

POSTER SESION 1, Tuesday, 17:40; SPORT HALL

- 1.1 Modeling of substance transport in simulated biomedical systems
A. Adach
- 1.2 Method for "on-line" measurement of water quality indicators in Sulejow Reservoir
J. Adamiec, A. Ziemińska-Stolarska, M. Imbierowicz, E. Imbierowicz, M. Jaskulski, I. Zbiciński
- 1.3 Heat conductivity of air-dried fiber-reinforced silica based xerogels measurements by the hot wire method
R. Adamski, Z. Pakowski, A. Kamińska, P. Wierucka
- 1.4 Separation of 1,3-propanediol from fermentation broth by reactive extraction
K. Alejski, I. Miesiąc, B. Rukowicz, M. Szóstak
- 1.5 Influence of mass transfer on drop size distribution in an agitated liquid-liquid dispersion
A. Bąk, W. Podgórska, J. Zenke, E. Leśniewska
- 1.6 Dynamical and technological consequences of the occurrence of multiple isolas of steady states in a catalytic fluidized bed reactor
K. Bizon
- 1.7 Reduced order model of a non-isothermal catalyst pellet based on proper orthogonal decomposition
K. Bizon
- 1.8 Effect of reactant adsorption on dynamic behavior of a porous catalyst pellet
K. Bizon, B. Tabiś
- 1.9 Laccase concentration by foam fractionation of *Cerrena unicolor* and *Pleurotus sapidus* culture supernatants
M. Błatkiewicz, A. Antecka, A. Górak, S. Ledakowicz
- 1.10 Simple novel multicolumn cyclic system for protein separation
R. Bochenek, R. Gorczyca, W. Piątkowski, D. Antos
- 1.11 Design of crystallization process of multicomponent mixtures of electrolytes based on semi-empirical excess Gibbs energy models
R. Bochenek, M. Olbrycht, M. Kołodziej, R. Gorczyca, I. Poplewska, W. Marek, R. Muca, M. Balawejder, W. Piątkowski, D. Antos
- 1.12 The annular flow of gas-liquid-liquid multiphase mixture in pipes of thin-film evaporators
A. Brandt, K. Czernek, M. Pietrzak, M. Płaczek, S. Witczak
- 1.13 The LPG dispersion process after emission from the car tanks
D. Brzezińska, M. Dziubiński, A.S. Markowski
- 1.14 Air-lift reactor with helical flow promoter
P. Budzyński, D. Czerbniak, K. Dymowski
- 1.15 Bubble hydrodynamics and mass transfer for oscillating sparger in bubble column
P. Budzyński, K. Dymowski, D. Czerbniak
- 1.16 The influence of a standing wave on mass transfer and gas hold-up in pulsed bubble column
P. Budzyński, A. Gwiazda
- 1.17 Analysis of the concentration of selected heavy metals in sediments of the Oder river estuary
M. Byczkiewicz, M. Jabłoński
- 1.18 Kinetics of mass transfer of calcium to chitosan thermosensitive hydrogel
A. Chacuk, A. Skwarczyńska, Z. Modrzejewska
- 1.19 Studies of different radionuclides sorption from liquid radioactive waste onto SiEA-KNiFe ion exchanger
D. Chmielewska, M. Henczka
- 1.20 Modelling and analysis of powder flow during shear tests in a rotational rheometer using discrete element method (DEM)
M. Chutkowski, W. Zapała
- 1.21 Mathematical modelling of periodic drying kinetics of wheat in a fluidized bed system
W. Ciesielczyk, A. Kamińska-Pękala
- 1.22 Membrane fouling in ultrafiltration of water-protein-sodium chloride model systems
K. Ćwirko, E. Tomczak, D. Szaniawska
- 1.23 Enzymatic activity of commercial cellulolytic enzyme preparations towards various biomass pre-treated in high-temperature/high-pressure
K. Dąbkowska, K. Kopeć, M. Pilarek
- 1.24 Application of supercritical carbon dioxide in extraction processes of carboxylic acids
M. Djas, M. Henczka
- 1.25 Economic analysis of diaphragm air-ground heat exchangers
P. Dolata, C. Kuncewicz, P. Owczarz

- 1.26 Biological drying of spent mushroom substrate
A. Domińczyk-Kuderko, L. Krzystek, S. Ledakowicz, M. Olczak
- 1.27 Numerical simulation of fluid flow through the cellular space of aluminium foams
R. Dyga
- 1.28 Selective component removal from liquid solution in a novel microwave device working in a continuous way
J. Dziak, T. Cioska, R. Apiecioneck
- 1.29 Separation of water-diesel oil emulsions with the use of microfilters
J. Dziak, I. Gadowska
- 1.30 Determination of mass transfer coefficient in liquid phase making use of distillation results or heat transfer examination during thin-layer evaporation
J. Dziak, M. Jakielarz, W. Ludwig
- 1.31 Comparison of different types of turbulizers applied to make more efficient the process of heat transfer
J. Dziak, J. Wiśniewska
- 1.32 Simulation of autonomic system for leakage detection
J. Dzierła, M. Staszak
- 1.33 Removal of styrene from air streams in the pilot-scale trickle-bed bioreactor (TBB)
A. Gąszczak, G. Bartelmus, R. Sarzyński
- 1.34 Multi-stage ultrafiltration of industrial waste brine from fish processing
U. Gabriel-Półrolniczak, A. Szaniawska, K. Ćwirko, M. Szymczak
- 1.35 External mass transfer model for decomposition of hydrogen peroxide by catalase Terminox Ultra in Packed Bed Reactor
I. Grubecki
- 1.36 The influence of pH on the production of volatile fatty acids in the dark fermentation process of the kitchen waste
J. Grzelak, R. Ślęzak, L. Krzystek, S. Ledakowicz
- 1.37 Study on kinetics of esterification of levulinic acids with selected aliphatic alcohols in nonisothermal conditions
Ł. Hamryszak, M. Grzesik
- 1.38 Resuspension and deposition of microparticles in small urban water distribution system
A. Hofman, M. Dziubiński, J. Sowiński
- 1.39 Starch granules swelling during gelatinization in Couette-Taylor flow apparatus
R. Hubacz, H. Masuda, T. Horie, N. Ohmura
- 1.40 Dynamic surface activity of polyaldehyde dextran nanoparticles and their effect on a model surfactant adsorption at the air - water interface
K. Jabłczyńska, T.R. Sosnowski
- 1.41 Safety assessment of the reaction of sulphuric acid(VI) with titanium raw materials
M. Jabłoński, S. Tylutka
- 1.42 The reorganization of the solid deposits during filtration of mixed aerosols in polymer fibrous filters
A. Jackiewicz, J.M. Gac, Ł. Werner, S. Jakubiak
- 1.43 New methods of natural gas adjusting for technological purposes and distribution based on modern filtration materials
A. Jackiewicz, M. Szwaś, J.M. Gac, M. Zalewski, Ł. Werner
- 1.44 Reduction of nanoparticles exposure by modification of the local exhaust ventilation system in a mixing nanopowders
T. Jankowski
- 1.45 Modification of chitin particles with [EOHpyr][TCB] ionic liquid
M.M. Jaworska, A. Górak, P. Sobieszuk
- 1.46 Analysis of the first difference of normal stress during shear flow in selected food fluids
K. Kaczmarczyk, A. Ptaszek, J. Kruk, P. Ptaszek, M. Grzesik
- 1.47 Analysis of non-newtonian rheological properties using pressure drop and ultrasound Doppler velocimetry
K. Kaczmarczyk, P. Ptaszek, J. Kruk, A. Ptaszek, M. Grzesik
- 1.48 Experimental analysis of the gas-liquid mass transfer process in the system with floating particles in the agitated vessel
A. Kiełbus-Rępała
- 1.49 Analysis of usefulness of selected correlations for calculations of hydraulics of columns packed with Pall rings
T. Komorowicz, K. Neupauer, A. Mucha
- 1.50 Modeling of heat transfer in magnetically assisted bioreactor
M. Konopacki, R. Rakoczy, M. Kordas, R. Drozd, K. Fijałkowski
- 1.51 Artificial urinary bladder model for the study of biofilm formation on the urological catheters
K. Kopeć, K. Dąbkowska, T. Ciach

- 1.52 Experimental study and mathematical modeling of the residence time distribution in a liquid vessel with rotating and reciprocating agitator
M. Kordas, R. Rakoczy
- 1.53 Comparative study of continuous-flow microreactors based on silica monoliths modified with Lewis acid centres
A. Koreniuk, K. Maresz, J. Mrowiec-Białoń
- 1.54 Analysis of the process of smoke lifting and temperature increase over the source of fire
G. Kowalski, D. Brzezińska, M. Dziubiński
- 1.55 Adsorption dynamics of model pulmonary surfactants at the air/water interface: a comparison of existing mathematical models
K. Kramek-Romanowska, T.R. Sosnowski
- 1.56 Average shear rate at surface of particles falling in non-Newtonian liquids
E. Krupicka, M. Dziubiński
- 1.57 CO₂ absorption in N,N-diethylethanolamine blends with primary amines
E. Kruszcak, H. Kierzkowska-Pawlak
- 1.58 Mechanical methods applied for properties improvement of carbon black from waste tyre pyrolysis
R. Krzywda, T. Wąsowski, B. Wrzesińska, L. Gradoń
- 1.59 Optimization of geometrical parameters of the ribbon impeller
C. Kuncewicz
- 1.60 Heat balance of horizontal ground heat exchangers
K. Kupiec, M. Gwadera
- 1.61 Diffusive properties of alginate biosorbents
S. Kwiatkowska-Marks, J. Miłek
- 1.62 Comparative studies on membrane assisted purification of tyrosinase versus salting-out technique followed by chromatography
K. Labus, M. Wiśniewski, M. Cieńska, J. Bryjak
- 1.63 Investigations of heat conduction process in granular bed
B. Larwa, K. Neupauer, M. Teper, T. Komorowicz, K. Kupiec
- 1.64 Heat transfer investigations in a liquid vessel that is mixed by means of a reciprocating agitator
J. Lechowska, M. Kordas, R. Rakoczy
- 1.65 Stimuli-responsive polymers – future perspectives for chemical engineering
M. Lemanowicz, W. Bogacz, A. Gierczycki
- 1.66 Modelling and simulations of pyrolysis oil condenser
M. Lewak
- 1.67 Modelling of suspensions permeation through the stratum corneum layer
J. Sęk, M. Błaszczak, O. Shtyka

POSTER SESION 2, Wednesday, 17:40; SPORT HALL

- 2.1 In-line measurements method of homogenization kinetic and emulsion stability for spray drying
A. Lewandowski, M. Jaskulski, I. Zbiciński
- 2.2 Thermal decomposition of Polyether polyols
A. Lewandowski, M. Stelmachowski, L. Nowicki
- 2.3 Hydrodynamics of particles flow in the modified Wurster apparatus operating in a fast circulating dilute spout-fluid bed regime
W. Ludwig
- 2.4 Modeling of gas flow in the modified Wurster apparatus
W. Ludwig, J. Dziak
- 2.5 Determination of basic electrostatic properties of cores used in the dry coating process
W. Ludwig, T. Mączka
- 2.6 Analysis of the gas flow in an economizer
W. Ludwig, D. Zając
- 2.7 Optimization of the construction of recuperator with the use of CFD methods
W. Ludwig, D. Zając
- 2.8 Experimental analysis of gas hold - up for gas - liquid system agitated in a vessel equipped with two impellers and vertical tubular baffles
M. Major-Godlewska, D. Radecki
- 2.9 Computational fluid dynamics of the inertial wave type mist eliminators
Ł. Makowski, J. Łaskowski
- 2.10 Application of PIV method for analyse of the behaviour of the moving bed in drum
K. Malek, K. Skoczowska, R. Ulbrich
- 2.11 Characterization of the phase equilibrium in aqueous two-phase extraction systems
W. Marek, R. Bochenek, A.P. Piech, W. Piątkowski, D. Antos
- 2.12 Drug-core double and triple emulsions preparation
A. Metera, A. Markowska-Radomska, E. Dłuska
- 2.13 Hybrid drying of potatoes – process kinetics, energy consumption and quality aspects
D. Mierzwa, A. Pawłowski
- 2.14 Mathematical modelling of ethanol production by *Saccharomyces cerevisiae* in batch culture with non-structured model
A. Mieszala, M. Konopacki, K. Fijałkowski, A. Żywicka, D. Peitler, R. Rakoczy
- 2.15 The effect of temperature on the kinetics of deactivation of catalase from *Aspergillus niger* by substrate
J. Miłek, M. Wójcik, S. Kwiatkowska-Marks
- 2.16 Conceptual design for innovative unit operations and processes
P.T. Mitkowski, W. Szaferksi
- 2.17 Viscosity measurements of gypsum suspensions
J. Moravec, F. Rieger, T. Jirout
- 2.18 Dynamics of hydrophobic interaction chromatography under nonlinear isotherm conditions
R. Muca, W. Piątkowski, D. Antos
- 2.19 Numerical analysis of the momentum transfer processes in a mechanically agitated air - biophase - liquid system
M. Musiał, M. Cudak, J. Karcz
- 2.20 Simultaneous measurement of phase velocities in liquid-gas system
R. Musoski, J. Stelmach
- 2.21 Modeling of volatile organic compounds removal from gas streams using cyclic VTSA process
J. Nastaj, J. Rudnicka, K. Witkiewicz
- 2.22 Experimental and modeling studies of Fe(III) ion biosorption process on *Trichoderma viride* fungus biomass and polymeric adsorbent Amberlite IRC-748
J. Nastaj, A. Szmyt, K. Witkiewicz
- 2.23 Recovery of volatile organic compounds from gas phase on selected zeolites using cyclic TSA process
J. Nastaj, B. Wilczyńska, K. Witkiewicz

- 2.24 Modification of fibrous filters with aerogels for improvement of oil mist separation
B. Nowak, J.M. Gac, M. Bojarska, A. Jackiewicz, Ł. Werner
- 2.25 The analysis of the effect of disaccharide concentration in the liquid binder on disc granulation kinetics
A. Obraniak, T. Gluba
- 2.26 Influence of individual mucus components on rheological properties and the mass transfer in the bronchial mucus
M. Odziomek, M. Kalinowska, T.R. Sosnowski
- 2.27 The effect of γ irradiation on viscoelastic properties of viscosupplements
M. Orczykowska, M. Dziubiński, M. Orczykowska
- 2.28 The effect of anionic flocculant concentration on the state of its mechanical structures
M. Orczykowska, P. Owczarz, M. Dziubiński
- 2.29 Sol-gel thermosensitive behaviour study of chitosan – inorganic calcium solutions
P. Owczarz, Z. Modrzejewska, S. Kuberski, M. Dziubiński
- 2.30 Mathematical modelling of thermal and flow processes in vertical ground heat exchangers of heat pumps
S. Pater, W. Ciesielczyk
- 2.31 Productivity of microalgae *Chlorella vulgaris* cultivation in cylindrical photobioreactor
A. Patyna, Ł. Biłos, M. Płaczek, S. Witczak
- 2.32 Analysis and evaluation of operation of domestic biological wastewater treatment plants
M. Pawlita-Posmyk, M. Wzorek
- 2.33 Hybrid drying of potatoes (*Solanum Tuberosum* L.): modeling of process kinetic
A. Pawłowski, D. Mierzwa
- 2.34 Can the airflow conditions significantly influence the filtration process of diesel exhaust particles by fibrous filters?
A. Pencone, A. Moskal
- 2.35 Study on the morphology and transport phenomena of the Reticulated Vitreous Carbon (RVC) foams
M. Piątek, A. Gancarczyk, M. Iwaniszyn, J. Łojewska, A. Kołodziej
- 2.36 Comparison of pressure drop correlations for two-phase flows in small diameter channels
M. Pietrzak, M. Płaczek, S. Witczak
- 2.37 Enhanced chondrocytes proliferation in a wave-induced agitation system
M. Pilarek, K. Godlewska, M. Wojasiński, K. Dąbkowska
- 2.38 Open-cell solid foam packed reactors
M. Płaczek
- 2.39 Effect of filter inhomogeneity on deep bed filtration process
R. Przekop, A. Jackiewicz
- 2.40 Large amplitude oscillatory shear (laos) in application to non-aqueous starch solutions
P. Ptaszek, A. Ptaszek, K. Kaczmarczyk, J. Kruk, M. Grzesik
- 2.41 Intensification of beech wood drying with using microwaves
K. Rajewska, A. Smockiewicz-Wojciechowska, J. Majka
- 2.42 Influence of rotating magnetic field on the gas-liquid volumetric mass transfer coefficients
R. Rakoczy, M. Konopacki, M. Kordas, R. Drozd, K. Fijałkowski
- 2.43 Modelling and experimental investigation of waste tyre pyrolysis process in a laboratory reactor
L. Rudniak, P. Machniewski
- 2.44 Experimental investigation and modelling of emulsions imbibition in porous media
O. Shtyka, J. Sęk
- 2.45 The impact of the process parameters on the efficiency of photocatalytic NO oxidation over P25 and Au modified TiO₂
K. Skalska
- 2.46 The impact of grain composition on behaviour of the bed in the rotating drum
K. Skoczowska, K. Malek, R. Ulbrich
- 2.47 Cellular-automata based modeling of heterogeneous biofilm growth for microbiological processes following various kinetic models
S. Skoneczny

- 2.48 Mathematical modeling of biofilm growth for double-substrate kinetics with substrate inhibition using cellular automata
S. Skoneczny
- 2.49 Steady-state characteristics of a three-phase fluidized bed bioreactor with partial biomass recirculation
S. Skoneczny, B. Tabiś
- 2.50 Experimental assessment of rheological properties of highly concentrated suspensions
L. Sobonkiewicz, G. Filipczak
- 2.51 Effect of increasing the impact packing on microbial cells in a bead mill
M. Solecki, A. Kacprowicz, K. Sicińska, A. Trawińska
- 2.52 Electronic cigarette as a source of aerosols inhaled by users and by-standers
T.R. Sosnowski
- 2.53 Measurements of hydrogen solubility in nitrobenzene/aniline mixtures
A. Srebniak, M. Kraut, O. Görke, P. Sobieszuk
- 2.54 Estimation of kinetic parameters of the pyrolytic decomposition of sewage sludges
P. Stolarek, S. Ledakowicz
- 2.55 Pumping properties of the modified HE-3X agitator
W. Szaferski, P.T. Mitkowski, K. Słowińska, M. Szuster, E. Matelska
- 2.56 The study of the hydrodynamics for three-phase system in the external-loop air-lift reactor
J. Szoplik, M. Bubnowska, A. Kapalka, S. Podgajna, K. Podlipniak
- 2.57 Diffusion and permeability coefficients of mixed matrix membranes determination
M. Szwast, D. Polak, M. Zalewski
- 2.58 Numerical interpretation of the mathematical model of gases – separation processes with participation of nonporous polymer membranes
M. Szwast, Z. Szwast
- 2.59 Gas permeability of porous materials with anisotropic internal structure
G. Wałowski, G. Filipczak
- 2.60 Theoretical and experimental studies on internal heat source capacity generation in carbonaceous and non-carbonaceous adsorbent beds
K. Witkiewicz
- 2.61 Blow-assisted multi-jet electrospinning of poly-L-lactic acid nanofibers
M. Wojasiński, J. Gołowski, T. Ciach
- 2.62 Fractionation of the oil from pyrolysis of waste tyres
B. Wrzesińska, R. Krzywda, A. Krasinski, L. Gradoń
- 2.63 Influence of mobile phase composition and temperature on the retention/sorption behavior of selected test substances in diol-type column
W. Zapała, L. Zapała, J. Kamińska, M. Chutkowski
- 2.64 Sorption properties of selected mixed-mode HILIC column on the example of phenol and caffeine as test substances in acetonitrile – water mobile phase systems
W. Zapała, L. Zapała, J. Kamińska, M. Chutkowski
- 2.65 Computational Fluid Dynamics calculation of a novel planar Solid Oxide Fuel Cell design running on reformed gas mixture
T. Zinko, P. Pianko-Oprych, Z. Jaworski
- 2.66 Three-dimensional Computational Fluid Dynamics modelling of a Proton Exchange membrane Fuel Cell with a serpentine micro-channels design
T. Zinko, P. Pianko-Oprych, Z. Jaworski
- 2.67 The LPG dispersion process after emission from the car tanks
D. Brzezińska, M. Dziubiński, A.S. Markowski