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## Design parameters estimations for bubble column reactors

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279	Simulation and experimental validation of reactive bubble column reactors. <i>Chemical Engineering Science</i> , <b>2017</b> , 170, 306-319	4.4	28
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269	Effects of a rotating magnetic field on gas-liquid mass transfer coefficient. <i>Chemical Engineering Journal</i> , <b>2017</b> , 327, 608-617	14.7	19
268	Prediction of the gas hold-up in a large-diameter bubble column with liquid mixtures and electrolytes. <i>Chemical Engineering Research and Design</i> , <b>2017</b> , 124, 283-298	5.5	3
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265	Estimation of bubble column hydrodynamics: Image-based measurement method. <b>2017</b> , 53, 4-17		10
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262	Investigation of bubble size and mass transfer rate in a scrubbing solution used for iodine removal. <b>2017</b> ,		
261	Mass Transfer. <b>2017</b> , 1-70		
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259	Characterization of Industrial Bioreactors (Mixing, Heat, and Mass Transfer). <b>2017</b> , 563-592		1
258	Gas holdup and flow regime transition in spider-sparger bubble column: effect of liquid phase properties. <b>2017</b> , 796, 012041		2

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256	Numerical analysis of the effects of air on light distribution in a bubble column photobioreactor. <b>2018</b> , 31, 311-325		12
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252	Direct numerical simulation of mass transfer in bubbly flows. <b>2018</b> , 172, 524-537		24
251	Water sterilisation using different hot gases in a bubble column reactor. <b>2018</b> , 6, 2651-2659		5
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246	A study on the influence of the tube layout on sub-channel hydrodynamics in a bubble column with internals. <i>Chemical Engineering Science</i> , <b>2018</b> , 179, 265-283	4.4	15
245	Prediction of bubble size and axial position distribution through hybridization of population balance modelling and dynamic gas disengagement. <b>2018</b> , 59, 181-193		2
244	Experimental Investigation of the Effect of Nano Heavy Metal Oxide Particles in Piperazine Solution on CO <sub>2</sub> Absorption Using a Stirrer Bubble Column. <i>Energy &amp; Fuels</i> , <b>2018</b> , 32, 2037-2052	4.1	21
243	Characterization of hydrodynamics of bubble columns by recurrence quantification analysis. <b>2018</b> , 111, 213-226		4
242	Reform of the drift-flux model of multiphase flow in pipes, wellbores, and reactor vessels. <i>Chemical Engineering Science</i> , <b>2018</b> , 184, 251-258	4.4	8
241	A review on empirical correlations estimating gas holdup for shear-thinning non-Newtonian fluids in bubble column systems with future perspectives. <b>2018</b> , 34, 887-928		4
240	Towards improved accuracy in modeling aeration efficiency through understanding bubble size distribution dynamics. <b>2018</b> , 131, 346-355		21

239	Improvement in modular scalability of polymeric thin-film photobioreactor for autotrophic culturing of <i>Haematococcus pluvialis</i> using industrial flue gas. <b>2018</b> , 249, 519-526		30
238	Effect of gas sparger design on bubble column hydrodynamics using pure and binary liquid phases. <i>Chemical Engineering Science</i> , <b>2018</b> , 176, 116-126	4.4	29
237	CFD assesment of uniform bubbly flow in a bubble column. <b>2018</b> , 161, 96-107		16
236	Experimental studies on retention of iodine in a wet scrubber. <b>2018</b> , 326, 234-243		4
235	Numerical simulation of side-entry bubbling reactor. <b>2018</b> , 1064, 012050		
234	Study of carbon dioxide mass transfer in an annular bubble column. <b>2018</b> ,		
233	Gaseous and liquid effluents treatment in bubble column reactors by advanced oxidation processes: A review. <b>2018</b> , 48, 949-996		15
232	CFD Simulation and Visualization of Reactive Bubble Columns. <i>Journal of Chemical Engineering of Japan</i> , <b>2018</b> , 51, 356-365	0.8	6
231	Research on Deposition of Micro-Nano Aerosols in Rising Bubble Under Pool Scrubbing Condition. <b>2018</b> ,		1
230	Effects of Medium Composition and Gas Superficial Velocity on Mass Transfer during Microalgae Culturing in a Bubble Column Photobioreactor. <b>2018</b> , 57, 17058-17063		1
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226	Imaging of copper oxygenation reactions in a bubble flow. <b>2018</b> , 56, 826-830		6
225	Modelling of breakage rate and bubble size distribution in bubble columns accounting for bubble shape variations. <i>Chemical Engineering Science</i> , <b>2018</b> , 187, 391-405	4.4	30
224	Multi-parametric modelling and kinetic sensitivity of microalgal cells. <b>2018</b> , 32, 259-269		1
223	Enhanced mass transfer from the installation of a sieve tray subject to the variation of liquid heights and flow regimes in a bubble column. <i>Chemical Engineering Research and Design</i> , <b>2018</b> , 136, 654-662	5.5	6
222	CFD-based scale-up of hydrodynamics and mixing in bubble columns. <i>Chemical Engineering Research and Design</i> , <b>2018</b> , 136, 846-858	5.5	20

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219	Measurement of Volumetric Mass Transfer Coefficient in Bubble Columns. <b>2018</b> , 2, 19		10
218	Effect of ejector operation on the oxygen transfer in a pilot jet loop reactor. <i>Chemical Engineering and Processing: Process Intensification</i> , <b>2018</b> , 131, 43-50	3-7	6
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214	Hydrodynamic considerations and design concepts for optimal thermal compressors. <b>2018</b> , 127, 209-223		8
213	On the use of physical boundary conditions for two-phase flow simulations: Integration of control feedback. <b>2018</b> , 118, 268-282		3
212	Mathematical Modeling and Simulation of Biodiesel Production in a Semibatch Bubble Reactor. <i>Energy &amp; Fuels</i> , <b>2018</b> , 32, 9614-9623	4-1	2
211	Mass transfer enhancement factor for chemical absorption of carbon dioxide into sodium metaborate solution. <i>Korean Journal of Chemical Engineering</i> , <b>2018</b> , 35, 1800-1806	2.8	0
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208	Local flow regime and bubble size distribution in the slender particle-containing scrubbing-cooling chamber of an entrained-flow gasifier. <i>Chemical Engineering Science</i> , <b>2018</b> , 190, 126-139	4-4	4
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205	Simultaneous removal of hydrogen sulfide and ammonia using a combined system with absorption and electrochemical oxidation. <b>2019</b> , 54, 1430-1440		3
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203	Comparative Hydrodynamic Analysis of Narrow and Pilot-Scale Bubble Columns with Internals. <i>Chemie-Ingenieur-Technik</i> , <b>2019</b> , 91, 1339-1346	0.8	3
202	Hydrodynamic correlations for bubble columns from complementary UXCT and RPT measurements in identical geometries and conditions. <i>Chemical Engineering Science</i> , <b>2019</b> , 208, 115099	4.4	6
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200	Mesoregime-Oriented Investigation of Flow Regime Transition in Bubble Columns. <b>2019</b> , 58, 14424-14435		3
199	Characteristics of counter-current gas-liquid two-phase flow and its limitations in vertical annuli. <b>2019</b> , 109, 109899		13
198	An improved categorization of vapor bubble collapse: Explaining the coupled nature of hydrodynamic and thermal mechanisms. <b>2019</b> , 145, 118754		3
197	A quadrature-based moment method for polydisperse bubbly flows. <b>2019</b> , 244, 187-204		12
196	Mass transfer in the homogeneous flow regime of a bubble column. <i>Chemical Engineering and Processing: Process Intensification</i> , <b>2019</b> , 144, 107647	3.7	10
195	Influence of the bubble size distribution on the bubble column flow regime. <i>International Journal of Multiphase Flow</i> , <b>2019</b> , 120, 103092	3.6	11
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193	Two-Bubble Class Approach Based on Measured Bubble Size Distribution for Bubble Columns with and without Internals. <b>2019</b> , 58, 2759-2769		7
192	Prediction of multi-inputs bubble column reactor using a novel hybrid model of computational fluid dynamics and machine learning. <b>2019</b> , 13, 482-492		77
191	Experimental Investigation of Decontamination Factor Dependence on Aerosol Concentration in Pool Scrubbing. <b>2019</b> , 2019, 1-15		3
190	Pilot-scale production of phylloquinone (vitamin K1) using a bubble column photo-bioreactor. <b>2019</b> , 150, 107243		3
189	Pattern transition of a gas-liquid flow with zero liquid superficial velocity in a vertical tube. <i>International Journal of Multiphase Flow</i> , <b>2019</b> , 118, 270-282	3.6	4
188	A review of bubble break-up. <b>2019</b> , 270, 108-122		21
187	Mass transfer estimation for bubble column scale up. <i>Chemical Engineering Science</i> , <b>2019</b> , 205, 350-357	4.4	5
186	A techno-economic assessment of microalgal culture technology implementation for combined wastewater treatment and CO <sub>2</sub> mitigation in the Arabian Gulf. <i>Chemical Engineering Research and Design</i> , <b>2019</b> , 127, 90-102	5.5	22

185	Bubble sizes and shapes in a counter-current bubble column with pure and binary liquid phases. <b>2019</b> , 67, 55-82		15
184	Phase-bounded finite element method for two-fluid incompressible flow systems. <i>International Journal of Multiphase Flow</i> , <b>2019</b> , 117, 1-13	3.6	2
183	Chlorocuprate(I) ionic liquid as an efficient and stable Cu-based catalyst for hydrochlorination of acetylene. <b>2019</b> , 9, 2868-2878		16
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181	Hydrodynamics, mixing and mass transfer in a pilot-scale bubble column with dense internals. <i>Chemical Engineering Science</i> , <b>2019</b> , 202, 491-507	4.4	12
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179	Prediction of Bubble Size Distributions in Large-Scale Bubble Columns Using a Population Balance Model. <b>2019</b> , 7, 17		3
178	Identification of flow regime in a bubble column reactor with a combination of optical probe data and machine learning technique. <b>2019</b> , 2, 100023		5
177	Gas rising through a large diameter column of very viscous liquid: Flow patterns and their dynamic characteristics. <i>International Journal of Multiphase Flow</i> , <b>2019</b> , 116, 1-14	3.6	8
176	Bubble size distribution and mass transfer on a three-phase electroflotation column. <b>2019</b> , 55, 2235-2245		3
175	Determination of gas hold-up of Pasig River using dynamic gassing out method in a bubble column reactor. <b>2019</b> , 344, 012035		
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173	Effect of surfactants on mass transfer coefficients in bubble column contactors: an interpretative critical review study. <b>2019</b> ,		3
172	Transferring bioelectrochemical processes from H-cells to a scalable bubble column reactor. <i>Chemical Engineering Science</i> , <b>2019</b> , 193, 133-143	4.4	26
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170	Concentration effects of main components of synthetic culture media on oxygen transfer in bubble column bioreactors. <b>2019</b> , 143, 131-140		4
169	Comparison between different strategies for the realization of flashing-light effects [Pneumatic mixing and flashing illumination. <b>2019</b> , 38, 101404		10
168	Prediction of Main Regime Transition with Variations of Gas and Liquid Phases in a Bubble Column. <b>2019</b> , 4, 1329-1343		4



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166	Experimental and theoretical investigation of CO <sub>2</sub> and air bubble rising velocity through kerosene and distilled water in bubble column. <b>2019</b> , 40, 33-42		5
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160	Use of pressure signal analysis to characterise counter-current two-phase flow regimes in annuli. <i>Chemical Engineering Research and Design</i> , <b>2020</b> , 153, 547-561	5.5	11
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158	A novel sieve plate hole pattern: effect on gas hold-up and flow regimes in a bubble column. <b>2020</b> , 207, 1755-1768		
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156	Identification of the regime boundaries in bubble columns based on the degree of randomness in the signals. <b>2020</b> , 98, 1607-1621		5
155	A Review on Multiphase Underwater Jets and Plumes: Droplets, Hydrodynamics, and Chemistry. <b>2020</b> , 58, e2020RG000703		10
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152	Effects of bubble size on the gas-liquid mass transfer of bubble swarms with Sauter mean diameters of 0.38-0.88 mm in a co-current upflow bubble column. <b>2020</b> , 95, 2853-2867		8
151	The Effect of Hydraulic Conditions in Barbotage Reactors on Aeration Efficiency. <b>2020</b> , 12, 724		1
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147	Effect of solid particles on the volumetric gas liquid mass transfer coefficient in slurry bubble column reactors. <i>Chemical Engineering Science</i> , <b>2020</b> , 227, 115912	4.4	11
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144	Changes in the Number of Membership Functions for Predicting the Gas Volume Fraction in Two-Phase Flow Using Grid Partition Clustering of the ANFIS Method. <b>2020</b> , 5, 16284-16291		31
143	Measurement of Gas-Solid Dispersion Characteristics in a Slurry Flotation Column Using ERT Technique. <b>2020</b> , 73, 2129-2140		1
142	A bubble-induced turbulence model for gas-liquid bubbly flows in airlift columns, pipes and bubble columns. <i>Chemical Engineering Science</i> , <b>2020</b> , 227, 115945	4.4	7
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140	On the prediction of gas hold-up in two-phase flow systems using an Euler-Euler model. <i>AIChE Journal</i> , <b>2020</b> , 66, e16959	3.6	6
139	Single bubble rising behaviors in Newtonian and non-Newtonian fluids with validation of empirical correlations: A computational fluid dynamics study. <b>2020</b> , 2, e12100		3
138	Prediction of flow characteristics in the bubble column reactor by the artificial pheromone-based communication of biological ants. <b>2020</b> , 14, 367-378		15
137	Scalable Synthesis of Li <sub>2</sub> S Nanocrystals for Solid-State Electrolyte Applications. <b>2020</b> , 167, 070520		5
136	Mass transfer modeling and simulation of a transient homogeneous bubbly flow in a bubble column. <i>Chemical Engineering Science</i> , <b>2020</b> , 218, 115531	4.4	4
135	Efficient CO <sub>2</sub> capture from the air for high microalgal biomass production by a bicarbonate Pool. <b>2020</b> , 37, 320-327		23
134	Insights into real industrial wastewater treatment by Fenton's oxidation in gas bubbling reactors. <b>2020</b> , 265, 110501		7
133	Computation of gas-liquid flow in a square bubble column with Wray-Agarwal one-equation turbulence model. <i>Chemical Engineering Science</i> , <b>2020</b> , 218, 115551	4.4	8
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131	Simulation of Microbubble Dynamics in Turbulent Channel Flows. <b>2020</b> , 105, 1303-1324		2
130	Methods of preparation of microparticles for radioactive particle tracking experiments. <b>2021</b> , 168, 109380		1
129	Experimental determination of gas holdup and volumetric mass transfer coefficient in a jet bubbling reactor. <i>Chinese Journal of Chemical Engineering</i> , <b>2021</b> , 34, 61-67	3.2	2
128	Bubble column fluid dynamics: A novel perspective for flow regimes and comprehensive experimental investigations. <i>International Journal of Multiphase Flow</i> , <b>2021</b> , 135, 103510	3.6	5
127	Morphology and flow behavior of buoyant bubble plumes. <i>Chemical Engineering Science</i> , <b>2021</b> , 229, 116098	4.4	2
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124	Modeling of solid-particle effects on bubble breakage and coalescence in slurry bubble columns. <b>2021</b> , 3, 303-317		1
123	Industrial wastewater treatment using a bubble photo-Fenton reactor with continuous gas supply. <b>2021</b> , 28, 6437-6449		1
122	Mass transfer in aerated culture media combining mixed electrolytes and glucose. <b>2021</b> , 44, 81-92		
121	Microfluidic mass transfer of CO at elevated pressures: implications for carbon storage in deep saline aquifers. <b>2021</b> , 21, 3942-3951		3
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118	Process Intensification in Pneumatically Agitated Slurry Reactors. <b>2021</b> , 7, 304-325		4
117	Solar thermal evaporation using bubbly nanofluids with recyclable magnetic particles. <b>2021</b> , 26, 102084		1
116	Advances in absorbents and techniques used in wet and dry FGD: a critical review. <b>2019</b> ,		2
115	Acoustic backscattering observations from non-spherical gas bubbles with ka between 0.03 and 4.4. <b>2021</b> , 149, 2504		1
114	The dependence of pool scrubbing decontamination factor on particle number density: modeling based on bubble mass and energy balances. <b>2021</b> , 58, 1048-1057		0

113	CFD Analysis of Phase Holdup Behaviour in a Gas-Liquid Bubble Column. <b>2021</b> , 8, 738-749		
112	Assessment of VoF based numerical scheme for bubble rise in isothermal liquid layer, and some new insight in thermally stratified liquid layers. <b>2021</b> , 169, 120916		0
111	Design, Commissioning, and Performance Assessment of a Lab-Scale Bubble Column Reactor for Photosynthetic Biogas Upgrading with. <b>2021</b> , 60, 5688-5704		3
110	Prediction and Experimental Study of Mass Transfer Properties of Micronanobubbles. <b>2021</b> , 60, 8291-8300		1
109	Experimental analysis of the effects of liquid phase surface tension on the hydrodynamics and mass transfer in a square bubble column. <b>2021</b> , 170, 121009		2
108	Towards demand-side management of the chlor-alkali electrolysis: Dynamic modeling and model validation. <b>2021</b> , 149, 107287		5
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