Muthanna H Al-Dahhan

List of Publications by Citations

226 papers	6,746 citations	43 h-index	72 g-index
234 ext. papers	7,294 ext. citations	4 avg, IF	6.22 L-index

#	Paper	IF	Citations
226	Production of bioenergy and biochemicals from industrial and agricultural wastewater. *Trends in Biotechnology*, **2004**, 22, 477-85	15.1	744
225	High-Pressure Trickle-Bed Reactors: A Review. *Industrial & Engineering Chemistry Research*, **1997**, 36, 3292-3314	3.9	273
224	Anaerobic digestion of animal waste: effect of mode of mixing. *Water Research*, **2005**, 39, 3597-606	12.5	178
223	Monoliths as multiphase reactors: A review. *AICHE Journal*, **2004**, 50, 2918-2938	3.6	173
222	Catalytic Wet Oxidation of Phenol by Hydrogen Peroxide over Pillared Clay Catalyst. *Industrial & Engineering Chemistry Research*, **2003**, 42, 2450-2460	3.9	153
221	Effect of shear on performance and microbial ecology of continuously stirred anaerobic digesters treating animal manure. *Biotechnology and Bioengineering*, **2008**, 100, 38-48	4.9	130
220	Catalyst wetting efficiency in trickle-bed reactors at high pressure. *Chemical Engineering Science*, **1995**, 50, 2377-2389	4.4	126
219	Analyzing and modeling of photobioreactors by combining first principles of physiology and hydrodynamics. *Biotechnology and Bioengineering*, **2004**, 85, 382-93	4.9	110
218	Pressure drop and liquid holdup in high pressure trickle-bed reactors. *Chemical Engineering Science*, **1994**, 49, 5681-5698	4.4	107
217	Flow pattern visualization in a mimic anaerobic digester using CFD. *Biotechnology and Bioengineering*, **2005**, 89, 719-32	4.9	105
216	CFD of multiphase flow in packed-bed reactors: I. k-Fluid modeling issues. *AICHE Journal*, **2002**, 48, 701-715	3.6	93
215	Solids flow mapping in a gas–solid riser: Mean holdup and velocity fields. *Powder Technology*, **2006**, 163, 98-123	5.2	83
214	Influence of solid-phase wall boundary condition on CFD simulation of spouted beds. *Chemical Engineering Science*, **2012**, 69, 419-430	4.4	82
213	Fluid dynamic parameters in bubble columns with internals. *Chemical Engineering Science*, **1999**, 54, 2187-2197	4.4	81
212	Verification and validation of CFD simulations for local flow dynamics in a draft tube airlift bioreactor. *Chemical Engineering Science*, **2011**, 66, 907-923	4.4	80
211	Catalyst bed dilution for improving catalyst wetting in laboratory trickle-bed reactors. *AICHE Journal*, **1996**, 42, 2594-2606	3.6	78
210	Experimental investigation of the hydrodynamics in a liquid–solid riser. *AICHE Journal*, **2005**, 51, 802-835	3.6	76

209	Scale-up of Bubble Column Reactors: A Review of Current State-of-the-Art. *Industrial & Engineering Chemistry Research*, **2013**, 52, 8091-8108	3.9	75
208	Gas–liquid mass transfer in a high pressure bubble column reactor with different sparger designs. *Chemical Engineering Science*, **2007**, 62, 131-139	4.4	75
207	Double-slit model for partially wetted trickle flow hydrodynamics. *AICHE Journal*, **2000**, 46, 597-609	3.6	74
206	Comparison of trickle-bed and upflow reactor performance at high pressure: Model predictions and experimental observations. *Chemical Engineering Science*, **1996**, 51, 2139-2148	4.4	74
205	Gas holdup in bubble columns at elevated pressure via computed tomography. *International Journal of Multiphase Flow*, **2001**, 27, 929-946	3.6	72
204	CFD of multiphase flow in packed-bed reactors: II. Results and applications. *AICHE Journal*, **2002**, 48, 716-730	3.6	68
203	Local characteristics of hydrodynamics in draft tube airlift bioreactor. *Chemical Engineering Science*, **2008**, 63, 3057-3068	4.4	67
202	Parametric study of unsteady-state flow modulation in trickle-bed reactors. *Chemical Engineering Science*, **1999**, 54, 2585-2595	4.4	63
201	Bubble velocity, size, and interfacial area measurements in a bubble column by four-point optical probe. *AICHE Journal*, **2008**, 54, 350-363	3.6	62
200	Optimal design of radioactive particle tracking experiments for flow mapping in opaque multiphase reactors. *Applied Radiation and Isotopes*, **2002**, 56, 485-503	1.7	62
199	Analysis of photobioreactors for culturing high-value microalgae and cyanobacteria via an advanced diagnostic technique: CARPT. *Chemical Engineering Science*, **2003**, 58, 2519-2527	4.4	61
198	Comparative hydrodynamics study in a bubble column using computer-automated radioactive particle tracking (CARPT)/computed tomography (CT) and particle image velocimetry (PIV). *Chemical Engineering Science*, **1999**, 54, 2199-2207	4.4	60
197	A Review on Flow Regime Transition in Bubble Columns. *International Journal of Chemical Reactor Engineering*, **2007**, 5,	1.2	59
196	Catalytic wet air oxidation of phenol in concurrent downflow and upflow packed-bed reactors over pillared clay catalyst. *Chemical Engineering Science*, **2005**, 60, 735-746	4.4	59
195	Flow pattern visualization of a simulated digester. *Water Research*, **2004**, 38, 3659-70	12.5	56
194	Characterization of the hydrodynamic flow regime in bubble columns via computed tomography. *Flow Measurement and Instrumentation*, **2005**, 16, 91-98	2.2	55
193	Prediction of Pressure Drop and Liquid Holdup in High-Pressure Trickle-Bed Reactors. *Industrial & Engineering Chemistry Research*, **1998**, 37, 793-798	3.9	55
192	Reproducible Technique for Packing Laboratory-Scale Trickle-Bed Reactors with a Mixture of Catalyst and Fines. *Industrial & Engineering Chemistry Research*, **1995**, 34, 741-747	3.9	55

191	Modeling of the Fischer‐Tropsch synthesis in slurry bubble column reactors. *Catalysis Today*, **2003**, 79-80, 211-218	5.3	54
190	A Lagrangian description of flows in stirred tanks via computer-automated radioactive particle tracking (CARPT). *Chemical Engineering Science*, **2001**, 56, 2629-2639	4.4	54
189	Impact of Internals on the Gas Holdup and Bubble Properties of a Bubble Column. *Industrial & Engineering Chemistry Research*, **2009**, 48, 8007-8013	3.9	53
188	Comparison of Upflow and Downflow Two-Phase Flow Packed-Bed Reactors with and without Fines: Experimental Observations. *Industrial & Engineering Chemistry Research*, **1996**, 35, 397-405	3.9	53
187	Activity and stability of iron-containing pillared clay catalysts for wet air oxidation of phenol. *Applied Catalysis A: General*, **2006**, 299, 175-184	5.1	49
186	Gas holdup distributions in large-diameter bubble columns measured by computed tomography. *Flow Measurement and Instrumentation*, **1998**, 9, 91-101	2.2	48
185	Impacts of dense heat exchanging internals on gas holdup cross-sectional distributions and profiles of bubble column using gamma ray Computed Tomography (CT) for FT synthesis. *Chemical Engineering Journal*, **2016**, 300, 317-333	14.7	45
184	Predictions of radial gas holdup profiles in bubble column reactors. *Chemical Engineering Science*, **2001**, 56, 1207-1210	4.4	44
183	Four-point optical probe for measurement of bubble dynamics: Validation of the technique. *Flow Measurement and Instrumentation*, **2008**, 19, 293-300	2.2	42
182	Hydrodynamics of churn turbulent bubble columns: gas‐liquid recirculation and mechanistic modeling. *Catalysis Today*, **2001**, 64, 253-269	5.3	41
181	Development of an artificial neural network correlation for prediction of overall gas holdup in bubble column reactors. *Chemical Engineering and Processing: Process Intensification*, **2003**, 42, 599-610	3.7	40
180	Impact of Internals Size and Configuration on Bubble Dynamics in Bubble Columns for Alternative Clean Fuels Production. *Industrial & Engineering Chemistry Research*, **2015**, 54, 1359-1372	3.9	38
179	Quantification of solids flow in a gas‐solid riser: single radioactive particle tracking. *Chemical Engineering Science*, **2004**, 59, 5381-5386	4.4	38
178	Prediction of axial liquid velocity profile in bubble columns. *Chemical Engineering Science*, **2001**, 56, 1127-1130	4.4	38
177	A method for estimating the solids circulation rate in a closed-loop circulating fluidized bed. *Powder Technology*, **2001**, 121, 213-222	5.2	38
176	Computed Tomographic Investigation of the Influence of Gas Sparger Design on Gas Holdup Distribution in a Bubble Column. *Industrial & Engineering Chemistry Research*, **2009**, 48, 58-68	3.9	37
175	Flow distribution characteristics of a gas‐liquid monolith reactor. *Catalysis Today*, **2005**, 105, 396-400	5.3	37
174	Airlift column photobioreactors for Porphyridium sp. culturing: part I. effects of hydrodynamics and reactor geometry. *Biotechnology and Bioengineering*, **2012**, 109, 932-41	4.9	36

173	Macro-mixing in a draft-tube airlift bioreactor. *Chemical Engineering Science*, **2008**, 63, 1572-1585	4.4	36
172	Solids flow mapping in a high pressure slurry bubble column. *Chemical Engineering Science*, **2005**, 60, 6067-6072	4.4	36
171	Two-phase flow distribution in 2D trickle-bed reactors. *Chemical Engineering Science*, **1999**, 54, 2409-2419	4.4	36
170	Local gas holdup in a draft tube airlift bioreactor. *Chemical Engineering Science*, **2010**, 65, 4503-4510	4.4	35
169	Tomographic and Particle Tracking Studies in a Liquid□Solid Riser. *Industrial & Engineering Chemistry Research*, **1997**, 36, 4666-4669	3.9	35
168	Countercurrent flow distribution in structured packing via computed tomography. *Chemical Engineering and Processing: Process Intensification*, **2005**, 44, 59-69	3.7	35
167	Single phase flow modeling in packed beds: discrete cell approach revisited. *Chemical Engineering Science*, **2000**, 55, 1829-1844	4.4	35
166	Hydrodynamics of Pilot-Scale Bubble Columns: Effect of Internals. *Industrial & Engineering Chemistry Research*, **2013**, 52, 43-55	3.9	34
165	Kinetics of Wet Air Oxidation of Phenol over a Novel Catalyst. *Industrial & Engineering Chemistry Research*, **2003**, 42, 5473-5481	3.9	34
164	Particle motion in packed/ebullated beds by CT and CARPT. *AICHE Journal*, **2001**, 47, 994-1004	3.6	34
163	Bubble Columns with Internals: A Review. *International Journal of Chemical Reactor Engineering*, **2013**, 11, 169-223	1.2	33
162	Bubble Dynamics Measurements Using Four-Point Optical Probe. *Canadian Journal of Chemical Engineering*, **2008**, 81, 375-381	2.3	33
161	Gas-lift digester configuration effects on mixing effectiveness. *Water Research*, **2007**, 41, 3051-60	12.5	33
160	CFD modeling of multiphase flow distribution in catalytic packed bed reactors: scale down issues. *Catalysis Today*, **2001**, 66, 209-218	5.3	33
159	Comparison of single- and two-bubble class gas□liquid recirculation models □application to pilot-plant radioactive tracer studies during methanol synthesis. *Chemical Engineering Science*, **2001**, 56, 1117-1125	4.4	33
158	Inferring liquid chaotic dynamics in bubble columns using CARPT. *Chemical Engineering Science*, **2001**, 56, 6125-6134	4.4	31
157	Characteristics of convective heat transport in a packed pebble-bed reactor. *Nuclear Engineering and Design*, **2015**, 284, 143-152	1.8	30
156	Bubble dynamics investigation in a slurry bubble column. *AICHE Journal*, **2008**, 54, 1203-1212	3.6	30

155	Liquid phase mixing in trayed bubble column reactors. *Chemical Engineering Science*, **2006**, 61, 1819-1835	4.4	29
154	Liquid saturation and gas–liquid distribution in multiphase monolithic reactors. *Chemical Engineering Science*, **2005**, 60, 3101-3106	4.4	29
153	Airlift column photobioreactors for Porphyridium sp. culturing: Part II. verification of dynamic growth rate model for reactor performance evaluation. *Biotechnology and Bioengineering*, **2012**, 109, 942-9	4.9	28
152	An advanced evaluation of spouted beds scale-up for coating TRISO nuclear fuel particles using Radioactive Particle Tracking (RPT). *Experimental Thermal and Fluid Science*, **2017**, 80, 90-104	3	28
151	Modelling and Simulation of the Monolithic Reactor for Gas–Liquid–Solid Reactions. *Chemical Engineering Research and Design*, **2005**, 83, 811-819	5.5	28
150	Study the effect of dense internals on the liquid velocity field and turbulent parameters in bubble column for Fischer–Tropsch (FT) synthesis by using Radioactive Particle Tracking (RPT) technique. *Chemical Engineering Science*, **2017**, 161, 228-248	4.4	27
149	Experimental Study of the Solids Velocity Field in Gas–Solid Risers. *Industrial & Engineering Chemistry Research*, **2005**, 44, 9739-9749	3.9	27
148	Heat transfer and hydrodynamics in a gas-solid fluidized bed with vertical immersed internals. *International Journal of Heat and Mass Transfer*, **2018**, 122, 229-251	4.9	25
147	A new method for online flow regime monitoring in bubble column reactors via nuclear gauge densitometry. *Chemical Engineering Science*, **2013**, 89, 120-132	4.4	25
146	Flow Regime Identification in a Bubble Column via Nuclear Gauge Densitometry and Chaos Analysis. *Chemical Engineering and Technology*, **2011**, 34, 225-233	2	24
145	Heat transfer coefficients in a high-pressure bubble column. *Chemical Engineering Science*, **2007**, 62, 140-147	4.4	24
144	Dynamic Modeling of Slurry Bubble Column Reactors. *Industrial & Engineering Chemistry Research*, **2005**, 44, 6086-6094	3.9	24
143	Characterization of Single Phase Flows in Stirred Tanks via Computer Automated Radioactive Particle Tracking (CARPT). *Chemical Engineering Research and Design*, **2001**, 79, 831-844	5.5	24
142	Investigation of cross-sectional gas-solid distributions in spouted beds using advanced non-invasive gamma-ray computed tomography (CT). *Experimental Thermal and Fluid Science*, **2017**, 86, 37-53	3	23
141	Gas holdup in a trayed cold-flow bubble column. *Chemical Engineering Science*, **2001**, 56, 1197-1205	4.4	23
140	Mesophilic digestion kinetics of manure slurry. *Applied Biochemistry and Biotechnology*, **2007**, 142, 231-43	3.2	22
139	Measurement of overall solids mass flux in a gas–solid Circulating Fluidized Bed. *Powder Technology* , **2004**, 148, 158-171	5.2	22
138	Multicomponent Flow-Transport-Reaction Modeling of Trickle Bed Reactors: Application to Unsteady State Liquid Flow Modulation. *Industrial & Engineering Chemistry Research*, **2005**, 44, 6354-6370	3.9	21

137	Liquid holdup measurement techniques in laboratory high pressure trickle Bed Reactors. *Canadian Journal of Chemical Engineering*, **1999**, 77, 759-765	2.3	21
136	A new methodology for hydrodynamic similarity in bubble columns. *Canadian Journal of Chemical Engineering*, **2010**, 88, 503-517	2.3	20
135	Experimental investigation of pebble flow dynamics using radioactive particle tracking technique in a scaled-down Pebble Bed Modular Reactor (PBMR). *Nuclear Engineering and Design*, **2016**, 302, 1-11	1.8	20
134	Impact of heat-exchanging tube configurations on the gas holdup distribution in bubble columns using gamma-ray computed tomography. *International Journal of Multiphase Flow*, **2018**, 106, 202-219	3.6	19
133	Local gas holdup and bubble dynamics investigation during microalgae culturing in a split airlift photobioreactor. *Chemical Engineering Science*, **2018**, 175, 185-198	4.4	19
132	Effect of Distributor Design on Gas-Liquid Distribution in Monolithic Bed at High Gas/Liquid Ratios. *Chinese Journal of Chemical Engineering*, **2012**, 20, 693-700	3.2	19
131	Influence of the size of heat exchanging internals on the gas holdup distribution in a bubble column using gamma-ray computed tomography. *Chemical Engineering Science*, **2018**, 186, 1-25	4.4	18
130	Heat transfer study in a pilot-plant scale bubble column. *Chemical Engineering Research and Design*, **2011**, 89, 78-84	5.5	18
129	Effect of sparger design on hydrodynamics of a gas recirculation anaerobic bioreactor. *Biotechnology and Bioengineering*, **2007**, 98, 1146-60	4.9	18
128	Dynamical features of the solid motion in gas□olid risers. *International Journal of Multiphase Flow*, **2007**, 33, 164-181	3.6	18
127	Demonstrating the non-similarity in local holdups of spouted beds obtained by CT with scale-up methodology based on dimensionless groups. *Chemical Engineering Research and Design*, **2016**, 114, 129-141	5.5	17
126	Modeling of trickle-bed reactors with exothermic reactions using cell network approach. *Chemical Engineering Science*, **2008**, 63, 751-764	4.4	17
125	Investigating the influence of the configuration of the bundle of heat exchanging tubes and column size on the gas holdup distributions in bubble columns via gamma-ray computed tomography. *Experimental Thermal and Fluid Science*, **2018**, 98, 68-85	3	17
124	Experimental investigation of the pebble bed structure by using gamma ray tomography. *Nuclear Engineering and Design*, **2016**, 310, 231-246	1.8	16
123	Impact of Internals on the Heat-Transfer Coefficient in a Bubble Column. *Industrial & Engineering Chemistry Research*, **2012**, 51, 2874-2881	3.9	16
122	Evaluation of trickle bed reactor models for a liquid limited reaction. *Chemical Engineering Science*, **1996**, 51, 2721-2725	4.4	16
121	A new approach for scale-up of bubble column reactors. *Chemical Engineering Research and Design*, **2014**, 92, 1637-1646	5.5	15
120	Methane production in a 100-L upflow bioreactor by anaerobic digestion of farm waste. *Applied Biochemistry and Biotechnology*, **2006**, 131, 887-96	3.2	15

119	Local time-averaged gas holdup in fluidized bed reactor using gamma ray computed tomography technique (CT). *International Journal of Industrial Chemistry*, **2015**, 6, 143-152	3.1	14
118	Liquid-Solid Mass Transfer Coefficient in High Pressure Trickle Bed Reactors. *Chemical Engineering Research and Design*, **2001**, 79, 631-640	5.5	14
117	Investigation of local gas holdup and bubble dynamics using four-point optical probe technique in a split-cylinder airlift reactor. *International Journal of Multiphase Flow*, **2018**, 102, 1-15	3.6	14
116	An advanced evaluation of the mechanistic scale-up methodology of gas–solid spouted beds using radioactive particle tracking. *Particuology*, **2017**, 34, 48-60	2.8	13
115	Identification of flow regime in a cocurrent gas–Liquid upflow moving packed bed reactor using gamma ray densitometry. *Chemical Engineering Science*, **2017**, 168, 380-390	4.4	13
114	Investigation of natural convection heat transfer in a unique scaled-down dual-channel facility. *AICHE Journal*, **2017**, 63, 387-396	3.6	13
113	Scale-up and On-line Monitoring of Gas-solid Systems Using Advanced and Non-invasive Measurement Techniques. *Procedia Engineering*, **2014**, 83, 469-476		13
112	ECT measurement and CFD simulation of cross section gas holdup distribution in a gas–liquid stirred standard Rushton tank. *Chemical Engineering Science*, **2011**, 66, 3721-3731	4.4	13
111	Numerical Simulation of Gas–Solid Dynamics in a Circulating Fluidized-Bed Riser with Geldart Group B Particles. *Industrial & Engineering Chemistry Research*, **2007**, 46, 8620-8628	3.9	13
110	Phase distribution in an upflow monolith reactor using computed tomography. *AICHE Journal*, **2006**, 52, 745-753	3.6	13
109	Hydrodynamics investigation of laboratory-scale Internal Gas-lift loop anaerobic digester using non-invasive CAPRT technique. *Biomass and Bioenergy*, **2016**, 84, 98-106	5.3	13
108	Axial dispersion and mixing phenomena of the gas phase in a packed pebble-bed reactor. *Annals of Nuclear Energy*, **2016**, 88, 100-111	1.7	12
107	The impact of vertical internals array on the key hydrodynamic parameters in a gas-solid fluidized bed using an advance optical fiber probe. *Advanced Powder Technology*, **2018**, 29, 2548-2567	4.6	12
106	Mapping of microalgae culturing via radioactive particle tracking. *Chemical Engineering Science*, **2018**, 192, 739-758	4.4	12
105	Using a Fiber-Optic Probe for the Measurement of Volumetric Expansion of Liquids. *Industrial & Engineering Chemistry Research*, **2007**, 46, 4330-4334	3.9	12
104	Gas Holdup in Trayed Bubble Column Reactors. *Industrial & Engineering Chemistry Research*, **2006**, 45, 3320-3326	3.9	12
103	A sequential approach to modeling catalytic reactions in packed-bed reactors. *Chemical Engineering Science*, **2004**, 59, 2023-2037	4.4	12
102	Statistical characterization of macroscale multiphase flow textures in trickle beds. *Chemical Engineering Science*, **2001**, 56, 1647-1656	4.4	12

101	A novel signal filtering methodology for obtaining liquid phase tracer responses from conductivity probes. *Flow Measurement and Instrumentation*, **2000**, 11, 123-131	2.2	12
100	THE EFFECT OF PARTICLE DILUTION ON WETTING EFFICIENCY AND LIQUID FILM THICKNESS IN SMALL TRICKLE BEDS. *Chemical Engineering Communications*, **2001**, 185, 67-77	2.2	12
99	Investigation of hydrodynamics of binary solids mixture spouted beds using radioactive particle tracking (RPT) technique. *Chemical Engineering Research and Design*, **2019**, 148, 21-44	5.5	11
98	Assessment of scale-up dimensionless groups methodology of gas-solid fluidized beds using advanced non-invasive measurement techniques (CT and RPT). *Canadian Journal of Chemical Engineering*, **2017**, 95, 656-669	2.3	11
97	Flow Regime Identification in Three Multiphase Reactors Based on Kolmogorov Entropies Derived from Gauge Pressure Fluctuations. *Journal of Chemical Engineering of Japan*, **2012**, 45, 757-764	0.8	11
96	A New Method for Flow Regime Identification in a Fluidized Bed Based on Gamma-Ray Densitometry and Information Entropy. *Journal of Chemical Engineering of Japan*, **2012**, 45, 197-205	0.8	11
95	Multiphase Flow Packed-Bed Reactor Modeling: Combining CFD and Cell Network Model. *Industrial & Engineering Chemistry Research*, **2005**, 44, 4940-4948	3.9	11
94	Liquid holdup and pressure drop in the gas–liquid cocurrent downflow packed-bed reactor under elevated pressures. *Chemical Engineering Science*, **2004**, 59, 5387-5393	4.4	11
93	Drawbacks of the Dissolution Method for Measurement of the Liquid–Solid Mass-Transfer Coefficients in Two-Phase Flow Packed-Bed Reactors Operated at Low and High Pressures. *Industrial & Engineering Chemistry Research*, **2000**, 39, 3102-3107	3.9	11
92	Overcoming the gamma-ray computed tomography data processing pitfalls for bubble column equipped with vertical internal tubes. *Canadian Journal of Chemical Engineering*, **2018**, 96, 2206-2226	2.3	11
91	Bed diameter effect on the hydrodynamics of gas-solid fluidized beds via radioactive particle tracking (RPT) technique. *Canadian Journal of Chemical Engineering*, **2017**, 95, 744-756	2.3	10
90	A new mechanistic scale-up methodology for gas-solid spouted beds. *Chemical Engineering and Processing: Process Intensification*, **2016**, 110, 146-159	3.7	10
89	Advance optical fiber probe for simultaneous measurements of solids holdup and particles velocity using simple calibration methods for gas-solid fluidization systems. *Flow Measurement and Instrumentation*, **2018**, 63, 18-32	2.2	10
88	Flow regimes in gas–solid fluidized bed with vertical internals. *Chemical Engineering Research and Design*, **2018**, 138, 87-104	5.5	10
87	Phase Distribution in a High Pressure Slurry Bubble Column via a Single Source Computed Tomography. *Canadian Journal of Chemical Engineering*, **2008**, 83, 104-112	2.3	10
86	Multiple-Zone Model for Partially Wetted Trickle Flow Hydrodynamics. *Chemical Engineering Research and Design*, **2000**, 78, 982-990	5.5	10
85	Effect of helium pressure on natural convection heat transfer in a prismatic dual-channel circulation loop. *International Journal of Thermal Sciences*, **2018**, 124, 162-173	4.1	10
84	Evaluation of the dimensionless groups based scale-up of gas–solid spouted beds. *International Journal of Multiphase Flow*, **2017**, 94, 209-218	3.6	9

83	Pressure Drop and Fluid Flow Characteristics in a Packed Pebble Bed Reactor. *Nuclear Technology*, **2017**, 198, 17-25	1.4	9
82	Experimental investigation of the helium natural circulation heat transfer in two channels facility using varying riser channel heat fluxes. *Experimental Thermal and Fluid Science*, **2018**, 93, 195-209	3	9
81	Pebble bed nuclear reactor structure study: A comparison of the experimental and calculated void fraction distribution. *Progress in Nuclear Energy*, **2018**, 106, 153-161	2.3	9
80	Effect of hydrodynamic multiplicity on trickle bed reactor performance. *AICHE Journal*, **2008**, 54, 249-257	3.6	9
79	Removal of hydrocarbons of 4-Nitrophenol by emulsion liquid membrane (ELM) using magnetic Fe2O3 nanoparticles and ionic liquid. *Journal of Water Process Engineering*, **2021**, 39, 101729	6.7	9
78	Study of Local Gas Holdup and Specific Interfacial Area in a Split-Column Airlift Bioreactor Using Sphosticated 4-Point Optical Probe for Culturing Microlgae/Cyanobacteria. *Chemical Engineering Communications*, **2015**, 202, 892-898	2.2	8
77	Trends in Minimizing and Treating Industrial Wastes for Sustainable Environment. *Procedia Engineering*, **2016**, 138, 347-368		8
76	Modeling Catalytic Trickle-Bed and Upflow Packed-Bed Reactors for Wet Air Oxidation of Phenol with Phase Change. *Industrial & Engineering Chemistry Research*, **2005**, 44, 6634-6642	3.9	8
75	Computation of effectiveness factors for partially wetted catalyst pellets using the method of fundamental solution. *Computers and Chemical Engineering*, **2003**, 27, 1431-1444	4	8
74	Comparison between the new mechanistic and the chaos scale-up methods for gas-solid fluidized beds. *Chinese Journal of Chemical Engineering*, **2018**, 26, 1401-1411	3.2	7
73	Investigating the cross-sectional gas holdup distribution in a split internal-loop photobioreactor during microalgae culturing using a sophisticated computed tomography (CT) technique. *Chemical Engineering Research and Design*, **2019**, 149, 13-33	5.5	7
72	Multiphase hydrodynamics and distribution characteristics in a monolith bed measured by optical fiber probe. *AICHE Journal*, **2014**, 60, 740-748	3.6	7
71	Investigation of a complex reaction network: I. Experiments in a high-pressure trickle-bed reactor. *AICHE Journal*, **1998**, 44, 912-920	3.6	7
70	A chemical engineering laboratory over distributed control and measurement systems. *Computer Applications in Engineering Education*, **2007**, 15, 174-184	1.6	7
69	Modified Contactor for Experimental Studies of Mass Transfer and Chemical Reaction across a Liquid−liquid Interface. *Industrial & Engineering Chemistry Research*, **1996**, 35, 3812-3816	3.9	7
68	Investigation of the effect of vertical immersed tube diameter on heat transfer in a gas-solid fluidized bed. *International Journal of Thermal Sciences*, **2019**, 135, 546-558	4.1	7
67	Impact of heat exchanging internals configurations on the gas holdup and bubble properties in a bubble column. *International Journal of Multiphase Flow*, **2019**, 112, 63-82	3.6	7
66	Influence of heat-exchanging tubes diameter on the gas holdup and bubble dynamics in a bubble column. *Fuel*, **2019**, 236, 1191-1203	7.1	7

65	Assessment of performing experimental investigation on a pebble bed modular reactor (PBMR) as a static packed bed approximation. *Annals of Nuclear Energy*, **2017**, 101, 339-346	1.7	6
64	Buoyancy-driven air flow within plenum-to-plenum facility down-comer channel. *Experimental Thermal and Fluid Science*, **2018**, 94, 205-214	3	6
63	Biodegradation of phenolic components in wastewater by micro algae: a review. *MATEC Web of Conferences*, **2018**, 162, 05009	0.3	6
62	Effect of Operating Pressure on the Extent of Hysteresis in a Trickle Bed Reactor. *Industrial & Engineering Chemistry Research*, **2008**, 47, 7593-7599	3.9	6
61	Digestion of sand-laden manure slurry in an upflow anaerobic solids removal (UASR) digester. *Biodegradation*, **2008**, 19, 21-6	4.1	6
60	Maldistribution and dynamic liquid holdup quantification of quadrilobe catalyst in a trickle bed reactor using gamma-ray computed tomography: Pseudo-3D modelling and empirical modelling using deep neural network. *Chemical Engineering Research and Design*, **2020**, 164, 195-208	5.5	6
59	Effect of L/D Ratio on Phase Holdup and Bubble Dynamics in Slurry Bubble Column using Optical Fiber Probe Measurements. *International Journal of Chemical Reactor Engineering*, **2016**, 14, 653-664	1.2	6
58	Phase distribution in Fischer-Tropsch mimicked slurry bubble column via computed tomography. *Chemical Engineering Science*, **2021**, 231, 116278	4.4	6
57	Integration of phase distribution from gamma-ray tomography technique with monolith reactor scale modeling. *Chemical Engineering Science*, **2019**, 200, 27-37	4.4	5
56	Evaluating the new mechanistic scale-up methodology of gas-solid spouted beds using gamma ray computed tomography (CT). *Experimental Thermal and Fluid Science*, **2019**, 104, 186-198	3	5
55	The effects of internals and low aspect ratio on the fully developed flow region and bubble properties in a pilot-plant bubble column. *Experimental Thermal and Fluid Science*, **2019**, 104, 284-301	3	5
54	BUBBLE DYNAMICS IN 2D BUBBLE COLUMN: COMPARISON BETWEEN HIGH-SPEED CAMERA IMAGING ANALYSIS AND 4-POINT OPTICAL PROBE. *Chemical Engineering Communications*, **2015**, 202, 85-95	2.2	5
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