Technical Program

Sunday, June 28, 2015

3:00 PM 6:00 PM Registration (Prefunction Lobby)

6:00 PM 7:00 PM Welcoming Reception (Atrium)

Monday, June 29, 2015

8:00 AM 10:00 AM Registration (Prefunction Lobby)

8:00 AM 8:40 AM Coffee (Atrium)

			Act IV
8:40 AM	**9:00 AM**	**Opening Ceremony**	**Opening Ceremony** ***Alissa Park, Bing Du, & Liang-Shih Fan***
9:00 AM	**9:45 AM**	**Keynote Session 1**	**New Frontiers in Magnetic Resonance Imaging of Multi-Phase Flows and Reaction in Gas-Liquid and Gas-Liquid-Solid Reactors** ***Lynn Gladden (University of Cambridge, UK)***

9:45 AM 10:00 AM Break (Atrium)

			Act IV	Act III	Room 401/402	Room 403/404
10:00 AM	**11:00 AM**	**Sessions 1-4**	**Session 1 - Classic 1** **Chairs: Jiri Drahos & Vania Santos-Moreau**	**Session 2 - Computational 1** **Chairs: Ying Liu & Madhava Syamlal**	**Session 3 - Novel 1** **Chairs: Faical Larachi & Joshua Allen**	**Session 4 - Process/Scale 1** **Chairs: John Coleman & Michael Schlueter**
		10:00-10:10 AM	Bubble Dynamics and Mass Transfer Study in a Photo-Bioreactor	Two-Fluid Model Analyses of Instabilities and Non-Uniformities in Bubbly Gas-Liquid Flows	Liquid-like Hybrid Sorbents for Carbon Capture: Investigation of CO2/Sorbent Interactions, Sorbent Viscosity and CO2 Diffusivity	Novel Clean Energy Technologies Utilizing Fluidized Bed Reactors
			Onkar Manjrekar (Washington University in St. Louis, USA)	*Henrik Ström (Chalmers University of Technology, Sweden)*	*Camille Petit (Imperial College London, UK)*	*Raghubir Gupta (RTI International, USA)*
		10:10-10:20 AM	New Approaches for Prediction of Gas Holdups and Validation of the Mixing Length Concept in Gas-Liquid and Slurry Bubble Columns	Numerical Simulation for Interfacial Forces of Counter-Current Flow over an Inclined Plate	A Comparative Study of Different Amine-Based Solvents for CO2-Capture Using the Rate-Based Approach	Influence of Hydrodynamics on Yield and Selectivity in Reactive Bubbly Flows
			Stoyan Nedeltchev (Institute of Fluid Dynamics, Helmholtz-Zentrum Dresden-Rossendorf, Germany)	*Janine Galvin (U.S. DOE National Energy Technology Laboratory, Albany, OR, USA)*	*Nicole Hüser (University of Paderborn, Germany)*	*Michael Schlueter (Hamburg University of Technology, Germany)*
		10:20-10:30 AM	Developing Correlations for Prediction of Hydrodynamic Parameters in Bubble Column Reactors Operating with Non-Newtonian Liquids	Multi-Scale Modelling of an Airlift-Loop Reactor Applied to Remove of Ferrous Iron from Potable Water	Recent Advances on the Integrated Effects of Dense Internals on Bubble Dynamics, Heat Transfer, and Flow Dynamics in Slurry Bubble Columns for Clean Alternative Fuels Production via Fischer-Tropsch Synthesis	An Energy Saving Dimethyl Ether Production from Synthesis Gas Using Indirect Method By Self-Heat Recuperation
			Amin Esmaeili K.S (Ecole Polytechnique de Montreal, Canada)	*Christophe Vial (Clermont Université, Université Blaise Pascal, LABEX IMobS3, France)*	*Mohammed AlMesfer (King Khalid University, Saudi Arabia)*	*Yasuki Kansha (The University of Tokyo, Japan)*
		10:30-10:40 AM	Hydrodynamic Characteristics of Liquid Solids Binary Fluidized Bed through Radiotracer Techniques and Euler-Lagrangian Simulations	Direct Numerical Simulations and Experiments of a Small Fluidized Bed	Industrial Petrochemical Wastewater Treatment By Ozonation in the Presence of Alumino Silica Materials in a Gas Liquid Solid Reactor	Heat & Mass Transfer in Boiling and Reacting Gas-Liquid Systems: A Study of Isolated Droplets & Bubbles

		Rajesh Kumar Upadhyay (Indian Institute of Technology Guwahati, India)	*Yali Tang (Eindhoven University of Technology, Netherlands)*	*Marie-Hélène Manero, Université de Toulouse*	*Vivek V. Ranade (National Chemical Laboratory, Pune, India)*
	10:40-10:50 AM	Circulation Structure Analysis of Fluid Flow in an Ebullated Bed Reactor Using Tracer Techniques	Coupled CFD-PBM Modeling of the Effect of Liquid Viscosity on Gas-Liquid Mass Transfer in a Bubble Column	Discrete Bubble Modeling of CO2 Absorption in a NaOH Solution in a Micro-Structured Bubble Column	Exergy Recuperative CO2 Separation Process
		Zi-Bin Huang (East China University of Science and Technology, China)	*Tiefeng Wang (Tsinghua University, China)*	*Niels G. Deen (Eindhoven University of Technology, Netherlands)*	*Atsushi Tsutsumi (The University of Tokyo, Japan)*
	10:50-11:00 AM	Dynamics of Unary and Binary Gas-Solid Flows: ECT Measurements and CFD Simulations	Investigation of Flow Regimes in Trickle Bed Reactors Using Volume of Fluid and Lattice Boltzmann Methods	Physical and Chemical Interactions of Shale with Supercritical CO2 for Enhanced Unconventional Hydrocarbon Extraction	Aqueous-Phase Hydrodechlorination of Chlorinated Organic Compounds over Ruthenium Catalysts
		Shantanu Roy (Indian Institute of Technology - Delhi, India)	*Mohamed Sassi (Masdar Institute of Science and Technology, United Arab Emirates)*	*Greeshma Gadikota (Columbia University, USA)*	*Prakash D. Vaidya (Institute of Chemical Technology, Mumbai, India)*

11:00 AM **12:30 PM** **Combined Poster Session for Sessions 1-4 (Atrium)**

12:30 PM 2:00 PM Lunch (Act I and II)

12:30 PM 2:00 PM Committee Meeting (closed)

			Act IV	**Act III**	**Room 401/402**	**Room 403/404**
2:00 PM	**3:00 PM**	**Sessions 5-8**	**Session 5 - Classic 2** **Chairs: Hans Kuipers & Tiberiu Leib**	**Session 6 - Computational 2** **Chairs: Chao Zhu & Francesco Bertola**	**Session 7 - Novel 2** **Chairs: Raghubir Gupta & Camille Petit**	**Session 8 - Multiphase 1** **Chairs: Arturo Macchi & Ya Qin**
		2:00-2:10 PM	Study of Catalytic Coal Gasification in Fluidized Bed Thermogravimetric Analyzer	Multiphase CFD Simulations for the Estimation of Kla Values in a Lab-Scale Stirred Tank Reactor with a Self-Inducing Impeller	Effect of Particle Size and Density on Mixing in a Double Screw Pyrolyzer	On in-Flight Collision Behaviour of Droplets on a Spherical Particle
			Said Samih (Polytechnique Montreal, Canada)	*Vania Santos-Moreau (IFP Energies Nouvelles, France)*	*Breanna L. Marmur (Iowa State University, USA)*	*Subhasish Mitra (University of Newcastle, Australia)*
		2:10-2:20 PM	Cyclic Operation Strategies in Inclined and Moving Trickle Beds-Potential Marine Applications for Floating Systems	Mal-Distribution and Formation of Hot Spots in Trickle Bed Reactors	Catalytic Enhancement of the Alkaline Thermal Treatment of Wet Biomass to Hydrogen in the Presence of Group I and II Hydroxides	Dynamic Contact Angle of Bubble with an Immersed-in-Water Spherical Particle in Turbulent Flow and Its Application to Flotation
			Faical Larachi (Laval University, Canada)	*Farzad Mousazadeh (Delft University of Technology, Netherlands)*	*Maxim Stonor (Columbia University, USA)*	*Guichao Wang (University of Newcastle, Australia)*
		2:20-2:30 PM	Efficient Synthesis of Iron Nanoparticles in a Fluidized Bed and Their Thermal Properties	Effects of Asymmetric Feeding on Gas-Solid-Liquid Transport and Catalytic Cracking Reaction in the Feed Zone of Riser	Multi-Functional Electrochemical Reactor for Hydrogen Energy System	Experimental Study of Hydrodynamics of Trickle Bed Reactor with and without Fine Particle Suspension Under Different Pressure Conditions
			Jun Li (Chinese Academy of Sciences, China)	*Bo Zhang (New Jersey Institute of Technology, USA)*	*Bokkyu Choi (The University of Tokyo, Japan)*	*Mohamed Sassi (Masdar Institute of Science and Technology, United Arab Emirates)*
		2:30-2:40 PM	Hydrodynamics of a Gas-Liquid Reactor with a Phase Change	Modeling and Simulation By CFD of an Electrocoagulation Reactor	Dual Bubbling Fluidized Bed Reactor Study for Hydrogen Production By Sorption Enhanced Steam Methane Reforming	Effective Rates of Coalescence in Oil-Water Dispersions Under Constant Shear

			Kunyu Guo (Tsinghua University, China)	*Mehdi Acil (High School of Technology-Casablanca, Morocco)*	*Kumar Ranjan Rout (Norwegian University of Science and Technology, Norway)*	*Shantanu Roy (Indian Institute of Technology - Delhi, India)*
		2:40-2:50 PM	Axial Distribution of Solid Particles in an Ebullated-Bed Reactor at High Solid Concentrations	Optimal Structure Design and Hotspot Change Analysis of Multi Tubular Fixed Bed Reactor for Fischer-Tropsch Synthesis Based on CFD Modeling with Sloshing Motion	Biogas Upgrading at Farm Scale: Improvements of Absorption in Water Scrubbers	CFD-PBE Simulation of Gas-Liquid Flow in an Internal Airlift Loop Reactor
			Yan Shi (East China University of Science and Technology, China)	*Hyunseung Kim (Myongji University, South Korea)*	*David Benizri (LISBP - EAD7, INSA, France)*	*Jingcai Cheng (Institute of Process Engineering, Chinese Academy of Sciences, China)*
		2:50-3:00 PM	Effect of Thermodynamic Parameters on Modeling Industrial Slurry Reactors for Catalytic Olefins Polymerization	Direct Numerical Simulations of Particulate Two-Phase Flows of Porous Particles Using Lattice Boltzmann Method	Hydrotreating of Karanja and Jatropha Oils over Pt/Al2O3 Catalyst	Role of Free Surface in Liquid Mixing in Shallow Gas-Liquid Process Vessels
			Maryam Tamaddoni (SABIC, Netherlands)	*Mao Ye (Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China)*	*Prakash D. Vaidya (Institute of Chemical Technology, Mumbai, India)*	*Abdul Quiyoom (Indian Institute of Technology Delhi, India)*
3:00 PM	**4:30 PM**	**Combined Poster Session for Sessions 5-8 (Atrium)**				
			Act IV			
4:30 PM	**5:15 PM**	**Keynote Session 2**	**Future Energy and Chemicals: Reaction Engineering and Process Intensification Challenges** ***Joe Powell (Shell, USA)***			
5:15 PM	6:30 PM	Poster Session 1 & Light Reception (Atrium)				

Tuesday, June 30, 2015

8:00 AM	10:00 AM	Registration (Prefunction Lobby)				
8:00 AM	9:00 AM	Coffee (Atrium)				
			Act IV			
9:00 AM	**9:45 AM**	**Keynote Session 3**	**Mesoscale Computational Fluid Dynamics for Multiphase Reactors** ***Ning Yang (Institute of Process Engineering, Chinese Academy of Sciences, China)***			
9:45 AM	10:00 AM	Break (Atrium)				
			Act IV	**Act III**	**Room 401/402**	**Room 403/404**
10:00 AM	**11:00 AM**	**Sessions 9-12**	**Session 9 - Novel 3** **Chairs: Atsushi Tsutsumi & Greeshma Gadikota**	**Session 10 - Computational 3** **Chairs: Janine Galvin & Bing Du**	**Session 11 - Measure 1** **Chairs: Ryan Stephens & Sayuri Yanai**	**Session 12 - Gas-Liquid 1** **Chairs: Geoffrey Evans & Ashfaq Shaikh**
		10:00-10:10 AM	Toward CO2 Capturing Using Aqueous DEMEA/MEA, DEMEA/DEA and DEMEA/PZ/Sulfolane Mixtures	Flow Visualization Around a Particle Bubble Aggregate	Phase Distribution, Local Maldistribution and Back Mixing Behavior Using Two Tip Optical Probe And Statistical/Chaotic Analysis Approach to Determine And To Monitor Local Flow Using Gamma Ray Densitometry In Upflow Moving Packed Bed Hydrotreater Reactor	Review and Analysis of Current Gas-Liquid Drag Models at High Gas Fractions
			Prakash D. Vaidya (Institute of Chemical Technology, Mumbai, India)	*Guichao Wang (University of Newcastle, Australia)*	*Vineet Alexander (Missouri University of Science and Technology, USA)*	*Chris Lane (Dalhousie University, Canada)*

10:10-10:20 AM	Numerical Modelling of the FCC Regenerator Reactor Based on Shrinkage Reaction Rate Model *Salar Azizi (Institute of Fluid Dynamics, Helmholtz-Zentrum Dresden-Rossendorf, Germany)*	CFD Modeling of Miscible Fluid Blending in Pulse Jet Mixing Vessels *Rahul Garg (National Energy Technology Laboratory, Morgantown, WV & URS Corp., USA)*	Bubble Size Measurement in Large Bubble Columns at High Void Fraction By an Original Method of Spatial Cross-Correlation Between Optical Probes *Pedro Raimundo (IFPEnergies Nouvelles, France)*	Mass Transfer in Bubble Columns – a Single Bubble Approach *David Merker (Technische Universität Berlin, Germany)*
10:20-10:30 AM	Development of Circulating Molten Metal Thermochemical Conversion System *Jihong Moon (Korea Institute of Industrial Technology (KITECH) & Yonsei University, South Korea)*	Simulation of Flow and Temperature Fields in Passive Decay Heat Removal System: Design Optimization *Jyeshtharaj B. Joshi (Homi Bhabha National Institute, India)*	Hydrodynamic Studies of Bubble Cutting in a Micro-Structured Bubble Column Reactor for a Dodecane-Nitrogen System *Krushnathej Thiruvalluvan Sujatha (Eindhoven University of Technology, Netherlands)*	Influences of Gas-Liquid Interface Contamination on Bubble Motions, Bubble Wakes, and Instantaneous Mass Transfer *Jie Huang (Shizuoka University, Japan)*
10:30-10:40 AM	Absorption of Toluene in Silicone Oil: Effect of the Solvent Viscosity on Hydrodynamics and Mass Transfer *Annabelle Couvert (ENSCR, UMR CNRS 6226, France)*	Numerical Studies of Kinetic Theory of Granular Flows (KTGF) on the Viscosity of Granular Fluid *Yupeng Xu (Eindhoven University of Technology, Netherlands)*	Bubble Holdup Structure in a Three-Phase Circulating Fluidized Bed *Dong Jun Yoo (Chungnam National University, South Korea)*	Numerical Study of Buoyancy-Induced Instability during CO2 Absorption in Alkaline Solutions *Benoît Haut (Université Libre de Bruxelles (ULB), Belgium)*
10:40-10:50 AM	"Equivalent Absorption Capacity" Concept Applied to the VOCs Absorption in a Countercurrent Packed-Bed Column Using Water/Silicone Oil Mixtures *Eric Dumont (GEPEA, UMR CNRS 6144, France)*	Internal Age Distribution inside Trickle Bed Reactors Using an Eulerian Two-Fluid Approach *Frédéric Augier (IFP Energies Nouvelles, France)*	Axial and Radial Vapor Void Fraction Profiles in Forced Convection Flow Boiling *Shantanu Roy (Indian Institute of Technology - Delhi, India)*	Fluid Flow and Gas-Liquid Transfer in a Swirling Quench Box with Jet *Kun Yu (East China University of Science and Technology, China)*
10:50-11:00 AM	Enhanced Water-Gas Shift Reaction and In-situ Carbon Fixation in the Presence of a Mg(OH)2 Slurry in a High Pressure Aqueous System *Ah-Hyung Alissa Park (Columbia University, USA)*	Pyrolysis of Biomass Particles Using Circulating Fluidized Bed Reactor with Heat Loop of the Heat Carrier Particles *Salar Azizi (Institute of Fluid Dynamics, Helmholtz-Zentrum Dresden-Rossendorf, Germany)*	Influence of Multiple Gas Inlet Jets on Fluidized Bed Hydrodynamics Using Digital Image Analysis Under Pressure *Junguo Li (Institute of Coal Chemistry, Chinese Academy of Sciences, China)*	Power Consumption and Gas-Liquid Mass Transfer in a Hot-Sparged Three-Phase Stirred Tank with Triple Impellers *Yuyun Bao (Beijing University of Chemical Technology, China)*

11:00 AM 12:30 PM Combined Poster Session for Sessions 9-12 (Atrium)

12:30 PM 1:00 PM Break (Atrium)

1:00 PM 6:00 PM Site Visits
Tour 1 - Alzo International
Tour 2 - BASF
Tour 3 - Phillips66

6:30 PM 9:00 PM Banquet (Columbia University)

Wednesday, July 1, 2015

8:00 AM 9:30 AM Registration (Prefunction Lobby)

8:30 AM 9:30 AM Coffee & Networking (Atrium)

		Act IV	Act III	Room 401/402	Room 403/404
9:30 AM	**10:30 AM** **Sessions 13-16**	**Session 13 - Classic 3** **Chairs: Benoit Haut**	**Session 14 - Computational 4** **Chairs: Henrik Strom & Qiang Xu**	**Session 15 - Measure 2** **Chairs: Robert Mudde**	**Session 16 - Gas-Liquid 2** **Chairs: Theodore Heindel & Bryan Patel**

9:30-9:40 AM	Comparison of Membrane and Fixed-Bed Reactor Performances of Ni-W-Mesoporous Alumina Catalysts in Dry Reforming of Methane	A New Approach to Development of Molecular Based Kinetic Lumping Model for Design and Simulation of Hydrodesulfurization Process	Experimental Measurement of the Bulk and Flow Properties of Gas Liquid-Solid Mixtures	Experimental Investigation of Particle Loading on Miscible Fluid Blending in Pulse Jet Mixing Vessels
	Timur Dogu (Middle East Technical University, Turkey)	*HongThuy T. Nguyen (The University of Tokyo, Japan)*	*Benjamin J. Glasser (Rutgers University, USA)*	*Balaji Gopalan (National Energy Technology Laboratory, Morgantown, WV & West Virginia University Research Corp, USA)*
9:40-9:50 AM	Absorption of Toluene per a Vegetable Oil-Water Emulsion in Scrubbing Tower: Experiments and Modeling	Unified Modeling of Bubbly Flows in Pipes, Bubble Columns, and Airlift Columns	Effect of Internals on Fluid Dynamic Parameters in Bubble Column: A Comparative Study	Instabilities Due to Turbulence through Inlet Jet in Plunging Jet Bubble Column
	Gilles Hébrard (Université de Toulouse & INRA, UMR792 & CNRS, UMR5504, France)	*Roland Rzehak (Helmholtz-Zentrum Dresden - Rossendorf, Germany)*	*Dinesh V. Kalaga (Institute of Chemical Technology, Mumbai & Indian Institute of Technology - Gandhinagar, India)*	*Geoffrey M. Evans (The University of Newcastle, Australia)*
9:50-10:00 AM	Modeling and Scale-up of a Continuous Process for the Production of Hexafluoroisopropanol	A New Force Law for a Spherical Intruder Plunging Vertically into a Granular Bed	Imaging an Air-Water Trickle Bed Using Electrical Capacitance Volume Tomography (ECVT)	Hydrodynamic Characteristics at Layer Inversion Point in Three-phase Fluidized Beds with Binary Solids
	Tiberiu Leib (The Chemours Company, USA)	*Yupeng Xu (Eindhoven University of Technology, Netherlands)*	*Aining Wang (The Ohio State University, USA)*	*Jun Young Kim (Sungkyunkwan University, South Korea)*
10:00-10:10 AM	Gas Dispersion and Solid Suspension in a Three-Phase Stirred Reactor with Optimized Triple Impellers	Direct Numerical Simulations of Freely Moving Spheres: A Dynamic Drag Correlation	Biological Floc Size Measurement for Shear Stress Characterisation in Full-Scale	Cutting Bubbles Using Direct Numerical Simulation
	Yuyun Bao (Beijing University of Chemical Technology, China)	*Yali Tang (Eindhoven University of Technology, Netherlands)*	*Yannick Fayolle (UR HBAN, Irstea, France)*	*Maike. W. Baltussen (Eindhoven University of Technology, Netherlands)*
10:10-10:20 AM	Estimation of Gas Induction in Jet Loop Reactors: Influence of Nozzle Designs	Pore-Scale Level Numerical Simulation of Flow in a Solid Foam: An Immersed Boundary Method (IBM) Based Approach	Advance in a Single-Tip Optical Fiber Probe for Simultaneously Measuring Droplet Size, Velocity, and Volume Fraction in Dispersed Flows	CFD Simulation and Local Phase Holdup Measurement in a Gas-Liquid-Solid Agitated Reactor
	Vivek V. Ranade (National Chemical Laboratory, Pune, India)	*Saurish Das (Eindhoven University of Technology, Netherlands)*	*Yuki Mizushima (Shizuoka University, Japan)*	*Shifang Yang (Institute of Process Engineering, Chinese Academy of Sciences, China)*
10:20-10:30 AM	Comparison of Different Capillary Pressure Models for Simulation on Liquid Dispersion in Trickling Flow Reactors	Two-/Multi-Fluid Simulations of Dispersed Gas-Liquid/Gas-Liquid-Solid Flows in a Slurry Bubble Column	TBD	CFD Simulation of Bubble Column Reactor : Comparison of Turbulence Models
	Peng Liu (East China University of Science and Technology, China)	*Parul Tyagi (Indian Institute of Technology Delhi, India)*	*TBD*	*J. B. Joshi (Homi Bhabha National Institute, India)*

10:30 AM **12:00 PM** **Combined Poster Session for Sessions 13-16 (Atrium)**

12:00 PM 1:30 PM Lunch (Act I and II)

1:30 PM 2:45 PM Poster Session 2 (Atrium)

			Act IV	**Act III**	**Room 401/402**	**Room 403/404**
2:45 PM	**3:45 PM**	**Sessions 17-20**	**Session 17 - Innovative 1**	**Session 18 - Biotech 1**	**Session 19 - Measure 3**	**Session 20 - Gas-Liquid 3**

	Chairs: Benjamin Glasser & Eric Hukkanen	Chairs: Thomas Hanley & Eric Cordi	Chairs: Melaz Tayakout	Chairs: Tiefeng Wang & Alissa Park
2:45-2:55 PM	A Novel Multiphase Continuous Polymeric Fiber Reactor	Design and Simulation of a Multiphase Continuous Bioreactor	Probe Effects on the Local Gas Holdup Conditions within a Fluidized Bed	Transient Global Modelling of Oxygen Mass Transfer in an Internal Gas-Liquid Airlift Reactor
	Eric J Hukkanen (The Dow Chemical Company, USA)	*Thomas R. Hanley (Auburn University, USA)*	*Theodore J. Heindel (Iowa State University, USA)*	*Arnaud Cockx (Université de Toulouse, France)*
2:55-3:05 PM	Analysis of Evaporation Mechanism in Thermal Desalination Process Using Fluidized Bed	Analysis of the Influence of Abiotic Parameters of a Submerged Membrane Bioreactor for BioH2 Production Using a Coupled Experimental and Numerical Methodology	Comparison of Monofibre Optical Probe and Dynamic Gas Disengagement Techniques for Local and Global Bubble Characteristics in a Bubble Column at High Gas Holdups Conditions	Motion of a Particle Bubble Aggregate in a Rectangular Cavity
	Hiroyuki Mizuno (The University of Tokyo, Japan)	*Zaineb Trad (Université Blaise Pascal, LABEX IMobS3 & UMR6602, CNRS & Institut Pascal, France)*	*Valois Parisien (University of Ottawa, Canada)*	*Guichao Wang (University of Newcastle, Australia)*
3:05-3:15 PM	Inertial Focusing in Spiral Microchannel for Separating Biological Particles in Drinking Water Monitoring	Coupled Hydrodynamic-Metabolic Simulations of Fermentation Processes	Analyzing Clustering in Bubbly Flow Using Ultra-Fast X-Ray Tomography	Theoretical Prediction of Mass Transfer Coefficients in Two-Phase and Slurry Bubble Columns
	Mélanie Jimenez (Heriot-Watt University, Scotland)	*Cees Haringa (TU Delft, Netherlands)*	*Yuk Man Lau (Institute of Fluid Dynamics, Helmholtz-Zentrum Dresden-Rossendorf, Germany)*	*Stoyan Nedeltchev (Institute of Fluid Dynamics, Helmholtz-Zentrum Dresden-Rossendorf, Germany)*
3:15-3:25PM	Visualization of Gas-Liquid Mass Transfer Around a Taylor Bubble during the Forming-Stage and the Flowing-Stage in Microreactors	Modelling Oxygen Transfer in Moving-Bed Biofilm Reactors Using Dimensional Analysis	Comparison and Experimental Verification of Methods to Convert Chord Length Measurements to Bubble Size Distribution	About the Dynamics and Morphology of Single Ellipsoidal Bubbles in Liquids
	Gilles Hébrard (Université de Toulouse & INRA, UMR792 & CNRS, UMR5504, France)	*Yannick Fayolle (UR HBAN, Irstea, France)*	*Abdul Quiyoom (Indian Institute of Technology Delhi, India)*	*Benoît Haut (Université Libre de Bruxelles (ULB), Belgium)*
3:25-3:35 PM	Innovative External-Loop Airlift Reactors As Electrochemical Reactors for Electrocoagulation / Electroflotation	Effect of Mixed Liquor Suspended Solids (MLSS) on Mass Transfer Coefficient in Sparged and Stirred Tank Reactors	Radioactive Particle Tracking Technique for Velocity Measurements in Coiled Geometries: Design of Experiments and Experimental Flow Patterns	Insights of Liquid Cooled Pebble Bed Reactor through Experiments and CFD Simulations
	Abdel hafid Essadki III (Ecole Supérieure de Technologie de Casablanca, Morocco)	*Jyeshtharaj B. Joshi (Homi Bhabha National Institute, India)*	*Loveleen Sharma (Indian Institute of Technology - Delhi, India)*	*Rajesh Kumar Upadhyay (Indian Institute of Technology Guwahati, India)*
3:35-3:45PM	Water/Wastewater Ozonation: The Importance of Effective Gas/Liquid Contacting	Dry Storage of *C. ljungdahlii* Paper-Based Biocomposites: Steps Toward Continuous, Modular, High Intensity Bioprocessing of Syngas into Liquids	Low-Temperature, Wet Coating of Cohesive Particles in a Vortex Chamber Generated High-G Fluidized Bed	Gas-Liquid Distribution in Monoliths: Effect of Distributor Configurations and Scale
	Feilong Zheng (Morimatsu Group, China)	*Mark Schulte(North Carolina State University, USA)*	*Juray De Wilde (Université Catholique de Louvain (UCL))*	*Shantanu Roy (Indian Institute of Technology - Delhi, India)*

3:45 PM 5:15 PM Combined Poster Session for Sessions 17-20 (Atrium)

Act IV

5:15 PM	**5:30 PM**	**Closing Ceremony**	**Closing Ceremony - current and next conference chairs**