

ISCRE 24 – POSTER SESSION 2

TUESDAY, JUNE 14, 2016

5:00 pm to 7:00 pm

TRANSIENT SIMULATION OF REGENERATION OF METHANOL-TO-GASOLINE CATALYST IN FIXED BED REACTORS

Martin Dan Palis Soerensen

(Paper #13)

EXPLORATION OF MAXWELL-STEFANS PARTICLE DIFFUSION IN A KINETIC MODEL FOR BISPHENOL-A SYNTHESIS CATALYZED BY STRONG ACID CATION EXCHANGE RESINS

Sweta Somasi, Dan Hickman, Kishori Deshpande, Chunxia Costeux and Steve Rosenberg

(Paper #18)

PREDICTING COPOLYMER PROPERTIES - SEQUENCE LENGTH AND GRADIENT QUALITY

Piet D. Iedema, Ivan Kryven and Kim B. McAuley

(Paper #43)

MATHEMATICAL MODELLING OF NYLON 6/6,6 COPOLYMERIZATION IN BATCH REACTOR

Fei Liu, Kimberley McAuley and James Hurley

(Paper #49)

ON THE CO₂ AND H₂O CHEMISORPTION ON HYDROTALCITE-BASED ADSORBENTS FOR SORPTION-ENHANCED WATER-GAS-SHIFT PROCESSES

Kai Coenen, Fausto Gallucci, Paul Cobden, Eric van Dijk, Emiel Hensen and Martin van Sint Annaland

(Paper #59)

A NEW AND ORIGINAL MICROWAVE CONTINUOUS REACTOR UNDER HIGH PRESSURE FOR FUTURE CHEMISTRY

Isabelle Polaert, Lionel Estel, Denis Luart, Christophe Len and Michel Delmotte

(Paper #63)

REVISION OF THE DUSHMAN REACTION KINETICS FOR AN IMPROVED
MICROMIXING CHARACTERIZATION

Pierrette Guichardon and Nelson Ibaseta

(Paper #65)

INVESTIGATION OF FREE CONVECTION HEAT TRANSFER IN MISSOURI S&T
PRISMATIC SCALED DOWN FACILITY (MSTF)

I.A. Said, M.M. Taha, S. Usman and Muthanna Al-Dahhan (Ibrahim Abdallah, presenter)

(Paper #73)

PD SUPPORTED ON THE ACID FUNCTIONALIZED CARBON BLACK FOR THE
HYDROGENATION OF CYCLOHEXENE: EFFECT OF CARBON PROPERTIES ON
THE PD DISPERSION

Ji Sun Kim, Jae Ho Baek, Young Bok Ryu, Kyeong Ho Kim, Seong-Soo Hong, Jeong-
Wook Park and Man Sig Lee

(Paper #75)

ESTIMATION OF SOLIDS DISPERSION IN A BUBBLING FLUIDIZED BED FROM
AREA MEASUREMENTS OF FLORECSSED SOLIDS

Ronald W. Breault, Steven L. Rowan, Kyle T. Stewart and Luke H. Macfarlan

(Paper #106)

DETAILED ANALYSIS OF FLUIDIZED-BED BIOMASS FAST PYROLYSIS USING
MFX-DEM

Qingang Xiong, Stuart Daw, Tingwen Li and Sreekanth Pannala

(Paper #110)

INTENSIFIED METHANOL AND DIMETHYL ETHER SYNTHESIS BY IN-SITU
WATER REMOVAL USING HYDROPHILIC MATERIALS

Maria Cornelia Iliuta, Francis Bougie, Marwa Ghodhbene, Ion Iliuta and Pascal
Fongarland

(Paper #152)

MULTI-SCALE ANALYSIS OF GAS-LIQUID FLOW IN POROUS MEDIA:
EFFECTS OF CONFINEMENT AND POROUS STRUCTURE

Marion Serres, Valérie Vidal and Régis Philippe

(Paper #157)

SYNTHESIS AND APPLICATIONS OF POLYSTYRENE@FE₃O₄ MAGNETIC
MICROSPHERES

Yongping Xue, Changchun Ai and Yuanxin Wu

(Paper #173)

DESIGN AND OPTIMIZATION OF SCREW CONVEYOR REACTOR SYSTEM FOR THE PYROLYSIS OF SPENT ION-EXCHANGE RESINS

Hee-Chul Yang, Hyung-Ju Kim and Dong-Yong Chung

(Paper #174)

CO₂ ACTIVATION VIA REVERSE WATER GAS SHIFT (RWGS) PROCESSES: A COMPARATIVE THERMODYNAMIC ANALYSIS

Marcus Wenzel, Liisa Rihko-Struckmann and Kai Sundmacher

(Paper #176)

SIMULATION OF HEAT TRANSFER IN A CALIBRATOR FOR PROFILE EXTRUSION USING OPENFOAM

Florian Habla, Célio Fernandes, Maximilian Maier, Lennart Densky, Luis Ferrás, Olga Carneiro, J. Miguel Nóbrega and Olaf Hinrichsen

(Paper #183)

KINETICS OF MELT TRANSESTERIFICATION OF BISPHENOL-A AND DIPHENYL CARBONATE TO POLYCARBONATE WITH TETRAETHYL AMMONIUM HYDROXIDE AS CATALYST

Zhenhao Xi, Fenglei Bi and Ling Zhao (Yahua Chen, presenter)

(Paper #186)

INTENSIFIED PYROLYSIS IN THERMAL PLASMA FOR ASPHALTENE UTILIZATION

Yan Cheng, Tianyang Li, Binhang Yan and Yi Cheng

(Paper #188)

EXPERIMENTAL AND NUMERICAL ANALYSIS OF A MICROSTRUCTURED PACKED BED REACTOR FOR METHANATION OF CO/CO₂ MIXTURES

Michael Belimov and Peter Pfeifer

(Paper #195)

VALIDATING STIRRED TANK REACTOR MODELS FOR A LIQUID-LIQUID NITRATION

Anabela Nogueira, Dulce Silva and Cristina Gaudencio Baptista

(Paper #209)

DEVELOPMENT OF A NEW MASS TRANSFER CORRELATION FOR OPEN CELL FOAMS

Matteo Ambrosetti, Gianpiero Groppi and Enrico Tronconi

(Paper #212)

SYNTHETIC NATURAL GAS PRODUCTION THROUGH HIGH PRESSURE
METHANATION OF CARBON DIOXIDE

Emanuele Giglio, Fabio Deorsola, Samir Bensaid, Salvatore Abate, Gabriele Centi and Raffaele Pirone

(Paper #237)

GENERAL METHOD FOR COMPARTMENTAL MODELLING OF REACTORS
USING TRACER EXPERIMENTS AND CFD SIMULATIONS

Jérémie Haag, Cécile Lemaitre, Caroline Gentric and Jean-Pierre LeClerc

(Paper #243)

SIMULATION OF THE DISPERSION OF ACTIVE SUBSTANCE FOR ALGAE
TREATMENT IN AQUACULTURE POND BY COMPARTMENTAL MODELLING

Jérémie Haag, Amahoue François Moussoh, Aziz Assaad, Cécile Lemaitre, Caroline Gentric, Marie-Noëlle Pons and Jean-Pierre LeClerc

(Paper #246)

TOWARDS A FRAMEWORK FOR EFFECTIVE EXPERIMENTATION AND
MODELLING TO CHARACTERISE SOLID ACIDS BY AMMONIA
TEMPERATURE PROGRAMMED DESORPTION

Sam K. Wilkinson, John West, Canan Gucuyener, Rhys Lloyd, E. Hugh Stitt and John L. Casci

(Paper #252)

EFFICIENT SOLUTION METHODS FOR INTRAPARTICLE DIFFUSION
SUITABLE FOR REACTOR OPTIMIZATION

Markus Kaiser, Gabriel Sievi and Hannsjörg Freund

(Paper #259)

SIMULATED MOVING BED REACTOR PROCESSES FOR THE INDUSTRIAL
PRODUCTION OF BUTYL ACRYLATE

Dânia Constantino, Rui Faria, Carla Pereira, José Loureiro and Alírio Rodrigues

(Paper #260)

SCALING -UP FROM A FIXED BED REACTOR TO A MULTI-TUBULAR
REACTOR FOR A HIGHLY EXOTHERMIC HYDROSILYLATION REACTION

John M. Gohndrone and Paul C. Dinh

(Paper #276)

INVESTIGATING THE EFFECT OF HEAT EXCHANGE TUBES SIZE ON PHASE
DISTRIBUTION OF BUBBLE COLUMNS FOR FISCHER TROPSCH SYNTHESIS
BY USING GAMMA RAY COMPUTED TOMOGRAPHY (CT) TECHNIQUE

Abbas Sultan, Laith Salim and Muthanna Al-Dahhan

(Paper #278)

EFFECT OF CATALYST PARTICLE SHAPE ON GAS-PHASE FISCHER-TROPSCH SYNTHESIS IN A WALL-COOLED FIXED-BED REACTOR: A COMPUTATIONAL STUDY

Arvind Nanduri and Patrick L. Mills
(Paper #296)

SINGLE-PHASE FLOW RESIDENCE TIME DISTRIBUTIONS IN A ROTOR-STATOR SPINNING DISC REACTOR

Franz Haseidl, Peter König and Olaf Hinrichsen (Julia Kleiner, presenter)
(Paper #304)

OPTIMIZATION OF CRYSTALLIZATION PROCESS IN AN INDUSTRIAL CONTINUOUS DRAFT TUBE BAFFLE CRYSTALLIZER THROUGH CFD WITH POPULATION BALANCE MODEL

Ze Sun, Hang Chen, Haiou Ni, Xingfu Song and Jianguo Yu
(Paper #312)

A DYNAMIC TWO-DIMENSIONAL HETEROGENEOUS MODEL FOR QUASI-ISOTHERMAL METHANOL SYNTHESIS REACTORS

Alarifi Abdulaziz, Ali Elkamel and Eric Croiset
(Paper #315)

CHEMICAL REACTION ENGINEERING OF NICKEL-PALLADIUM CORE SHELL NANOPARTICLES: EXPERIMENTAL AND MODELLING STUDY

Sayan Pal, Arun Nikam and Amol Kulkarni
(Paper #324)

CARBON DIOXIDE CONVERSION BY REVERSE WATER GAS SHIFT CHEMICAL LOOPING

Yolanda Daza, Debtanu Maiti, Bryan Hare, Adela Ramos, Matt Yung, Venkat Bhethanabotla and John Kuhn
(Paper #330)

EXPERIMENTAL INVESTIGATION OF GAS-LIQUID FLOW IN MONOLITH CHANNELS USING MONOFIBER OPTICAL PROBES

Deepali Chugh, Jianbin Shao, Muthanna H. Al-Dahhan and Shantanu Roy
(Paper #336)

MEASUREMENT OF PHASE CROSS SECTION DISTRIBUTION IN GAS-SOLID SPOUTED BED VIA GAMMA RAY COMPUTED TOMOGRAPHY (CT)

Neven Ali, Thaar Aljuwaya and Muthanna Al-Dahhan
(Paper #338)

VELOCITY MAPPING IN A BINARY FLUIDIZED BED OF COAL AND
GASIFIER ASH

Sangram Roy, Ashutosh Yadav, Manojkumar Ramteke, Harish J. Pant and Shantanu Roy
(*Paper #344*)

THERMAL MANAGEMENT FOR THE DIRECT SYNTHESIS OF HYDROGEN
PEROXIDE BY INTENSIFYING HEAT REMOVAL CAPABILITY OF GLASS
BASED MICROFABRICATED FLOW REACTOR

Tomoya Inoue, Ming Lu, Kenichiro Ohtaki and Hirotada Hirama
(*Paper #349*)

BIFURCATION ANALYSIS OF INDEX INFINITY PARABOLIC MODELS
DESCRIBING REACTORS AND REACTING FLOWS

Vemuri Balakotaiah and Ram Ratnakar
(*Paper #371*)

DETERMINATION OF MASS TRANSFER RESISTANCES IN THREE-PHASE
MECHANICALLY AGITATED SLURRY REACTORS

Ilias Stamatiou and Frans Muller
(*Paper #381*)

HEAT AND MASS TRANSFER COEFFICIENTS FOR COUPLED HOMOGENEOUS-
HETEROGENEOUS COMBUSTION IN MONOLITHS

Imran Alam, David West and Vemuri Balakotaiah
(*Paper #403*)

ACCELERATION OF KINETIC MONTE CARLO SIMULATION FOR DESIGNING
FREE RADICAL COPOLYMER SEQUENCE

Hanyu Gao, Ivan Konstantinov, Steve Arturo and Linda Broadbelt
(*Paper #417*)