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Multi-impeller mixing performance prediction in stirred tanks using mean age theory approach, Wu, M; Jurtz, N; Hohl, L; Kraume, M, 70(1), (2024), DOI: 10.1002/aic.18247

The effect of axial impeller geometry on the link between power and flow numbers, John, TP; Fonte, CP; Kowalski, A; Rodgers, TL, 69(3), e17871, (2023), DOI: 10.1002/aic.17871

Study of trailing vortices and impeller jet instabilities of a flat blade impeller in small-scale reactors, Charalambidou, AD; Micheletti, M; Ducci, A, 69(2), e17842, (2023), DOI: 10.1002/aic.17842

Non-invasive mixing time estimation in unbaffled stirred tank: An ultrasonic approach, Mukherjee, D; Sen, N; Singh, KK; Saha, S; Mayya, A; Shenoy, KT, 69(3), e17966, (2023), DOI: 10.1002/aic.17966

Multi-objective optimization of radially stirred tank based on CFD and machine learning, Zhao, XZ; Fan, HA; Lin, GB; Fang, ZC; Yang, WL; Li, M; Wang, JH; Lu, XY; Li, BL; Wu, KJ; Fu, J, 70(3), (2024), DOI: 10.1002/aic.18324

Cavitation behavior and mixing performance of antisolvent precipitation process in an ultrasonic micromixer, Liu, ZK; Yang, M; Dong, ZY; Yao, CQ; Chen, GW, 69(7), (2023), DOI: 10.1002/aic.18080

Chirality enhanced shear-free mixing of highly viscous fluids in an origami reactor, Guo, PF; Tao, SY, 69(6), (2023), DOI: 10.1002/aic.18002

Gas phase hydrodynamics in a surface-aerated tank with a long-short blades agitator, Wu, YJ; Wang, J; You, P; Luo, PC, 69(1), e17680, (2023), DOI: 10.1002/aic.17680

Pressure-controlled secondary flows and mixing in sheared Platonic solid-shaped particles, Hao, JH; Guo, Y; Yu, ZS; Curtis, JS, 69(6), (2023), DOI: 10.1002/aic.18090

A generalized zoning framework for development of CFD-based reduced-order compartment models, Liu, GY; Wilhite, BA, 69(7), (2023), DOI: 10.1002/aic.18063

Measurement of droplet coalescence in a mixing tank, Cai, YB; Yang, ZS; Jin, YJ; Jing, S; Lan, WJ; Li, SW, 70(4), (2024), DOI: 10.1002/aic.18282

Flow physics of planar bistable fluidic oscillator with backflow limbs, Madane, K; Khalde, C; Pandit, A; Ranade, VV, 69(1), e17621, (2023), DOI: 10.1002/aic.17621

Advection and dispersion induced by an interface between two immiscible fluids in a laminar flow, Dejam, M; Hassanzadeh, H, 69(1), (2023), DOI: 10.1002/aic.17928

Taylor-vortex membrane reactor for continuous gas-liquid reactions, Venezia, B; Morris, DC; Gavriilidis, A, 69(3), e17880, (2023), DOI: 10.1002/aic.17880

Numerical investigation of the reactive gas-solid characteristics in biomass fast pyrolysis of conical spouted reactor equipped with draft tube, Sun, HR; Bao, GR; Yang, SL; Hu, JH; Wang, H, (), (2023), DOI: 10.1002/aic.18200

DEM-CFD analysis of swelling behaviors of binary particle systems with a microscopic diffusion model, Hu, JW; Li, W; Zhang, L; Tan, YQ; Wu, CY, 70(1), e18248, (2024), DOI: 10.1002/aic.18248

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, 69(1), e17511, (2023), DOI: 10.1002/aic.17511

Performance characteristics of an axial-flow gas induction impeller, Hoffman, SM; Janz, EE; Myers, KJ; Brown, NA, 101(3), 1371-1386, (2023), DOI: 10.1002/cjce.24556

Effect of operating factors on liquid-liquid mass transfer and dispersion pattern of sedimentary liquid in a mechanically stirred vessel, Sunami, K; Horiuchi, S; Nishimura, N; Uddin, MA; Kato, Y, 101(6), 3479-3489, (2023), DOI: 10.1002/cjce.24706

Integrating mechanical mixing, headspace, and rheology in a computational model for a fermentation process, Sadino-Riquelme, MC; Rivas, J; Jeison, D; Donoso-Bravo, A; Hayes, RE, 101(11), 6240-6260, (2023), DOI: 10.1002/cjce.24845

Effect of agitation and aeration on gas dispersion efficiency in coaxial mixers containing yield-pseudoplastic fluids: Experimental and numerical analysis, Barros, PL; Ein-Mozaffari, F; Lohi, A, 102(2), 911-924, (2024), DOI: 10.1002/cjce.25086

Artificial neural network to predict the power number of agitated tanks fed by CFD simulations, Bibeau, V; Barbeau, L; Boffito, DC; Blais, B, 101(10), 5992-6002, (2023), DOI: 10.1002/cjce.24870

Exploiting the prediction of mass transfer performance in aerated coaxial mixers containing biopolymer solutions using empirical correlations and neural networks, Barros, PL; Ein-Mozaffari, F; Lohi, A; Upreti, S, (), -, (2023), DOI: 10.1002/cjce.25123

An integrated CFD methodology for tracking fluid interfaces and solid distributions in a vortexing stirred tank, Pukkella, AK; Subramanian, S, 101(4), 1854-1873, (2023), DOI: 10.1002/cjce.24645

Flow regime identification in aerated stirred vessel using passive acoustic emission and machine learning, Forte, G; Antonelli, M; Brunazzi, E; Simmons, MJ; Stitt, H; Alberini, F, 101(10), 5670-5682, (2023), DOI: 10.1002/cjce.24831

Single and two-phase flows in a horizontal pipe with a Kenics static mixer: Effect of pressure drop on mixing, Hosni, M; Hammoudi, M; Si-Ahmed, EK; Legrand, J; Douib, L, 101(2), 828-844, (2023), DOI: 10.1002/cjce.24402

Optimization study of obstacles in T-T mixing channel at low Reynolds numbers, Rampalli, S; Raju, VRK, 102(4), 1670-1682, (2024), DOI: 10.1002/cjce.25146

Investigation of mixing performance in a semi-active T-micromixer actuated by magnetic nanoparticles: Characterization via Villermaux-Dushman reaction, Azimi, N; Rahimi, M; Hosseini, F; Jafari, O, 101(2), 1055-1067, (2023), DOI: 10.1002/cjce.24377

Experimental study on energy consumption characteristics of rotational-perforated static mixers, Meng, LC; Gao, XF; Wang, DW; Liu, Y; Wang, RJ; Hu, BS; Tang, M; Zhang, SF, 101(11), 6656-6671, (2023), DOI: 10.1002/cjce.24920

An improved correlation for dry pressure losses across static mixers at high Reynolds numbers, Lowry, E; Krishnamoorthy, G, 101(7), 3821-3839, (2023), DOI: 10.1002/cjce.24730

Power consumption in a moving baffle oscillatory baffled reactor: A CFD study, Mortazavi, H; Pakzad, L, 101(5), 2878-2895, (2023), DOI: 10.1002/cjce.24672

A continuous flow reactor for the flexible production of different formulations: CFD-aided design, di Capaci, RB; Bellagotti, F; Pannocchia, G; Brunazzi, E; Galletti, C, 101(7), 4230-4243, (2023), DOI: 10.1002/cjce.24778

Experimental methods in chemical engineering: Reactive extrusion, Zhuang, YF; Saadatkah, N; Morgani, MS; Xu, TH; Martin, C; Patience, GS; Ajji, A, 101(1), 59-77, (2023), DOI: 10.1002/cjce.24538

Novel extensional device to efficiently form fine oil-in-water food emulsions, Song, DY; Agarwal, S; Casasnovas, J; Padmanabhan, M; Gupta, RK, 101(8), 4429-4445, (2023), DOI: 10.1002/cjce.24777

Improvement of mass and heat transfer efficiency in a scale-up microfluidic mixer designed by CFD simulation, Nie, YY; Zhao, SF; Yu, PJ; Wei, YM; Hu, RZ; He, W; Zhu, N; Li, YG; Ji, D; Guo, K, 101(10), 6017-6031, (2023), DOI: 10.1002/cjce.24855

Chemical Engineering Communications Vol. 209 (2022), Vol. 210 (2023)

Thermo-hydrodynamic effects of the Ethylene reactive flow on convecting hot spots using LES, Hajialigol, N; Mazaheri, K; Fattahi, A, 210(4), 516-535, (2023), DOI: 10.1080/00986445.2021.1974411

Application of tracer technology in wastewater treatment processes: a review, Sarkar, M; Sangal, VK; Pant, HJ; Sharma, VK; Bhunia, H; Bajpai, PK, 210(1), 16-33, (2023), DOI: 10.1080/00986445.2021.1995371

An experimental approach to investigate the viscoelastic and rheological behavior of polydisperse glass suspensions, Haghighi, M, 210(10), 1631-1641, (2023), DOI: 10.1080/00986445.2022.2095266

Modeling free surface gas transfer in agitated lab-scale bioreactors, Thomas, JA; Rahman, A; Wutz, J; Wang, Y; DeVincentis, B; McGuire, B; Cao, L, 210(8), 1328-1339, (2023), DOI: 10.1080/00986445.2022.2084392

Chemical Engineering Journal Vol. 451-477 (2023), 479-480 (2024)

Intensification of power efficiency by grooves in flanged impellers, Rivadeneyra-Romero, G; Mendoza-Escamilla, VX; Mollinedo, H; Alonzo-García, A; Gonzalez-Neria, I; Yanez-Varela, J; Martínez-Delgadillo, SA, 470, 144092, (2023), DOI: 10.1016/j.cej.2023.144092

Characterisation and analysis on the agitation of downward pitched blade turbine in the Stirred Tank Reactor, Fang, X; Yan, YH; Li, XJ; He, FJ; Tu, JY, 472, 144556, (2023), DOI: 10.1016/j.cej.2023.144556

Optimising flow and mixing in a full-scale gas-mixed anaerobic digester by integrating sludge rheological data using computational fluid dynamics, Wei, P; Uijtewaalt, W; Spanjers, H; van Lier, JB; de Kreuk, M, 468, 143647, (2023), DOI: 10.1016/j.cej.2023.143647

A low-dissipative and accurate method of simulating the unsteady mixing process, Gao, YH; Wang, ZN; Xu, ZH, 460, 141760, (2023), DOI: 10.1016/j.cej.2023.141760

Mixing methods for solid state electrodes: Techniques, fundamentals, recent advances, and perspectives, Fernandez-Diaz, L; Castillo, J; Sasieta-Barrutia, E; Arnaiz, M; Cabello, M; Judez, X; Terry, A; Otaegui, L; Morant-Miñana, MC; Villaverde, A, 464, 142469, (2023), DOI: 10.1016/j.cej.2023.142469

Ultrafast mixing for high-throughput droplet microfluidics using GHz acoustic streaming, Shen, XT; Li, TC; Wang, ZX; Ke, XW; Shen, SH; Cui, HP; Yang, Y; Guo, WL; Sun, C; Duan, XX, 477, 147164, (2023), DOI: 10.1016/j.cej.2023.147164

Development of ultra-fast computing method for powder mixing process, Kishida, N; Nakamura, H; Ohsaki, S; Watano, S, 475, 146166, (2023), DOI: 10.1016/j.cej.2023.146166

Incorporative mixing in microreactors: Influence on reactions and importance of inlet designation, Asano, S; Maki, T; Inoue, S; Sogo, S; Furuta, M; Watanabe, S; Muranaka, Y; Kudo, S; Hayashi, J; Mae, K, 451, 138942, (2023), DOI: 10.1016/j.cej.2022.138942

Mixing effects on the gas flow and mass transfer in a vertical single helical ribbon agitated reactor for propylene polymerization, Tianzhou, Y; Jingyuan, S; Zhengliang, H; Yao, Y; Binbo, J; Jingdai, W; Yongrong, Y, 471, 144492, (2023), DOI: 10.1016/j.cej.2023.144492

Scale-up of antisolvent precipitation process with ultrasonic microreactors: Cavitation patterns, mixing characteristics and application in nanoparticle manufacturing, Liu, ZK; Yang, M; Zhao, QK; Yao, CQ; Chen, GW, 475, 146040, (2023), DOI: 10.1016/j.cej.2023.146040

Development of a multiparticle optical trajectory technique for hydrodynamic analysis of a stirred tank devoted to dark fermentation, Danican, A; Darrehmane, A; Chateau, T; Trad, Z; Fontaine, JP; Vial, C, 453, 139521, (2023), DOI: 10.1016/j.cej.2022.139521

Effects of secondary impinging on flow features and mixing performance in T-T jet reactors, Bie, HY; Xue, LC; Wang, Y; Hao, ZR; Liu, G; Li, YX; Lin, ZX; An, WZ, 454, 140368, (2023), DOI: 10.1016/j.cej.2022.140368

Enhancing mixing efficiency in curved channels: A 3D study of bi-phasic Dean-Taylor flow with high spatial and temporal resolution, Pinho, B; Williams, LM; Mahin, J; Gao, YH; Torrente-Murciano, L, 471, 144342, (2023), DOI: 10.1016/j.cej.2023.144342

Suspension of high concentration solids in a pilot scale jet-flow high shear mixer, Liu, YD; Zhang, YX; Guo, JH; Li, W; Zhou, ML; Zhang, JL, 451, 138567, (2023), DOI: 10.1016/j.cej.2022.138567

Experimental investigation on the flow patterns in a T-junction under steady and rolling motion conditions using PLIF, Su, B; Huang, KX; Lin, M; Wang, QW, 465, 142772, (2023), DOI: 10.1016/j.ccej.2023.142772

Direct numerical simulations of liquid-liquid dispersions in a SMX mixer under different inlet conditions, Valdes, JP; Kahouadji, L; Liang, FY; Shin, S; Chergui, J; Juric, D; Matar, OK, 462, 142248, (2023), DOI: 10.1016/j.ccej.2023.142248

A general design equation for Confined Impinging Jets mixers, Brito, MSCA; Dias, MM; Lopes, JCB; Santos, RJ; Fonte, CP, 465, 142892, (2023), DOI: 10.1016/j.ccej.2023.142892

On the dispersion dynamics of liquid-liquid surfactant-laden flows in a SMX static mixer, Valdes, JP; Kahouadji, L; Liang, FY; Shin, S; Chergui, J; Juric, D; Matar, OK, 475, 146058, (2023), DOI: 10.1016/j.ccej.2023.146058

The effects of agitation in anaerobic biodigesters operating with substrates from swine manure and rice husk, Leite, SAF; Leite, BS; Ferreira, DJO; Baêta, BEL; Dangelo, JVH, 451, 138533, (2023), DOI: 10.1016/j.ccej.2022.138533

Vortex shedding of unsteady symmetric flow regime induced by secondary impinging in T-T jet reactors, Xue, LC; Liu, G; Wang, Y; Hao, ZR; Bie, HY, 471, 144468, (2023), DOI: 10.1016/j.ccej.2023.144468

Predicting the size of silver nanoparticles synthesised in flow reactors: Coupling population balance models with fluid dynamic simulations, Casado, C; Pinho, B; Marugán, J; Torrente-Murciano, L, 479, 147684, (2024), DOI: 10.1016/j.ccej.2023.147684

Residence time distribution and micromixing efficiency of a dynamic inline rotor-stator mixer, Dolshanskiy, W; Stepanyuk, A; Arian, E; Pauer, W, 451, 138555, (2023), DOI: 10.1016/j.ccej.2022.138555

A modelling workflow for quantification of photobioreactor performance, Gu, WJ; Theau, E; Anderson, AW; Fletcher, DF; Kavanagh, JM; McClure, DD, 477, 147032, (2023), DOI: 10.1016/j.ccej.2023.147032

Numerical simulation and coupling mechanism study of acoustic-inertial micromixer, Mu, SS; Lu, YW; Zhu, GR, 480, 147967, (2024), DOI: 10.1016/j.ccej.2023.147967

Modelling and analysis of hydrodynamics and flow phenomena of fluid with formic acid as pollutant in the reactive area of a flat plate photocatalytic reactor with top and bottom turbulence promote, Rasul, MG; Ahmed, S; Sattar, MA; Jahirul, MI, 466, 142760, (2023), DOI: 10.1016/j.ccej.2023.142760,

Chemical Engineering and Processing: Process Intensification Vol. 183-194 (2023), 195-196 (2024)

Study of the flow field of a new fishtail-type stirring impeller in a stirred tank, Wang, ZH; Li, DL; Gao, QJ; Yang, QW; Xiong, X; Jiang, CZ; Zhang, F, 194, (2023), DOI: 10.1016/j.ccep.2023.109577

Pressure drop reduction of the impeller spiral static mixer design enabled by additive manufacturing, Hildner, M; Lorenz, J; Zhu, BZ; Shih, A, 191, (2023), DOI: 10.1016/j.ccep.2023.109486

Performance of an engineered combination of plunging jet with stirred tank part I: Single impeller system, Patil, B; Kulkarni, AV, 184, (2023), DOI: 10.1016/j.ccep.2023.109286

Studying particle attrition in a solid-liquid agitated vessel using focused beam reflectance measurement (FBRM), Ravisankar, V; Wu, J; Bhargava, S; Parthasarathy, R, 183, (2023), DOI: 10.1016/j.ccep.2022.109256

Numerical investigation on the intensification of coaxial slurry mixing systems, Xu, ZL; Yang, C; Wan, LX; Liu, BQ, 192, (2023), DOI: 10.1016/j.ccep.2023.109514

Investigating the power consumption for the intensification of gas dispersion in a dual coaxial mixer containing yield-pseudoplastic fluids, Sharifi, F; Behzadfar, E; Ein-Mozaffari, F, 191, (2023), DOI: 10.1016/j.ccep.2023.109461

Design and analysis of a novel Bi-layer curved serpentine chaotic micromixer for efficient mixing, Raza, W; Islam, N; Samad, A, 183, (2023), DOI: 10.1016/j.ccep.2022.109246

Intensification of mixing in an ultrasonic flow reactor, Ahoure, L; Bulliard-Sauret, O; Andre, C; Bergraser, J; Gaudeau, M; Bahrani, SA, 183, (2023), DOI: 10.1016/j.cep.2022.109212

Enhanced mixing quality of ring-type electroosmotic micromixer using baffles, Gayen, B; Manna, N; Biswas, N, 189, (2023), DOI: 10.1016/j.cep.2023.109381

Numerical Analysis and Moth Flame Optimization of Passive T-Micromixer with Twist and Bend mixing channel, Mustafa, MG; Zunaid, M; Gautam, S, 190, (2023), DOI: 10.1016/j.cep.2023.109436

Numerical simulation and structural recombination of microchannel micromixer for excellent mixing performance, Zhang, L; Li, J; Liu, MX; Tian, GY; Cheng, PG; Zhang, JP; Tang, N, 191, (2023), DOI: 10.1016/j.cep.2023.109476

Numerical study of mixing performance in T-junction passive micromixer with twisted design, Najafpour, A; Hosseinzadeh, K; Akbari, S; Mahboobtsi, M; Ranjbar, AA; Ganji, DD, 194, (2023), DOI: 10.1016/j.cep.2023.109567

Investigation of mixing characteristics in a novel SAR micromixer with locally overlapping V-shaped flow channels, Zhou, ZR; Zhang, LQ; Almond, H; Ge, DH, 195, (2024), DOI: 10.1016/j.cep.2023.109648

Numerical simulation of electroosmotic mixing of non-Newtonian fluids in a micromixer with zeta potential heterogeneity, Yang, JJ; Chen, Y; Du, CL; Guan, XT; Li, J, 186, (2023), DOI: 10.1016/j.cep.2023.109339

Improving mixing efficiency in laminar-flow static mixers with baffle inserts and vortex generators: A three-dimensional numerical investigation using corrugated tubes, Bennour, E; Kezrane, C; Kaid, N; Alqahtani, S; Alshehry, S; Menni, Y, 193, (2023), DOI: 10.1016/j.cep.2023.109530

Performance comparison between novel and commercial static mixers under turbulent conditions, Chakleh, R; Azizi, F, 193, (2023), DOI: 10.1016/j.cep.2023.109559

Microscale mixing efficiency of ultrasound-assisted synergistic microreactors, Liu, YH; Ran, JF; Yin, SH; Li, SW; Huang, WC; Zhang, LB, 194, (2023), DOI: 10.1016/j.cep.2023.109573

Mixing enhancement in an acousto-inertial microfluidic system, Kharaji, ZG; Kalantar, V; Bayareh, M, 191, (2023), DOI: 10.1016/j.cep.2023.109473

Mixing intensification in an acoustofluidic micromixer aided with micro-pillars, Barman, C; Bandopadhyay, A, 194, (2023), DOI: 10.1016/j.cep.2023.109604

Topological flow transformations in a universal vortex bioreactor, Naumov, IV; Gevorgiz, RG; Skirpkin, SG; Tintulova, MV; Tsoy, MA; Sharifullin, BR, 191, (2023), DOI: 10.1016/j.cep.2023.109467

Numerical and experimental study on the synergistic effect of vortex and contact surface of fluid in the inlet section of micromixer, Qin, LT; Yue, JC; Zhou, DJ; Yang, AM; Zheng, SQ, 196, (2024), DOI: 10.1016/j.cep.2023.109645

Flow and mixing characteristics of gas-liquid slug flow in a continuous Taylor-Couette flow reactor with narrow gap width, Shimizu, K; Kato, K; Kobayashi, T; Komoda, Y; Ohmura, N, 183, (2023), DOI: 10.1016/j.cep.2022.109226

Topology optimization design of micromixer based on principle of Tesla valve: An experimental and numerical study, Xiong, M; Yang, JD; Ding, XH; Li, H; Zhang, H, 193, (2023), DOI: 10.1016/j.cep.2023.109560

Design and scale-up of a superb micromixer with fan-shaped obstacles for synthesis of Dolutegravir intermediate, Jin, H; Wang, DR; Liu, PW; Chang, YX; Chen, Y; Sun, YC; Xu, YF; Qian, XH; Zhu, WP, 195, (2024), DOI: 10.1016/j.cep.2023.109638

Effects of cross baffles on the flow of the microalgae in raceway photobioreactors, Fu, SC; Zhang, X; Dou, B; Zhou, FQ; Dai, CL; Ling, J; Zhang, Y; Yan, SH, 192, (2023), DOI: 10.1016/j.cep.2023.109515

Process intensification of biodiesel production using pilot-scale continuous multiple baffle reactor with feed distribution, Thipdech, A; Prasertsit, K; Photaworn, S, 195, (2024), DOI: 10.1016/j.cep.2023.109614

Complexity analysis of multiscale flow field of dynamic impinging stream based on chaos theory and Stockwell transform, Zhang, JW; Zhang, ZC; Dong, X; Feng, Y, 193, (2023), DOI: 10.1016/j.cep.2023.109524

Mixing characteristics of unbaffled bioreactor with levitating radial impeller, Gebousky, O; Idzakovicová, K; Haidl, J, 276, 118801, (2023), DOI: 10.1016/j.ces.2023.118801

Numerical investigation on intensified mixing performance with modified dual impeller, Xiong, X; Wang, SS; Liu, PQ; Tao, CY; Wang, YD; Liu, ZH, 274, 118698, (2023), DOI: 10.1016/j.ces.2023.118698

Characterisation of particle stress in turbulent impeller flows utilising photo-optical measurements of a flocculation system-PART 1, Panckow, RP; Bliatsiou, C; Nolte, L; Böhm, L; Maass, S; Kraume, M, 267, 118333, (2023), DOI: 10.1016/j.ces.2022.118333

Power, mixing and flow dynamics of the novel Allegro™ stirred tank reactor, Delbridge, JN; Barrett, TA; Ducci, A; Micheletti, M, 271, 118545, (2023), DOI: 10.1016/j.ces.2023.118545

Enhancement of chaotic mixing performance in laminar flow with reciprocating and rotating coupled agitator, Fan, MY; Xu, JX; Sun, H; Wang, SB; Zhang, X; Wang, H; Yin, WL, 280, 118988, (2023), DOI: 10.1016/j.ces.2023.118988

A rapid method for flow pattern, mixing time estimation and turbulent dissipation rates in turbulent stirred mixers based on 2-D network-of-zones (NoZ) model, Bai, YQ; da Fonte, CP; Kowalski, A; Trujillo, WR; Rodgers, TL, 285, 119577, (2024), DOI: 10.1016/j.ces.2023.119577

Fluid flow and mixing in a novel intermittently rotating bioreactor for CAR-T cell therapy manufacturing, Atanasova, GG; Micheletti, M; Ducci, A, 281, 119175, (2023), DOI: 10.1016/j.ces.2023.119175

Assessment of stress-blended eddy simulation on prediction of flow characteristics in a Rushton impeller stirred tank, Jia, ZT; Zhang, SF; Fang, KF; Kong, B; Xie, MH; Zhang, QH; Yang, C, 284, 119442, (2024), DOI: 10.1016/j.ces.2023.119442

Blending and cavern formation within non-Newtonian fluids in stirred tanks: Application to nuclear waste fluid processing, Noble, S; Poirier, M; Thomas, J, 266, 118184, (2023), DOI: 10.1016/j.ces.2022.118184

A PIV study to quantify the relationships between viscoelasticity and flow behavior in stirred tanks, Kolano, M; Kraume, M, 282, 119301, (2023), DOI: 10.1016/j.ces.2023.119301

Investigation of the impact of probes and internals on power and flow in stirred tank reactors, Charalambidou, AD; Wyrobnik, TA; Micheletti, M; Ducci, A, 286, 119683, (2024), DOI: 10.1016/j.ces.2023.119683

Experimental characterization and mixing modeling of a horizontally rotating disc reactor, Jäger, L; Scholl, S, 280, 118995, (2023), DOI: 10.1016/j.ces.2023.118995

Impingement and mixing between two shear-thinning droplets on the solid surface, Li, ZQ; Yi, GA; Cai, ZQ; Gao, ZM, 266, 118293, (2023), DOI: 10.1016/j.ces.2022.118293

Rapid mixing achieved using Coriolis force and grooves in rotating microchannels, Lee, S; Lee, J; Lee, M; Kim, H; Cho, G; Lee, J, 283, 119395, (2024), DOI: 10.1016/j.ces.2023.119395

A computational-fluid-dynamics model for particle-size evolution in the presence of turbulent mixing, Ilgun, AD; Fox, RO; Madadi-Kandjani, E; Passalacqua, A, 279, 118961, (2023), DOI: 10.1016/j.ces.2023.118961

Investigation of the mixing inside the confined impinging jet mixer using the Fokker-Planck mixing model, Madadi-Kandjani, E; Passalacqua, A; Fox, RO, 273, 118634, (2023), DOI: 10.1016/j.ces.2023.118634

A solid-liquid mixing reactor based on swirling flow technology, Yang, Z; Holemans, T; Lagrain, B; Sels, B; Vanierschot, M, 280, 119054, (2023), DOI: 10.1016/j.ces.2023.119054

Numerical simulation of mixing-induced dynamic interfacial tension inside droplet by lattice Boltzmann method, Wang, ST; Wang, H; Cheng, Y, 270, 118510, (2023), DOI: 10.1016/j.ces.2023.118510

Decomposition of power number in a stirred tank and real time reconstruction of 3D large-scale flow structures from sparse pressure measurements, Mikhaylov, K; Rigopoulos, S; Papadakis, G, 279, 118881, (2023), DOI: 10.1016/j.ces.2023.118881

Assessment of scale-adaptive turbulence modeling in coupled CFD-PBM 3D flow simulations of disperse liquid-liquid flow in a baffled stirred tank with particular emphasis on the dissipation rate, Rave, K; Hermes, M; Hundshagen, M; Skoda, R, 270, 118509, (2023), DOI: 10.1016/j.ces.2023.118509

Rational scale-up of catalytic hydrogenation involving slowly dissolving reactants, Nanto, F; Ciato, D; Canu, P, 283, 119351, (2024), DOI: 10.1016/j.ces.2023.119351

Inline spectroscopic measurements and LES of competitive consecutive reaction in a confined liquid jet in coflow, Ahmad, MRC; Usta, M; Pathikonda, G; Khan, I; Gillis, P; Dhodapkar, S; Jain, P; Ranjan, D; Aidun, CK, 268, 118375, (2023), DOI: 10.1016/j.ces.2022.118375

Flow regime identification using pressure fluctuation signals in an aerated vessel stirred, Yang, C; Lu, HC; Wang, B; Xu, ZL; Liu, BQ, 280, 119058, (2023), DOI: 10.1016/j.ces.2023.119058

Comparison between RANS and 3D-PTV measurements of Newtonian and non-Newtonian fluid flows in a stirred vessel in the transitional regime, Romano, MG; Alberini, F; Liu, L; Simmons, MJH; Stitt, EH, 267, 118294, (2023), DOI: 10.1016/j.ces.2022.118294

Mixing and mass transfer in production scale mammalian cell culture reactor using coupled CFD-species transport-PBM validation, Mishra, S; Kumar, V; Sarkar, J; Rathore, AS, 267, 118323, (2023), DOI: 10.1016/j.ces.2022.118323

Micromixing intensification by gas introduction in a miniaturized annular rotating flow mixer (MARFM), Chen, QC; Wang, YB; Deng, J; Luo, GS, 272, 118610, (2023), DOI: 10.1016/j.ces.2023.118610

Investigating mixer-viscometer techniques for partially filled stirred tanks, Cunningham, GE; Deshpande, S; Simmons, MJH; O'Sullivan, J, 282, 119340, (2023), DOI: 10.1016/j.ces.2023.119340

Numerical investigation of gas-liquid flow hydrodynamics in three-dimensional bottom-blown reactor via LES-VOF coupled model, Liu, P; Yang, SL; Hu, JH; Wang, H, 282, 119338, (2023), DOI: 10.1016/j.ces.2023.119338

Experimental study of transient particle suspension in bioreactors using a light attenuation technique, Maillot, C; Delafosse, A; De Isla, N; Olmos, E; Toye, D, 285, 119633, (2024), DOI: 10.1016/j.ces.2023.119633

Turbulent droplet breakage probability: Analysis of fitting parameters for two commonly used models, Ravichandar, K; Olsen, MG; Vigil, RD, 266, 118311, (2023), DOI: 10.1016/j.ces.2022.118311

Chemical Engineering & Technology Vol. 46 (2023), 47 (2024)

Mixing Efficiency of Viscous Fluid in a Multiple-Impeller Agitated Tank, Shiue, A; Chen, QQ; Chen, YT; Jeng, JC; Leggett, G, 46(7), 1464-1475, (2023), DOI: 10.1002/ceat.202200069

Hydrodynamic Characteristics of a Stirred Tank with Self-Priming Jet Impeller, Zhang, J; Li, HY; Yuan, JX; Zhang, CS; Li, YX; Gong, B, (), -, (2023), DOI: 10.1002/ceat.202200218

Impact of Curved-Blade Impellers on Gas Holdup and Liquid Homogenization Dynamics in Stirred Tanks, Zák, A; Moucha, T; Paglianti, A; Montante, G, 46(6), 1191-1197, (2023), DOI: 10.1002/ceat.202200538

Simulating Stirred Tank Reactor Characteristics with a Lattice Boltzmann CFD Code, Kersebaum, J; Fleischlen, S; Hofinger, J; Wehinger, GD, 47(3), 586-595, (2024), DOI: 10.1002/ceat.202300384

Rheology and Hydrodynamics of Iron Ore Mineral Pulps during a Bioleaching Process in a Continuous Stirred-Tank Reactor, Ramírez-Torres, LA; Medina-Torres, L; Calderas, F; Núñez-Ramírez, DM; Manero, O, (), -, (2023), DOI: 10.1002/ceat.202200438

Removal of Hexavalent Chromium Using Emulsion Liquid Membrane with Jet Mixer: A Continuous Approach, Kavitha, S; Baral, SS; Ganesan, S, 46(5), 934-939, (2023), DOI: 10.1002/ceat.202200183

Continuous Reactive Crystallization in a Mesoscale Oscillatory Baffled Reactor, Ahmed, SMR; Walton, D; Ghenni, SA; Phan, AN, 46(11), 2345-2352, (2023), DOI: 10.1002/ceat.202200369

Chinese Journal of Chemical Engineering Vol. 55-62 (2023), 65 (2024)

CFD simulation of hydrodynamics and mixing performance in dual shaft eccentric mixers, Wang, SS; Xiong, X; Liu, PQ; Zhang, QZ; Zhang, Q; Tao, CY; Wang, YD; Liu, ZH, 62, 297-309, (2023), DOI: 10.1016/j.cjche.2023.03.004

Effect of aspect ratio of elliptical stirred vessel on mixing time and flow field characteristics in the absence of baffles, Yao, Y; Liu, PQ; Zhang, Q; Li, ZQ; Xi, BJ; Tao, CY; Wang, YD; Liu, ZH, 65, 63-74, (2024), DOI: 10.1016/j.cjche.2023.06.010

Study on cavern evolution and performance of three mixers in agitation of yield-pseudoplastic fluids, Wang, SS; Li, H; Tao, CY; Liu, RL; Wang, YD; Liu, ZH, 55, 111-122, (2023), DOI: 10.1016/j.cjche.2022.06.001

Effect of bubble morphology and behavior on power consumption in non-Newtonian fluids' aeration process, Liu, XM; Wan, J; Sun, JN; Zhang, L; Zhang, F; Zhang, ZB; Li, XY; Zhou, Z, 65, 243-254, (2024), DOI: 10.1016/j.cjche.2023.09.003

Experimental investigation of the mixing efficiency via intensity of segregation along axial direction of a rotating bar reactor, Banaga, AB; Li, YB; Li, ZH; Sun, BC; Chu, GW, 59, 153-159, (2023), DOI: 10.1016/j.cjche.2023.01.003

Microfluidic field strategy for enhancement and scale up of liquid-liquid homogeneous chemical processes by optimization of 3D spiral baffle structure, Zhao, SF; Nie, YY; Zhang, WY; Hu, RZ; Sheng, LZ; He, W; Zhu, N; Li, YG; Ji, D; Guo, K, 56, 255-265, (2023), DOI: 10.1016/j.cjche.2022.07.016

Industrial & Engineering Chemistry Research Vol. 63 (2023), 64 (2024)

Mixing Characteristics of Shear-Thinning Fluids in a Fractal Perforating Impeller Stirred Reactor, Gu, DY; Yang, T; Xie, LF, 62(28), 11194-11205, (2023), DOI: 10.1021/acs.iecr.3c01338

Investigation on Solid Particles and Pseudoplastic Fluid Mixing Characteristics in a Dislocated Self-Similarity Impeller Stirred Reactor, Gu, DY; Wang, J; Yang, H; Deng, YY, 62(27), 10700-10710, (2023), DOI: 10.1021/acs.iecr.3c01538

Investigation of the Intensified Chaotic Mixing and Flow Structures Evolution Mechanism in Stirred Reactor with Torsional Rigid-Flexible Impeller, Tang, XY; Qiu, FC; Li, H; Zhang, Q; Quan, XJ; Tao, CY; Wang, YD; Liu, ZH, (), -, (2023), DOI: 10.1021/acs.iecr.2c03512

Blade Configuration Optimization of the Axial Flow Impeller Applied in a Tall Stirred Tank, Zhu, YW; Yu, JC; Ma, X; Cai, ZQ; Gao, ZM, 62(35), 14047-14060, (2023), DOI: 10.1021/acs.iecr.3c01389

CFD-PBM Investigation on Droplet Size Distribution in a Liquid-Liquid Stirred Tank: Effect of Impeller Type, Tan, GC; Qian, K; Jiang, SX; Wang, JQ; Wang, JJ, (), -, (2023), DOI: 10.1021/acs.iecr.2c03695

Effect of Modified Impellers with Added Leading Edges Flanges on Pumping Efficiency in Agitated Tanks, Mendoza-Escamilla, VX; Rivasdeneyra-Romero, G; Mollinedo, H; Yañez-Varela, JA; Gonzalez-Neria, I; Alonzo-Garcia, A; Martínez-Delgadillo, SA, 62(1), 535-544, (2023), DOI: 10.1021/acs.iecr.2c03321

Optimization of a Gas-Liquid Dual-Impeller Stirred Tank Based on Deep Learning with a Small Data Set from CFD Simulation, Kang, ZM; Feng, LF; Wang, JJ, 63(1), 843-855, (2023), DOI: 10.1021/acs.iecr.3c03561

Numerical Study on the Synergistic Mechanism of Coaxial Mixers in Dense Solid-Liquid Mixing Systems, Xu, ZL; Wan, LX; Li, Z; Liu, BQ, 62(29), 11744-11755, (2023), DOI: 10.1021/acs.iecr.3c01726

Gas Helicity Yields New Insights into Gas-Liquid Reactor Design: Enhanced Oxygen Transfer Rate of Coaxial Mixers at Low-Speed Ratio, Jegatheeswaran, S; Ein-Mozaffari, F, (), -, (2023), DOI: 10.1021/acs.iecr.2c04016

CFD Modeling of Liquid-Liquid Batch-Stirred Tank at High Organic to Aqueous Phase Ratios, Mahakal, PA; Patwardhan, AW, 62(45), 19323-19340, (2023), DOI: 10.1021/acs.iecr.3c00826

Experimental and Numerical Study on the Residence Time Distribution in a Stirred Membrane Reactor, Hui, YY; Feng, X; Duan, XX; Mao, ZS; Yang, C, 62(16), 6486-6499, (2023), DOI: 10.1021/acs.iecr.3c00182

Intensification of Solid-Liquid Suspension Performance in an Elliptical Uncovered Unbaffled Stirred Tank, Yao, Y; Liu, ZH; Zheng, GC; Tao, CY; Wang, YD; Xi, BJ, 62(12), 5315-5325, (2023), DOI: 10.1021/acs.iecr.2c03923

CFD-PBE Simulation of Flow Dynamics and Mass Transfer in Two-Stage Countercurrent Mixer-Settler, Hao, Z; Yang, LB; Xiao, ST; Liu, XC; Zhao, WL, 62(26), 10237-10251, (2023), DOI: 10.1021/acs.iecr.3c00440

Residence Time Distribution and Flow Characteristic in a Multistage Stirred Reactor, Wang, JH; Wang, HB; Li, ZP; Cai, ZQ; Gao, ZM, 62(36), 14712-14722, (2023), DOI: 10.1021/acs.iecr.3c01513

Novel Correlation for Critical Speed for Solid Suspension in Stirred Tanks Developed Using Machine Learning Models Trained on Literature Data, Joshi, SS; Dalvi, VH; Vitankar, VS; Joshi, AJ; Joshi, JB, (), -, (2023), DOI: 10.1021/acs.iecr.3c00488

A Methodical Approach to Scaling Up an Aerated Coaxial Mixer Containing a Shear-Thinning Fluid: Effect of the Fluid Rheology, Rahimzadeh, A; Ein-Mozaffari, F; Lohi, A, 62(21), 8454-8476, (2023), DOI: 10.1021/acs.iecr.3c00464

Experimental and Numerical Investigation of the Characteristics of Novel Disc Turbines in Aerated Stirred Tanks, Jia, ZT; Zhang, SF; Guo, MK; Xu, LL; Zhang, QH; Yang, C, 62(25), 9886-9900, (2023), DOI: 10.1021/acs.iecr.3c00962

Intensifying the Absorption of CO₂ in Water Using a Static Mixer; Part II: Effect of Reactor Design, Altabash, G; Al-Hindi, M; Azizi, F, (), -, (2023), DOI: 10.1021/acs.iecr.3c01353

Mixing Enhancement in a Chaotic Micromixer with Reversed Ridges and Grooves, Chen, SL; Lin, Q; Pan, N; Hao, M; Jiang, Y; Xie, YH; Ba, YS; Bian, X; Liu, K, 62(39), 16113-16124, (2023), DOI: 10.1021/acs.iecr.3c01997

Novel Correlation for the Solid-Liquid Mass Transfer Coefficient in Stirred Tanks Developed by Interpreting Machine Learning Models Trained on Literature Data, Joshi, SS; Dalvi, VH; Vitankar, VS; Joshi, AJ; Joshi, JB, 62(46), 19920-19935, (2023), DOI: 10.1021/acs.iecr.3c02442

Complex Polymer Nanoparticle Synthesis and Morphology Control Using an Inkjet Mixing System, Maki, T; Muranaka, Y; Takeda, S; Mae, K, 62(2), 991-997, (2023), DOI: 10.1021/acs.iecr.2c03767

Mixing Enhancement of Newtonian Liquids in a Curvature Induced Split and Recombine Micromixer, Ghosh, AB; Atta, A, (), -, (2023), DOI: 10.1021/acs.iecr.2c04131

Experimental Investigations on Geometry Modulated Solute Mixing in Viscoelastic Media, Mahapatra, B; Bandopadhyay, A, (), -, (2023), DOI: 10.1021/acs.iecr.2c03663

Enhancement of Macromixing Performance of a Stirred Tank with a Novel V-Shaped Punched Baffle, Xu, LL; Jia, ZT; Guo, MK; Mao, ZS; Fan, YQ; Zhang, QH; Yang, C, (), -, (2023), DOI: 10.1021/acs.iecr.2c03936

Three-Dimensional Model on Liquid-Liquid Mass Transfer of the Kenics Static Mixer: Considering Dynamic Droplet Size Distribution, Cao, Q; Zhou, JF; Qian, Y; Yang, SY, 62(27), 10507-10522, (2023), DOI: 10.1021/acs.iecr.3c00285

Residence Time Distribution in an Asymmetrical Twin-Screw Extruder, Yu, HW; Zhao, ZW; Xu, BP; Hu, GH; Lemaitre, C; Feng, YH, 62(43), 17997-18008, (2023), DOI: 10.1021/acs.iecr.3c02065

Study on the Numerical Model of Gas-Liquid Dispersion Driven by a Coaxial Mixer, Yang, C; Lu, HC; Li, Z; Xu, ZL; Liu, BQ, 62(21), 8556-8572, (2023), DOI: 10.1021/acs.iecr.3c00882

Numerical Simulation of Liquid-Liquid Dispersion Characteristics in Screen-Type Static Mixers by Two Simplified Zero-Dimensional Models, He, K; Chen, XY; Hu, CJ; Zhang, S; Chen, KH; Qiu, XP; Luo, PC; Zhu, ZY, 62(20), 8085-8097, (2023), DOI: 10.1021/acs.iecr.3c00816

Hydrodynamics, Residence Time Distribution, and Mass Transfer in Spiral Coils in Series, Khan, MS; Deore, HS; Kulkarni, AA, 62(50), 21822-21834, (2023), DOI: 10.1021/acs.iecr.3c02859

Journal of the Taiwan Institute of Chemical Engineers Vol. 142-153 (2023), 155 (2024)

Mixing performance of a non-Newtonian fluid in a coaxial agitated impeller reactor, Shiue, A; Zhu, LK; Wang, CL; Jeng, JC; Leggett, G, 143, 104715, (2023), DOI: 10.1016/j.jtice.2023.104715

CFD simulation and experimental analysis of solid-liquid mixing characteristics in a stirred tank with a self-similarity impeller, Gu, DY; Song, YH; Xu, H; Wen, L; Ye, M, 146, 104878, (2023), DOI: 10.1016/j.jtice.2023.104878

Cavern development characteristics of pseudoplastic fluid in a stirred tank with dual-impellers, Zhao, CZ; Zhang, X; Si, W; Luan, DY; Chen, SY, 150, 105057, (2023), DOI: 10.1016/j.jtice.2023.105057

Study on hydrodynamics characteristics in a gas-liquid stirred tank with a self-similarity impeller based on CFD-PBM coupled model, Gu, DY; Wen, L; Xu, H; Ye, M, 143, 104688, (2023), DOI: 10.1016/j.jtice.2023.104688

Optimization of mixing behaviors in a multistage vanadium shale leaching tank by a double-layer impeller at different speeds, Fang, Q; Li, J; Wu, GL; Liu, J; Shi, WN; Wang, JH; Ni, HW, 155, 105296, (2024), DOI: 10.1016/j.jtice.2023.105296

Investigation of the flow patterns and mixing efficiency in a stirred tank through particle image velocimetry, Ciou, ZY; Wu, CY, 149, 104988, (2023), DOI: 10.1016/j.jtice.2023.104988

Improved mixing performance of gas-liquid stirred tanks by using V-shaped punched baffles, Guo, MK; Jia, ZT; Zhang, SF; Kong, B; Xie, MH; Zhang, QH; Yang, C, 153, 105206, (2023), DOI: 10.1016/j.jtice.2023.105206

Numerical investigation of the interstage backmixing in multistage compartmented agitated column with single phase, Zi, C; Liang, XF; Li, JC, 149, 105003, (2023), DOI: 10.1016/j.jtice.2023.105003

Chaotic mixing properties under rotation plus revolution revealed by purification experiments and numerical simulations, Dai, XR; Li, CL; Wang, SB; Wang, H; Xu, JX; Xiao, QT; Fan, YW, 142, 104652, (2023), DOI: 10.1016/j.jtice.2022.104652

Korean Journal of Chemical Engineering Vol. 40 (2023)

Performance characteristics of an axial-flow gas induction impeller, Park, J; Lee, WHY; Lee, JW, 40(1), 46-56 (2023), DOI: 10.1007/s11814-022-1252-7

Journal of Chemical Engineering of Japan Vol. 56 (2023)

Estimation of the Just Suspension Speed in Solid-Liquid Agitated Vessels With Various Impellers, Aida, M; Murakami, Y; Shono, A, 56, 2221707 (2023), DO: 10.1080/00219592.2023.2221707

Estimation of the Just Suspension Speed of Mixed Particles in a Solid-Liquid Stirred Tank, Aida, M; Murakami, Y; Shono, A, 56, 2197949 (2023), DO: 10.1080/00219592.2023.2197949

化学工学論文集 Vol. 49 (2023)

新型軸流攪拌翼 HR320 と HR320S の性能評価, 高倉逸仁, 岩田真依, 西田亮太, 小出千尋, 古川陽輝, 加藤禎人, 加藤好一, 根本孝宏, 吾郷健一, 高承台, 49(3), 56-61 (2023), DOI: <https://doi.org/10.1252/kakoronbunshu.49.56>

多目的変形合体多段翼(AM 翼)の新規開発, 高橋理輝, 松岡杏奈, 古川陽輝, 加藤禎人, 朝山真輔, 森川議博, 高承台, 49(4), 89-94 (2023), DOI: <https://doi.org/10.1252/kakoronbunshu.49.89>

HB 翼の試験管からパイロットスケールまでの適用, 安井詩織, 伊奈卓哉, 服部大輔, 下河邊一樹, 原口蘭, 古川陽輝, 加藤禎人, 高承台, 49(5), 109-113(2023), DOI: <https://doi.org/10.1252/kakoronbunshu.49.109>

新型大型 2 枚パドル翼 GD220 の開発と性能評価, 高橋理輝, 岩田真依, 古川陽輝, 加藤禎人, 加藤好一, 根本孝宏, 吾郷健一, 高承台, 49(5), 114-118(2023), DOI: <https://doi.org/10.1252/kakoronbunshu.49.114>

大粒子添加による固液攪拌槽の槽壁熱伝達の促進, 藤堂里美, 門叶秀樹, 49(5), 119-122(2023), DOI: <https://doi.org/10.1252/kakoronbunshu.49.119>