetry studies of dry powder inhalers. International Journal of Pharmaceutics, 2021, 592, 119966.	5.2	18
166	Laminar Flow and Heat Transfer in Periodic Serpentine Mini-Channels. Journal of Enhanced Heat Transfer, 2006, 13, 309-320.	1.1	18
167	Buoyancy-driven, transient, two-dimensional thermo-hydrodynamics of a melt-water-steam mixture. Computers and Fluids, 1988, 16, 59-80.	2.5	17
168	An experimental and CFD study of liquid jet injection into a partially baffled mixing vessel: A contribution to process safety by improving the quenching of runaway reactions. Chemical Engineering Science, 2008, 63, 924-942.	3.8	17
169	Thoracic aortic aneurysm: 4D flow MRI and computational fluid dynamics model. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 1894-1895.	1.6	17
170	Numerical simulation of annular flow boiling in microchannels. Journal of Computational Multiphase Flows, 2016, 8, 61-82.	0.8	17
171	Impinging jet simulation of stationary downburst flow over topography. Wind and Structures, an International Journal, 2007, 10, 437-462.	0.8	17
172	Numerical studies of multiphase mixing with application to some small-scale experiments. Nuclear Engineering and Design, 1996, 166, 135-145.	1.7	16
173	Radiation absorption during premixing. Nuclear Engineering and Design, 1999, 189, 435-440.	1.7	16
174	Progress in Understanding the Physical Processes Inside Spinning Cone Columns. Chemical Engineering Research and Design, 2003, 81, 122-130.	5.6	16
175	Analysis of shear-induced coagulation in an emulsion polymerisation reactor using computational fluid dynamics. Chemical Engineering Science, 2005, 60, 2005-2015.	3.8	16
176	Analysis of the Dynamic Response of a Reverse Osmosis Membrane to Time-Dependent Transmembrane Pressure Variation. Industrial & Engineering Chemistry Research, 2005, 44, 7823-7834.	3.7	16
177	Numerical study of heat transfer in square millimetric zigzag channels in the laminar flow regime. Chemical Engineering and Processing: Process Intensification, 2019, 144, 107624.	3.6	16
178	Application of hybrid RANS-LES models to the prediction of flow behaviour in an industrial crystalliser. Applied Mathematical Modelling, 2020, 77, 1797-1819.	4.2	16
179	Effects of head tilt on squeeze-bottle nasal irrigation “ A computational fluid dynamics study. Journal of Biomechanics, 2021, 123, 110490.	2.1	16
180	Validation of Chymes: simulant studies. Nuclear Engineering and Design, 1995, 155, 97-114.	1.7	15

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181	High-Speed Laser Image Analysis of Plume Angles for Pressurised Metered Dose Inhalers: The Effect of Nozzle Geometry. AAPS PharmSciTech, 2017, 18, 782-789.	3.3	15
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