

ミキシング関連文献リスト

(2021 年)

AICHE Journal Vol. 67 (2021), Vol. 68 (2022)

The effect of radial impeller geometry on the link between power and flow numbers, John, TP; Fonte, CP; Kowalski, A; Rodgers, TL, 68(1), e17405 (2022), DOI: 10.1002/aic.17405

Which impeller should be chosen for efficient solid-liquid mixing in the laminar and transitional regime?, Delacroix, B; Fradette, L; Bertrand, F; Blais, B, 67(11), e17360 (2021), DOI: 10.1002/aic.17360

Liquid mixing intensification by adding swirling flow in the transverse jet mixer, Wu, B; Li, CH; Zhang, MX; Luo, PC, 67(8), e17276 (2021), DOI: 10.1002/aic.17276

Chaotic advection in a twin cam mixer under various operating conditions, He, Y; Zhan, XB; Shen, BJ; Sun, ZB; Long, JC; Yang, YL; Li, XW, 68(2), e17492 (2022), DOI: 10.1002/aic.17492

Determination of the just-suspended speed, N_{js}, in stirred tanks using electrical resistance tomography (ERT), Teoman, B; Sirasithichoke, C; Potanin, A; Armenante, PM, 67(10), e17354 (2021), DOI: 10.1002/aic.17354

Modeling mixing dynamics in uncovered baffled and unbaffled stirred tanks, Plusa, T; Talaga, J; Duda, A; Duda, P, 67(9), e17322 (2021), DOI: 10.1002/aic.17322

Stretch, fold, and break: Intensification of emulsification of high viscosity ratio systems by fractal mixers, Hofmann, M; Bayles, AV; Vermant, J, 67(5), e17192 (2021), DOI: 10.1002/aic.17192

Heat transfer of dry granular materials in a bladed mixer: Effect of thermal properties and agitation rate (vol 66, e16861, 2020), Hartmanshenn, C; Khinast, JG; Papageorgiou, CD; Mitchell, C; Quon, J; Glasser, BJ, 67(5), e17251 (2021), DOI: 10.1002/aic.17251

Design and operation of an enhanced pervaporation device with static mixers, Zhang, HM; Ladosz, A; Jensen, KF, 68(2), e17455 (2022), DOI: 10.1002/aic.17455

Turbulence damping above the cloud height in suspensions of concentrated slurries in stirred tanks, Ayrancı, I; Kresta, SM, 67(7), e17207 (2021), DOI: 10.1002/aic.17207

Experimental study and numerical modeling of mixing by air injection in yield stress fluids using the OpenFOAM software, Hojeij, A; Jossic, L; Sechet, P; Bonamy, C; Magnin, A; Hattou, S, 68(2), e17442 (2022), DOI: 10.1002/aic.17442

Reconstruction of large-scale flow structures in a stirred tank from limited sensor data, Mikhaylov, K; Rigopoulos, S; Papadakis, G, 67(10), e17348 (2021), DOI: 10.1002/aic.17348

Circulating jet for enhancing the mass transfer in a gas-liquid stirred tank reactor, Xu, X; Wang, L; Wang, HL; Liu, HL; Yang, Q, 68(1), e17392 (2022), DOI: 10.1002/aic.17392

Methane hydrate production using a novel spiral-agitated reactor: Promotion of hydrate formation kinetics, Zhang, GD; Shi, XY; Wang, F, 68(1), e17423 (2022), DOI: 10.1002/aic.17423

Experimental study on breakup of a single bubble in a stirred tank: Effect of gas density and liquid properties, Zhang, HH; Wang, YL; Sayyar, A; Wang, TF, (), e17511 (), DOI: 10.1002/aic.17511

Canadian Journal of Chemical Engineering Vol. 99 (2021), Vol. 100 (2022),

Insights into granular mixing in vertical ribbon mixers, Golshan, S; Blais, B, 99(7), 1570-1581 (2021), DOI: 10.1002/cjce.23965

Experimental study of mixing performance with the tridimensional rotational flow sieve tray under low Reynolds number, Yang, K; Tang, M; Wang, DW; Liu, Y; Wang, HK; Zhang, YR; Zhang, SF; Nie, L, 100(5), 1079-1090 (2022), DOI: 10.1002/cjce.24215

Experimental study on the flow field characteristics of the two-layer impinging stream mixer, Zhang, JW; Ding, CW; Dong, X; Feng, Y; Ma, FR, 99(12), 2748-2759 (2021), DOI: 10.1002/cjce.24042

Mathematical modelling of hydrothermal performance for Kenics type static mixer using power law obeying fluids, Mukherjee, J; Pandit, AB, 100(1), 170-186 (2022), DOI: 10.1002/cjce.24067

Emulsion polymerization of vinylidene fluoride: Effects of mixing and reaction conditions on the initial rate of polymerization, Ecoscia, ACM; Sheibat-Othman, N; McKenna, TFL, 100(4), 654-665 (2022), DOI: 10.1002/cjce.24145

On the prediction of suspension viscosity, grain morphology, and agitation power in SPVC reactors, Kiparissides, C; Pladis, P, 100(4), 714-730 (2022), DOI: 10.1002/cjce.24262

Particle image velocimetry (PIV) experimental investigation of flow structures and dynamics produced by a centripetal turbine, Jin, J; Fan, Y, 100(1), 187-201 (2022), DOI: 10.1002/cjce.24065

Experimental and numerical investigation of the scale-up criterion of solid-viscous fluid mixing in a stirred tank, Lin, DQ; Wei, HY; Song, ER; Ng, B; He, T; Dang, LP, 99(0), S259-S274 (2021), DOI: 10.1002/cjce.24022

Computational fluid dynamics simulation of pressure drop and macromixing in LL microreactors, D'Orazio, AO; Haelssig, JB; Roberge, DM; Macchi, A, 99(8), 1715-1732 (2021), DOI: 10.1002/cjce.24069

Chaotic characterization of macromixing effect in a gas-liquid stirring system using modified 0-1 test, Zhang, L; Yang, K; Li, M; Xiao, QT; Wang, H, 100(2), 261-275 (2022), DOI: 10.1002/cjce.24100

Computational fluid dynamic characterization of vertical-wheel bioreactors used for effective scale-up of human induced pluripotent stem cell aggregate culture, Dang, T; Borys, BS; Kanwar, S; Colter, J; Worden, H; Blatchford, A; Croughan, MS; Hossan, T; Rancourt, DE; Lee, B; Kallos, MS; Jung, S, 99(11), 2536-2553 (2021), DOI: 10.1002/cjce.24253

Chemical Engineering Communications Vol. 208 (2021), Vol. 209 (2022)

Experimental and modeling based dead-volume detection for externally stirred tanks, Tarcsay, BL; Bobek-Nagy, J; Egedy, A, 209(6), 1-15 (2022), DOI: 10.1080/00986445.2021.1903449

Modulation of secondary flows in curved serpentine micromixers, Qamareen, A; Ansari, MA; Alam, SS; Alazzam, A, 209(5), 648-667 (2022), DOI: 10.1080/00986445.2021.1887153

Combined effects of double porous layers and nanofluids on the performance of confined single and multi-jet impingement heat transfer, Selimefendigil, F; Oztop, HF, 209(7), 925-937 (2022), DOI: 10.1080/00986445.2021.1928650

Chemical Engineering Journal Vol. 403-426 (2021), 428-429 (2022)

Advanced DEM simulation on powder mixing for ellipsoidal particles in an industrial mixer, Mori, Y; Sakai, M, 429, 132415 (2022), DOI: 10.1016/j.cej.2021.132415

Investigation of gas-liquid mass transfer and power consumption characteristics in jet-flow high shear mixers, Liu, YD; Guo, JH; Li, WP; Li, W; Zhang, JL, 411, 128580 (2021), DOI: 10.1016/j.cej.2021.128580

On the complete similitude of technical precipitation. Part I: Impinging mixers, Rehage, H; Orthey, J; Kind, M, 415, 129047 (2021), DOI: 10.1016/j.cej.2021.129047

Thorough computational analysis of the staggered herringbone micromixer reveals transport mechanisms and enables mixing efficiency-based improved design, Hadjigeorgiou, AG; Boudouvis, AG; Kokkoris, G, 414, 128775 (2021), DOI: 10.1016/j.cej.2021.128775

Impeller shape-optimization of stirred-tank reactor: CFD and fluid structure interaction analyses, Hoseini, SS; Najafi, G; Ghobadian, B; Akbarzadeh, AH, 413, 127497 (2021), DOI: 10.1016/j.cej.2020.127497

An immersed boundary-lattice Boltzmann method with multi relaxation time for solving flow-induced vibrations of an elastic vortex generator and its effect on heat transfer and mixing, Hosseini, S; Aghebatandish, S; Dadvand, A; Khoo, BC, 405, 126652 (2021), DOI: 10.1016/j.cej.2020.126652

Particle movement characteristics in a gas-solid vertical single helical ribbon agitated reactor, Ye, TZ; Yang, Y; Sun, JY; Huang, ZL; Jiang, BB; Zhang, LJ; Wang, J; Wang, JD; Yang, YR, 429, 132349 (2022), DOI: 10.1016/j.cej.2021.132349

Mixing intensification using sound-driven micromixer with sharp edges, Zhang, CY; Brunet, P; Royon, L; Guo, XF, 410, 128252 (2021), DOI: 10.1016/j.cej.2020.128252

Effect of element thickness on the pressure drop in the Kenics static mixer, Jiang, XR; Xiao, ZD; Jiang, JN; Yang, XX; Wang, RJ, 424, 130399 (2021), DOI: 10.1016/j.cej.2021.130399

Comparison and estimation on deagglomeration performance of batch high shear mixers for nanoparticle suspensions, Liu, YD; Guo, JH; Li, WP; Yang, XH; Li, W; Zhou, ML; Zhang, JL, 429, 132420 (2022), DOI: 10.1016/j.cej.2021.132420

Investigation and estimation on deagglomeration of nanoparticle clusters in toothed in-line high shear mixers, Liu, YD; Guo, JH; Zhao, SC; Li, WP; Li, HJ; Li, W; Zhou, ML; Zhang, JL, 426, 130795 (2021), DOI: 10.1016/j.cej.2021.130795

Optimum design of micromixer for a non-Newtonian fluid by topology optimization, Dong, X; Yaji, K; Liu, XM, 428, 131367 (2022), DOI: 10.1016/j.cej.2021.131367

Mixing behavior in a confined jet with disparate viscosity and implications for complex reactions, Pathikonda, G; Usta, M; Ahmad, MC; Khan, I; Gillis, P; Dhadapkar, S; Jain, P; Ranjan, D; Aidun, CK, 403, 126300 (2021), DOI: 10.1016/j.cej.2020.126300

On the complete similitude of technical precipitation. Part II: Stirred-tank reactors, Rehage, H; Orthey, J; Kind, M, 426, 131788 (2021), DOI: 10.1016/j.cej.2021.131788

Direct numerical simulation of turbulent liquid-solid flow in a small-scale stirred tank, Chang, Q; Di, SB; Xu, J; Ge, W, 420, 127562 (2021), DOI: 10.1016/j.cej.2020.127562

Solvent mixing generating air bubbles as a template for polydopamine nanobowl fabrication: Underlying mechanism, nanomotor assembly and application in cancer treatment, Zhan, QC; Shi, XQ; Fan, D; Zhou, L; Wei, SH, 404, 126443 (2021), DOI: 10.1016/j.cej.2020.126443

Spherical agglomeration of nickel-manganese-cobalt hydroxide in turbulent Batchelor vortex flow, Sun, X; Kim, J; Kim, WS, 421, 129924 (2021), DOI: 10.1016/j.cej.2021.129924

Modelling of turbulent shear controllable co-precipitation synthesis of lithium ion battery cathode precursor micro-particles in a Taylor-Couette flow reactor with variable configurations of inner cylinder, Liu, L; Yang, XG; Yang, J; Li, G; Guo, YQ; Xue, CY, 411, 128571 (2021), DOI: 10.1016/j.cej.2021.128571

The influence of turbulent transport in reactive processes: A combined numerical and experimental investigation in a Taylor-Couette reactor, Anabaraonye, BU; Bentzon, JR; Khaliqdad, I; Feilberg, KL; Andersen, SI; Walther, JH, 421, 129591 (2021), DOI: 10.1016/j.cej.2021.129591

Enhanced performance of a Ni-rich LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂ cathode material formed through Taylor flow synthesis and surface modification with Li₂MoO₄, Babulal, LM; Yang, CC; Wu, SH; Chien, WC; Jose, R; Lue, SJ, 413, 127150 (2021), DOI: 10.1016/j.cej.2020.127150

Effect of agitation mode (mechanical, ultrasound and microwave) on uranium sorption using amine- and dithizone-functionalized magnetic chitosan hybrid materials, Elwakeel, KZ; Hamza, MF; Guibal, E, 411, 128553 (2021), DOI: 10.1016/j.cej.2021.128553

Chemical Engineering and Processing: Process Intensification Vol. 159-170 (2021)

Intensification of suspension of solid particles in non-Newtonian fluids with coaxial mixers, Mishra, P; Ein-Mozaffari, F, 168, 108553 (2021), DOI: 10.1016/j.cep.2021.108553

Enhancement of turbulent liquid-liquid dispersions in a round-bottom stirred tank equipped by a flexible impeller, Chen, LM; Bo, C; Yuan, MY; Li, YB; Zeng, HW; Chen, BB; Zhang, W, 169, 108652 (2021), DOI: 10.1016/j.cep.2021.108652

Mixing sensitivity to the inclination of the lateral walls in a T-mixer, Mariotti, A; Galletti, C; Brunazzi, E; Salvetti, MV, 170, 108699 (2022), DOI: 10.1016/j.cep.2021.108699

Striation Thickness Distribution in Split-and-Recombine Mixers in the Stokes Regime, Brito, MSCA; Santos, RJ; Dias, MM; Lopes, JCB; Fonte, CP, 170, 108714 (2022), DOI: 10.1016/j.cep.2021.108714

A novel gas inducing rotor-stator impeller for gas-liquid foam generation, Badve, M, 159, 108216 (2021), DOI: 10.1016/j.cep.2020.108216

Intensification of mixing-pumping process in a novel active micropump-mixer with maximum efficiency and minimum energy cost: A LBM-RSM approach, Khozeymeh-Nezhad, H; Fallah-Kharmiani, S; Niazmand, H, 159, 108219 (2021), DOI: 10.1016/j.cep.2020.108219

Droplet-based mixing characteristics in bumpy serpentine microchannel, Cao, X; Zhou, B; Yu, C; Liu, XD, 159, 108246 (2021), DOI: 10.1016/j.cep.2020.108246

Flow regimes and mixing performance in T-T jet reactor, Bie, HY; Xue, LC; Wang, Y; Liu, G; Hao, ZR; An, WZ, 170, 108700 (2022), DOI: 10.1016/j.cep.2021.108700

Development of a triple impinging jet mixer for continuous antisolvent crystallization of acetylsalicylic acid reaction mixture, Tacsi, K; Joo, A; Pusztai, E; Domokos, A; Nagy, ZK; Marosi, G; Pataki, H, 165, 108446 (2021), DOI: 10.1016/j.cep.2021.108446

Numerical investigation of mixing performance in spiral micromixers based on Dean flows and chaotic advection, Tripathi, E; Patowari, PK; Pati, S, 169, 108609 (2021), DOI: 10.1016/j.cep.2021.108609

Experimental characterization of heat transfer enhancement in a circular tube fitted with Koflo Blade (TM) inline mixer, Zarei, R; Razzaghi, K; Shahroki, F, 166, 108508 (2021), DOI: 10.1016/j.cep.2021.108508

Performance optimization of a novel passive T-shaped micromixer with deformable baffles, Talebjedi, B; Ghazi, M; Tasnim, N; Janfaza, S; Hoofar, M, 163, 108369 (2021), DOI: 10.1016/j.cep.2021.108369

High hydrodynamic and thermal mixing performances of efficient chaotic micromixers: A comparative study, Douroum, E; Laouedj, S; Kouadri, A; Naas, TT; Khelladi, S; Benazza, A, 164, 108394 (2021), DOI: 10.1016/j.cep.2021.108394

Intensification of micromixing efficiency in a spinning disk reactor: Experimental investigation, Yao, LB; Wu, W; Wu, XS; Chu, GW; Luo, Y; Sun, BC, 166, 108500 (2021), DOI: 10.1016/j.cep.2021.108500

Comparative assessment of mixing characteristics and pressure drop in spiral and serpentine micromixers, Tripathi, E; Patowari, PK; Pati, S, 162, 108335 (2021), DOI: 10.1016/j.cep.2021.108335

Experiments and CFD simulation of accessories used in stirred pulp-mixing process, Li, Z; Chang, J; Yang, C; Qu, JZ; Yu, YX; Xiong, SX, 166, 108463 (2021), DOI: 10.1016/j.cep.2021.108463

Numerical investigation on distribution characteristics of oxidation air in a lime slurry desulfurization system with rotary jet agitators, Xiang, LH; Sun, X; Wei, XS; Wang, GC; Boczkaj, G; Yoon, JY; Chen, SY, 163, 108372 (2021), DOI: 10.1016/j.cep.2021.108372

Numerical analysis of electroosmotic mixing in a heterogeneous charged micromixer with obstacles, Mondal, B; Mehta, SK; Pati, S; Patowari, PK, 168, 108585 (2021), DOI: 10.1016/j.cep.2021.108585

Mixing in a novel double coaxial spinning disks reactor, Mirzaei, M; Dehkordi, AM; Farahani, HB, 159, 108228 (2021), DOI: 10.1016/j.cep.2020.108228

The mixing sensitivity of toluene and ethylbenzene sulfonation using fuming sulfuric acid studied in a rotor-stator spinning disc reactor, van Kouwen, ER; Winkenwerder, W; Brentzel, Z; Joyce, B; Pagano, T; Jovic, S; Bargeman, G; van der Schaaf, J, 160, 108303 (2021), DOI: 10.1016/j.cep.2021.108303

Twisted architecture for enhancement of passive micromixing in a wide range of Reynolds numbers, Akar, S; Taheri, A; Bazaz, R; Warkiani, E; Shaegh, M, 160, 108251 (2021), DOI: 10.1016/j.cep.2020.108251

Chemical Engineering Science Vol. 229-246 (2021), 247-249 (2022)

Enhancement of mixing performance with anchor-type impellers via chaotic advection, Jo, HJ; Kim, YJ; Hwang, WR, 243, 116757 (2021), DOI: 10.1016/j.ces.2021.116757

Study of kneading pressure and power consumption in a twin-blade planetary mixer for mixing highly viscous fluids, Long, JC; He, Y; Zhan, XB; Sun, ZB; Shen, BJ; Li, XW, 241, 116723 (2021), DOI: 10.1016/j.ces.2021.116723

Improvement in mixing efficiency of microfluidic passive mixers functionalized by microstructures created with proton beam lithography, Nady, E; Nagy, G; Huszank, R, 247, 117006 (2022), DOI: 10.1016/j.ces.2021.117006

Mixing time prediction with artificial neural network model, Szoplik, J; Ciukszna, M, 246, 116949 (2021), DOI: 10.1016/j.ces.2021.116949

Design and development of high shear mixers: Fundamentals, applications and recent progress, Vashisth, V; Nigam, KDP; Kumar, V, 232, 116296 (2021), DOI: 10.1016/j.ces.2020.116296

Imaging method for the determination of the minimum agitation speed, N-*js*, for solids suspension in stirred vessels and reactors, Teoman, B; Shastry, S; Abdelhamid, S; Armenante, PM, 231, 116263 (2021), DOI: 10.1016/j.ces.2020.116263

Lagrangian stochastic modelling of liquid flow in a mechanically agitated vessel, Sheikh, HA; Savari, C; Barigou, M, 249, 117318 (2022), DOI: 10.1016/j.ces.2021.117318

CFD-DEM simulations of solid-liquid flow in stirred tanks using a non-inertial frame of reference, Delacroix, B; Rastoueix, J; Fradette, L; Bertrand, F; Blais, B, 230, 116137 (2021), DOI: 10.1016/j.ces.2020.116137

Hydrodynamics and mixing process in a horizontal self-cleaning opposite-rotating twin-shaft kneader, Cheng, WK; Xin, SC; Chen, SC; Zhang, XM; Chen, WX; Wang, JJ; Feng, LF, 241, 116700 (2021), DOI: 10.1016/j.ces.2021.116700

Efficient mixing enhancement by orthogonal injection of shear-thinning fluids in a micro serpentine channel at low Reynolds numbers, Yang, HE; Yao, GC; Wen, DS, 235, 116368 (2021), DOI: 10.1016/j.ces.2020.116368

3D-PTV flow measurements of Newtonian and non-Newtonian fluid blending in a batch reactor in the transitional regime, Romano, MG; Alberini, F; Liu, L; Simmons, MJH; Stitt, EH, 246, 116969 (2021), DOI: 10.1016/j.ces.2021.116969

Numerical simulation and experimental investigation of gas-liquid two-phase flow in a complex microchannel, Zheng, C; Zhang, MD; Qiu, SC; Li, HS; Wang, T; Wang, HW, 230, 116198 (2021), DOI: 10.1016/j.ces.2020.116198

Nanoparticle de-agglomeration in viscous fluids using different high shear mixer geometries, Vashisth, V; Nigam, KDP; Kumar, V, 248, 117132 (2022), DOI: 10.1016/j.ces.2021.117132

Population balance modelling of dense clay slurries flocculation, Pougatch, K; Delfel, S; Hosseini, M; Moyls, B; Sadighian, A; Revington, A, 231, 116260 (2021), DOI: 10.1016/j.ces.2020.116260

Solid-liquid flow in stirred tanks: CFD-grade experimental investigation, Sommer, AE; Rox, H; Shi, P; Eckert, K; Rzehak, R, 245, 116743 (2021), DOI: 10.1016/j.ces.2021.116743

Two-dimensional shear rate field and flow structures of a pseudoplastic fluid in a stirred tank using particle image velocimetry, Ayala, JS; de Moura, HL; Amaral, RD; Oliveira, FD; Nunhez, JR; de Castilho, GJ, 248, 117198 (2022), DOI: 10.1016/j.ces.2021.117198

Mixing characteristics and energy conversion in the coalescence process of the two droplets, Luo, XM; Xu, K; Li, WR; Huang, X; He, LM, 248, 117153 (2022), DOI: 10.1016/j.ces.2021.117153

The impact of fluid-dynamic stress in stirred tank bioreactors on the synthesis of cellulases by *Trichoderma reesei* at the intracellular and extracellular levels, Roque, T; Delettre, J; Hardy, N; Nienow, AW; Augier, F; Chaabane, FB; Beal, C, 232, 116353 (2021), DOI: 10.1016/j.ces.2020.116353

The role of circular folds in mixing intensification in the small intestine: A numerical study, Zha, JP; Zou, SY; Hao, JY; Liu, XJ; Delaplace, G; Jeantet, R; Dupont, D; Wu, P; Chen, XD; Xiao, J, 229, 116079 (2021), DOI: 10.1016/j.ces.2020.116079

The first Damkohler number and its importance for characterizing the influence of mixing on competitive chemical reactions, Rehage, H; Kind, M, 229, 116007 (2021), DOI: 10.1016/j.ces.2020.116007

Application of hybrid RANS-LES models to the prediction of mixing time and residence time distribution: Case study of a draft tube reactor, Brown, GJ; Fletcher, DF; Leggoe, JW; Whyte, DS, 240, 116676 (2021), DOI: 10.1016/j.ces.2021.116676

Investigating nucleation and growth phenomena in microfluidic supercritical antisolvent process by coupling in situ fluorescence spectroscopy and direct numerical simulation, Jaouhari, T; Marre, S; Tassaing, T; Fery-Forgues, S; Aymonier, C; Erriguel, A, 248, 117240 (2022), DOI: 10.1016/j.ces.2021.117240

Fractal injectors to intensify liquid-phase processes by controlling the turbulent flow field, Jiang, SX; Wang, JJ; Feng, LF; Coppens, MO, 238, 116616 (2021), DOI: 10.1016/j.ces.2021.116616

Investigation on steady regimes in a X-shaped micromixer fed with water and ethanol, Antognoli, M; Masoni, ST; Mariotti, A; Mauri, R; Brunazzi, E; Galletti, C, 248, 117254 (2022), DOI: 10.1016/j.ces.2021.117254

Reduced-order modeling of turbulent flow reactors by tracing the Damkohler numbers, Qiu, P; Wang, FC; Guo, QH; Richter, A; Xu, JL; Dai, ZH, 248, 117112 (2022), DOI: 10.1016/j.ces.2021.117112

A mechanistic approach for predicting mass transfer in bioreactors, Thomas, JA; Liu, XM; DeVincentis, B; Hua, HE; Yao, G; Borys, MC; Aron, K; Pendse, G, 237, 116538 (2021), DOI: 10.1016/j.ces.2021.116538

3D flow simulation of a baffled stirred tank for an assessment of geometry simplifications and a scale-adaptive turbulence model, Rave, K; Lehmenkuhler, M; Wirz, D; Bart, HJ; Skoda, R, 231, 116262 (2021), DOI: 10.1016/j.ces.2020.116262

Enzymatic starch hydrolysis performance of Taylor-Couette flow reactor with ribbed inner cylinder, Matsumoto, M; Masuda, H; Hubacz, R; Horie, T; Iyota, H; Shimoyamada, M; Ohmura, N, 231, 116270 (2021), DOI: 10.1016/j.ces.2020.116270

Free-surface vortex formation and aeration by a submerged rotating disk, Kim, D; Kim, D, 243, 116787 (2021), DOI: 10.1016/j.ces.2021.116787

Simulation of a batch crystallizer using a multi-scale approach in time and space, de Souza, LM; Temmel, E; Janiga, G; Seidel-Morgenstern, A; Thevenin, D, 232, 116344 (2021), DOI: 10.1016/j.ces.2020.116344

Design and evaluation of two-dimensional passive micromixer based on unbalanced convergence-divergence-splits and reverse-collisions-recombination, Zou, LL; Gong, Y; Chen, LS; Yi, X; Liu, WK, 244, 116816 (2021), DOI: 10.1016/j.ces.2021.116816

Characteristic parameters and process maps for fully-filled twin-screw extruder elements, Bauer, H; Matic, J; Khinast, J, 230, 116202 (2021), DOI: 10.1016/j.ces.2020.116202

CFD-DEM model study of gas-solid flow in a spout fluidized bed with an umbrella-like baffle, Yue, YH; Zhang, CX; Shen, YS, 230, 116234 (2021), DOI: 10.1016/j.ces.2020.116234

Liquid hydrodynamics in a gas-liquid vortex reactor, Ouyang, Y; Manzano, MN; Wetzel, R; Chen, SY; Lang, XJ; Heynderickx, GJ; Van Geem, KM, 246, 116970 (2021), DOI: 10.1016/j.ces.2021.116970

Modeling mass transfer in stirred microbioreactors, Farsani, HY; Wutz, J; DeVincentis, B; Thomas, JA; Motevalian, SP, 248, 117146 (2022), DOI: 10.1016/j.ces.2021.117146

Residence time distribution (RTD) revisited, Rodrigues, AE, 230, 116188 (2021), DOI: 10.1016/j.ces.2020.116188

Numerical investigation on the hydrodynamics of Taylor flow in ultrasonically oscillating microreactors, Xu, FS; Yang, LX; Liu, ZK; Chen, GW, 235, 116477 (2021), DOI: 10.1016/j.ces.2021.116477

Image analysis based mass transfer measurement in droplet breakage phenomenon, Tamminen, J; Lahdenpera, E; Koiranen, T, 246, 116964 (2021), DOI: 10.1016/j.ces.2021.116964

Numerical simulation of solid flow and segregation in a blast furnace by coupling granular rheology and transport equation, Yang, LYM; Zheng, QJ; Yu, AB, 239, 116741 (2021), DOI: 10.1016/j.ces.2021.116741

Gas-solid-liquid reactive CFD simulation of an industrial RFCC riser with investigation of feed injection, Chen, S; Fan, YP; Kang, HY; Lu, BN; Tian, YJ; Xie, GS; Wang, W; Lu, CX, 239, 116740 (2021), DOI: 10.1016/j.ces.2021.116740

Chemical Engineering & Technology Vol. 44 (2021), 45 (2022)

Synergistic Effects in Coaxial Mixers: The Controlling Strategy of the Flow and Shear, Huang, J; Zhang, BT; Dai, GC; Chen, C; Yu, HY; Tian, HX, 45(2), 210-219 (2022), DOI: 10.1002/ceat.202100395

Connection of Hydrodynamics and Nucleation Kinetics in Dual-Impeller Crystallizers, Celan, A; Cosic, M; Penga, Z; Kuzmanic, N, 44(6), 1033-1042 (2021), DOI: 10.1002/ceat.202000515

Mixing Performance of Baffles in Shear-Thinning Fluids, Furukawa, H; Mizuno, Y; Kato, Y, 44(8), 1440-1446 (2021), DOI: 10.1002/ceat.202100054

Power Consumption Prediction in a Viscous Liquid in Mechanically Agitated Gas-Liquid Reactors, Kracik, T; Moucha, T; Petricek, R, 44(3), 565-569 (2021), DOI: 10.1002/ceat.202000514

Laminar Fluid Mixing in Micromixers: Description of Pull-Push Effects, Haghhighinia, A; Movahedirad, S; Azad, BKD, 45(1), 67-72 (2022), DOI: 10.1002/ceat.202100193

Global Convection Characteristics of Conical Taylor-Couette Flow with Shear-Thinning Fluids, Masuda, H; Iyota, H; Ohmura, N, 44(11), 2049-2055 (2021), DOI: 10.1002/ceat.202100236

Experimental and Numerical Investigation of a Novel Spiral Micromixer with Sinusoidal Channel Walls, Bahrami, D; Bayareh, M, 45(1), 100-109 (2022), DOI: 10.1002/ceat.202100368

Heat and Mass Transfer at the Wall of a Square Mechanically Stirred Gas-Liquid-Solid Catalytic Reactor, Fathalla, AS; Amin, NK; El-Ashtoukhy, ESZ; Sedahmed, GH, 45(1), 58-66 (2022), DOI: 10.1002/ceat.202100142

Mass Transfer Prediction in a Mechanically Stirred Gas-Liquid Reactor Containing Solid Particles, Kracik, T; Moucha, T; Petricek, R; Tamaskovicova, D, 44(4), 752-760 (2021), DOI: 10.1002/ceat.202000532

Mixing Performance of Micromixers with Fractal Obstacles Based on Murray's Law, Hou, CM; Li, LX; Lv, RH; Tian, Z; Chen, XY, 44(12), 2220-2227 (2021), DOI: 10.1002/ceat.202100047

Mixing Time and Scale-up Investigation of a Moving-Baffle Oscillatory Baffled Column, Sutherland, K; Pakzad, L; Fatehi, P, 44(8), 1403-1411 (2021), DOI: 10.1002/ceat.202000262

Numerical and Experimental Analysis of the Daughter Distribution in Liquid-Liquid Stirred Tanks, Maluta, F; Buffo, A; Marchisio, D; Montante, G; Paglianti, A; Vanni, M, 44(11), 1994-2001 (2021), DOI: 10.1002/ceat.202100237

Impact of Ultrasound Amplitude on Crystallization of Borax Decahydrate in a Stirred-Batch Crystallizer, Celan, A; Milanovic, I; Cosic, M; Kuzmanic, N, 44(11), 2100-2108 (2021), DOI: 10.1002/ceat.202100275

Chinese Journal of Chemical Engineering Vol. 29-38 (2021)

Numerical investigation of granular mixing in an intensive mixer: Effect of process and structural parameters on mixing performance and power consumption, Zuo, ZJ; Gong, SG; Xie, GL, 32, 241-252 (2021), DOI: 10.1016/j.cjche.2020.10.036

Numerical optimization for blades of Intermig impeller in solid-liquid stirred tank, Li, XL; Zhao, HL; Zhang, ZM; Liu, Y; Zhang, TA, 29, 57-66 (2021), DOI: 10.1016/j.cjche.2020.08.044

Multi-fluid Eulerian simulation of binary particles mixing and gas-solids contacting in high solids-flux downer reactor equipped with a lateral particle feeding nozzle, Zheng, Q; Yang, JX; Lian, WH; Zhang, BP; Pan, XE; Zhang, ZL; Hao, XG; Guan, GQ, 35, 152-162 (2021), DOI: 10.1016/j.cjche.2021.03.009

Study on gas-liquid flow characteristics in stirred tank with dual-impeller based on CFD-PBM coupled model, Wang, SS; Bu, QX; Luan, DY; Zhang, Y; Li, LB; Wang, ZR; Shi, WH, 38, 63-75 (2021), DOI: 10.1016/j.cjche.2020.10.026

Industrial & Engineering Chemistry Research Vol. 60 (2021), 61 (2022)

CFD Simulation of Internal Flow and Mixing within Droplets in a T-Junction Microchannel, Chao, X; Xu, FS; Yao, CQ; Liu, TT; Chen, GW, 60(16), 6038-6047 (2021), DOI: 10.1021/acs.iecr.1c00800

Influence of Buoyancy Effects on the Mixing Process and RTD in a Side-Injection Reactor Equipped with Static Mixers, Albertazzi, J; Florit, F; Busini, V; Rota, R, 60(45), 16490-16497 (2021), DOI: 10.1021/acs.iecr.1c03346

Lagrangian Recurrence Tracking: A Novel Approach for Description of Mixing in Liquid and Particle-Liquid Flows, Savari, C; Sheikh, HA; Barigou, M, 60(50), 18501-18512 (2021), DOI: 10.1021/acs.iecr.1c04101

Mixing Efficiency and Residence Time Distributions of a Side-Injection Tubular Reactor Equipped with Static Mixers, Albertazzi, J; Florit, F; Busini, V; Rota, R, 60(29), 10595-10602 (2021), DOI: 10.1021/acs.iecr.1c00575

Mixing Performance of Planar Oscillatory Flow Reactors with Liquid Solutions and Solid Suspensions, Cruz, PC; Silva, CR; Rocha, FA; Ferreira, AM, 60(6), 2663-2676 (2021), DOI: 10.1021/acs.iecr.0c04991

Analysis of the Performance of a High-Speed Scott Turbon Mixer in Immiscible Liquid-Liquid Mixing through Endoscopy, Tomography, CFD, and Statistical Methods, Kazemzadeh, A; Turcotte, G; Ein-Mozaffari, F; Lohi, A, 60(41), 14927-14947 (2021), DOI: 10.1021/acs.iecr.1c02145

Using Statistical and Experimental Methods to Investigate the Mixing of Dense Slurries with Coaxial Mixers: Effects of Design Parameters and Novel Equations for Power and Reynolds Numbers, Mishra, P; Ein-Mozaffari, F, 60(17), 6306-6326 (2021), DOI: 10.1021/acs.iecr.1c00090

CFD Analysis of a Kenics Static Mixer with a Low Pressure Drop under Laminar Flow Conditions, Nyande, BW; Thomas, KM; Lakerveld, R, 60(14), 5264-5277 (2021), DOI: 10.1021/acs.iecr.1c00135

Performance Evaluation and Scale-Up Behavior of an Engineered In-Line Mixer for 3D Printing, Feng, YR; Zhang, HM; Wang, JD; Yang, YR, 60(30), 11568-11578 (2021), DOI: 10.1021/acs.iecr.1c02320

Numerical Investigation of Particle Suspensions in a Liquid-Solid Stirred Tank with Baffles, Wang, ZJ; Zhao, YL; Yao, J, 61(1), 914-930 (2022), DOI: 10.1021/acs.iecr.1c03687

Study on the Numerical Model of Dense Solid Suspension Driven by a Coaxial Mixer, Xu, ZL; Yang, C; Zhang, ZQ; Liu, BQ; Jin, ZJ, 60(4), 1939-1951 (2021), DOI: 10.1021/acs.iecr.0c06287

Effects of Scale-Up and Impeller Types on Spherical Agglomeration of Dimethyl Fumarate, Chen, CW; Lee, HL; Yeh, KL; Lee, T, 60(30), 11555-11567 (2021), DOI: 10.1021/acs.iecr.1c02006

CFD-PBM Numerical Study on Liquid-Liquid Dispersion in the Q-Type Static Mixer, Meng, HB; Wang, JB; Yu, YF; Wang, ZY; Wu, JH, 60(49), 18121-18135 (2021), DOI: 10.1021/acs.iecr.1c02906

Korean Journal of Chemical Engineering Vol. 38 (2021)

Numerical investigation of the mixing process in a Twin Cam Mixer: Influence of triangular cam height-base ratio and eccentricity, He, Y; Li, XW; Long, JC; Shen, BJ; Sun, ZB; Yang, YL; Zhan, XB, 38(3), 552-564 (2021), DOI: 10.1007/s11814-020-0715-y

Effect of multiple impeller designs and configurations on the droplet size and uniformity in a 100 L scale stirred tank, Park, J; Ahan, W; Lee, JW, 38(7), 1348-1357 (2021), DOI: 10.1007/s11814-021-0803-7

Computational fluid dynamic analysis of mass transfer and hydrodynamics in a planetary centrifugal bioreactor, Shen, BJ; Zhan, XB; He, Y; Sun, ZB; Long, JC; Yang, YL; Li, XW, 38(7), 1358-1369 (2021), DOI: 10.1007/s11814-021-0817-1

Esterification of free fatty acids in a rotor-stator spinning disc reactor, Wang, YB; Tao, XQ; Li, J; Zhang, SQ; Jin, Y; Chen, M, 38(8), 1727-1732 (2021), DOI: 10.1007/s11814-021-0815-3

Journal of Chemical Engineering of Japan Vol. 54 (2021)

Experimental Study and Prediction by Computational Fluid Dynamics on Self-induced Sloshing Due to Bubble Flow in a Rectangular Vessel, Ryohei Aoki, Satoko Fujioka , Koichi Terasaka, 54(2), 51-57 (2021), DOI: 10.1252/jcej.20we007

化学工学論文集 Vol. 47 (2021)

コッホ曲線を用いたフラクタル翼の動力数と搅拌抗力係数, 鈴川一己 , 友田一基, 宮崎達史, 河村祐亮, 金井由悟, 47(3), 57-63 (2021), DOI: 10.1252/kakoronbunshu.47.57

対流混合パターンに対する新しい考え方, 井上 義朗, 47(4), 85-90 (2021), DOI: 10.1252/kakoronbunshu.47.85

乱流搅拌における槽壁熱伝達におよぼす粗粒子混入の影響, 丸井征敏, 門叶秀樹, 47(4), 91-95 (2021), DOI: 10.1252/kakoronbunshu.47.91

3 段縦型搅拌槽における交換流量におよぼす槽径の影響, 大平勇一, 島津昌光, 47(4), 96-99 (2021), DOI: 10.1252/kakoronbunshu.47.96

搅拌槽における混合時間の相関式に関する一考察, 相田真男, 村上裕哉, 庄野厚, 47(4), 100-103 (2021), DOI: 10.1252/kakoronbunshu.47.100

固液搅拌槽における粒子巻き込み限界回転数の汎用的推算法, 相田真男, 庄野厚, 47(5), 125-131 (2021), DOI: 10.1252/kakoronbunshu.47.125