ISIC 22 / BACG 52 - Programme for Parallel Sessions

Wednesday 6th September

Parallel Session A - 11.20-12.40				
Session A1	**Crystallization fundamentals 1 - Auditorium B&C**			
A1.1	Rapid, automated measurement of dynamic size distributions and size-dependent growth rates of crystal ensembles within microfluidic flow cells	Ariel Yi Hui Chua	National University of Singapore	Singapore
A1.2	Capturing interface induced concentration enhancement in situ via surface plasmon resonance spectroscopy	Ruairidh Mackay	University Of Strathclyde	UK
A1.3	Triggering the Growth of Magnesium Hydroxide Crystals in Stirred Tank Crystallizers using Sodium Hydroxide Solutions	Salvatore Romano	Università Degli Studi Di Palermo	Italy
A1.4	Facet Crystal Growth Rate Measurements of Beta-Form L-Glutamic Acid for Growth Kinetics Determination with Machine Learning	Chen Jiang	University Of Leeds	UK
Session A2	**Advances in industrial crystallization processes 1 - Auditorium A**			
A2.1	Kinetic Impurity Rejection and Form Control for GDC-4379 Drug Substance via Continuous Crystallization	Andreas Stumpf	Genentech	USA
A2.2	Process Control and Design of the Continuous Crystallization of a Polymorphic Agrochemical	Montgomery Smith	Purdue University, Davidson School of Chemical Engineering	USA
A2.3	Continuous Crystallization of Monoclonal Antibodies	Torsten Stelzer	University of Puerto Rico	Puerto Rico
A2.4	Characterization of a Novel 7-Stage Continuous Crystallizer Cascade with Diaphragm-Driven Slurry Transfer	Giovanni Aprile	Technical University Of Denmark	Denmark
Session A3	**Sustainable crystallization technologies 1 - Level 1 Auditorium**			
A3.1	Crystallisation in flow environments: smooth cooling gradients to in situ XRD analysis, a KRAICing series of crystallisers	Karen Robertson	University of Nottingham	UK
A3.2	Mechanism and kinetics of salt recoveries by seeding membrane distillation crystallization	Stefanie Flatscher	Johannes Kepler University Linz, Institute of Process Engineering	Austria
A3.3	Effects of operating parameters on crystal properties of CaCO3 during an integrated CO2 capture and mineralization process	Dharmjeet Madhav	KU Leuven, Belgium	Belgium
A3.4	Highly-efficient production of desired solid forms of drugs with improved mechanical properties via an organic solvent-free sublimation process	Xin Su	Tianjin University	China

Parallel Session B - 14.40-16.00				
Session B1	**Crystallization fundamentals 2 - Auditorium B&C**			
B1.1	The Effect of Recirculation Rate on the Crystallization of REE Recovered using Antisolvent Crystallization in a Fluidised Bed Reactor	Jacolien Sussens	University Of Cape Town	South Africa
B1.2	Secondary Nucleation Scale-Up for Stirred Vessels	Gina Kaysan	Karlsruhe Institute of Technology	Germany
B1.3	The Scaling Up of Batch Crystallisation Processes: Small Changes, Big Impacts	Amy Robertson	AstraZeneca	UK
B1.4	Dynamic interplay of crystal growth, abrasion and shape in crystallization processes: modelling and experimental approaches	Simon Schiele	Technical University of Munich	Germany
Session B2	**Process modelling, design & control & digital design 1 - Auditorium A**			
B2.1	Digital design framework for pharmaceutical crystallization processes – A case study for continuous cooling crystallization of Diphenhydramine hydrochloride	Yash Barhate	Purdue University	USA
B2.2	Evaluation of Methods for Particle Characterisation from In-Situ Sensors	Christopher Boyle	University Of Strathclyde	UK
B2.3	Model Predictive Control of Supersaturation and Crystal Size During Batch Cooling Crystallisation of Hexamine from Ethanol Solution	Tariq Mahmud	University of Leeds	UK
B2.4	Application of Deep Learning to Support Industrial Crystallization Process Development	Akeem Olaleye	APC Ltd	Ireland
Session B3	**New materials & products 1 - Level 1 Auditorium**			
B3.1	New Salts and Cocrystals of Pymetrozine with Improvements on Solubility and Humidity Stability: Experimental and Theoretical Study	Di Wu	Tianjin University	China
B3.2	Levofloxacin and Quercetin drug-GRAS co-crystal: solid-state characterization, solubility and dissolution rate investigation of a novel biologically-active system	Cecilia Fiore	Politecnico Di Torino	Italy
B3.3	Novel series of Ivosidenib-Polymer cocrystals	Adam Patterson	Veranova	UK
B3.4	Co-crystal screening of novel solid forms and determination of the relationship between crystal structure and particle properties	Emmanuele Parisi	Politecnico Di Torino	Italy

Parallel Session C - 16.25-17.25				
Session C1	**Crystallization fundamentals 3 - Auditorium B&C**			
C1.1	Taking Cues from Elementary Chemical Kinetics: Absolute Rate Theory of Homogeneous Crystal Nucleation from Solution	Sven Schroeder	University of Leeds	UK
C1.2	Classical and non-classical nucleation mechanisms of insulin crystals	Joana Ferreira	University Of Porto	Portugal
C1.3	On the kinetics of stochastic ice nucleation from aqueous solutions	Leif-Thore Deck	Eth Zürich	Switzerland
C1.4	Prediction of API solubility: an overview of the recent developments of the SAFT-gamma Mie approach	Thomas Bernet	Imperial College London	UK
Session C2	**Advances in industrial crystallization processes 2 - Auditorium A**			
C2.1	Heterogeneous crystallization on the surface of formulation additive	Hajnalka Pataki	Budapest University Of Technology And Economics	Hungary
C2.2	Deracemization of Conglomerates via Temperature Cycling and Cooling	Mercedeh Sadat Hosseinalipour	ETH Zurich	Switzerland
C2.3	Towards protein crystallization as a tool for bio-separation: study of insulin crystallization in a meso OFR-SPC	Filipa Castro	Lepabe-feup	Portugal
C2.4	How polymer templates influence the crystallisation rate of pharmaceutical materials	Grahame Woollam	Novartis	Switzerland
Session C3	**Process modelling, design & control & digital design 2 - Level 1 Auditorium**			
C3.1	Integrated Filtration and Washing modelling of Active Pharmaceutical Ingredients and Impurities	Bhavik Mehta	Siemens Process Systems Engineering Ltd	Germany
C3.2	Temperature correction of spectra to achieve isothermal local model performance for monitoring and control of cooling crystallisation	Magdalene Chong	University Of Strathclyde	UK
C3.3	A Computationally Efficient Framework for Solving Population Balances in Crystallization Using Adaptive High-resolution Finite Volume Method	Yung-Shun Kang	Davidson School of Chemical Engineering, Purdue University	USA
C3.4	Computer aided solvent design to minimize solvent use in integrated synthesis, purification and isolation for sustainable pharmaceutical manufacturing	Chris Price	University Of Strathclyde	UK

Thursday 7th September

Parallel Session D - 11.45-13.05				
Session D1	**Crystallization fundamentals 4 - Auditorium B&C**			
D1.1	Mesoscale clusters in the crystallization of amino acids	Michele Chen	ETH Zürich	Switzerland
D1.2	Tackling Intermolecular Interactions and Transient Liquid Phases in Protein Crystallization using Molecular Rotors	Yevgeniya Karibjanova	Laboratory Of Chemical Engineering Of Toulouse	France
D1.3	Modular microfluidic platform for solubility measurement, nucleation statistics and polymorph screening of active pharmaceutical ingredients.	Romain Grossier	CNRS - CINaM	France
D1.4	Heterogeneous nucleation of urea from aqueous solution: a combined experimental and simulation approach	Samira Anker	University Of Strathclyde	UK
Session D2	**New materials & products 2 - Auditorium A**			
D2.1	Green Synthesis of Magnolol Multicomponent Crystals for Improved Natural Antibiotics and Customizable Release Profiles	Haibin Qu	Tianjin University	China
D2.2	Understanding the crystallization of complex mixtures of triglycerides: towards rational design of confectionary products with improved sustainability	Elena Simone	Polito	Italy
D2.3	Separation Strategies for Tailored Molecular Weight Fractionation: The Inherent Complexity of Lignins Polydispersity During Fractional Precipitation	Arulselvan Ponnudurai	Max Planck Institute for Dynamics of Complex Technical Systems	Germany
D2.4	Impact of additive concentration on stabilization and carrier particle mediated isolation of dalcetrapib nanoparticles	Peuli Ghosh	University of Limerick	Ireland
Session D3	**Advances in industrial crystallization processes 3 - Level 1 Auditorium**			
D3.1	Crystallization of Ni-Co-Mn-Li in Battery Recycling Applications	Evangelos Stamatiou	Hatch	Canada
D3.2	Controlling reaction equilibrium and crystal formation using membrane-assisted antisolvent crystallization	Sara Chergaoui	Université catholique de Louvain	Belgium
D3.3	Understanding washing behavior and optimizing its efficiency during continuous particle isolation in a modular Vacuum Screw Filter (CVSF)	Justin Simons	Tu Dortmund University	Germany
D3.4	Design and Characterization of Electrochemical pH-shift Crystallization Processes	Christian Kocks	Fluid Process Engineering - AVT.FVT	Germany

Parallel Session E - 15.05-16.25				
Session E1	**Crystallization fundamentals 5 - Auditorium B&C**			
E1.1	How do you select a form for progression from a complex landscape?	Aneesa Al-Ani	GSK	UK
E1.2	Studying Ultra-Small Silver Nanoparticle Formation by Coupling Ultra-Fast Mixing and in-situ UV-Vis and SAXS	Rohan Parmer	Laboratoire de Génie Chimique	France
E1.3	Crystal or Amorphous? Impact of Chemical and Crystal Structure on Formation Rate	Colin Seaton	University Of Bradford	UK
E1.4	Identification and characterisation of mesoscale clusters in ethanolic solutions of flufenamic acid	Harsh Barua	SSPC, University Of Limerick	Ireland
Session E2	**Process modelling, design & control & digital design 3 - Auditorium A**			
E2.1	Deep-learning based in-situ image monitoring crystal polymorph and size distribution: modeling and validation	Zhenguo Gao	Tianjin University	China
E2.2	Using a morphological population balance to develop a model-driven QBD approach for crystallisation processes	Eftychios Hadjittofis	UCB Pharma	Ireland
E2.3	Two Dimensional Population Balance Model of a Cooling Crystallization Process for Particle Morphology Control	Niall Mitchell	Siemens Process Systems Engineering Ltd.	UK
E2.4	Impact of a multistage cyclic crystallization process on the size and shape of plate-like crystals	Daniel Biri	Eth Zürich	Switzerland
Session E3	**Sustainable crystallization technologies 2 - Level 1 Auditorium**			
E3.1	Recovery of metals from Lithium-ion battery recycling through simultaneous precipitation of hydroxide metal salts	Andressa Mazur	KTH	Sweden
E3.2	Purification of High-Value Natural Substances from Complex Multicomponent Extracts - Towards an efficient and more sustainable process	Steffi Wünsche	Max Planck Institute For Dynamics Of Complex Technical Systems	Germany
E3.3	Recovery of Spent Lithium-Ion Batteries Using a Novel Reactive Crystallization Process	Mriganka Mondal	University College Dublin	Ireland
E3.4	Continuous precipitation of terephthalic acid in a back-to-monomer recycling process for PET	Clemens Mueller	Technische Universität Braunschweig	Germany

Parallel Session F - 16.50-17.50				
Session F1	**Crystallization Fundamentals 6: John Sherwood Session - Auditorium B&C**			
F1.1	"The Big Man" The Early Career of Professor John Sherwood (1955-1985) together with some Reflections upon his Wider Community Impact	Kevin Roberts	University of Leeds	UK
F1.2	Remembering Prof John Sherwood	Rile Ristic	University of Sheffield	UK
F1.3	John Sherwood: Continuity and change across the turn of the century	Ranko Vrjeli	Cranfield University	UK
Session F2	**New materials & products 3 - Auditorium A**			
F2.1	Piezoelectric Biomolecules for Lead-Free, Reliable, Eco-Friendly Electronics	Sarah Guerin	University of Limerick	Ireland
F2.2	Crystal Structure and Solid-State Behavior of Derivatives of Praziquantel	Clément Pinètre	Sms Lab, Univ Normandie	France
F2.3	Mechanical Motion and Modulation of Thermal-Actuation Properties in a Robust Organic Molecular Crystal Actuator	Jiawei Lin	Tianjin University	China
Session F3	**Process modelling, design & control & digital design 4 - Level 1 Auditorium**			
F3.1	Maximizing similarity: using correlation coefficients to calibrate kinetic parameters in PBMs	Álmos Orosz	Budapest University Of Technology And Economics	Hungary
F3.2	Machine Learning Nucleation Collective Variables using Graph Neural Networks	Florian Markus Dietrich	University College London	UK
F3.3	Machine learning for multivariate parameter identification of first-principle model: the Mg(OH)2 test case	Antonello Raponi	Politecnico di Torino	Italy

Friday 8th September

Parallel Session G - 10.55-12.15				
Session G1	**Crystallization fundamentals 7 - Auditorium B&C**			
G1.1	Using sub-millisecond microfluidic mixers coupled to time-resolved in-situ photonics to study ultra-fast gold nanoparticles formation kinetics	Isaac Rodriguez Ruiz	LGC - CNRS	France
G1.2	Filler surface induced heterogeneous nucleation of polymer crystals	Dominic Wadkin-snaith	The University Of Strathclyde	UK
G1.3	Investigating the effect of heat exchanger roughness and surface energy on scaling during eutectic freeze crystallization.	Lerato Motsepe	University of Cape Town	South Africa
G1.4	Assembling of the masses: the crystallisation of larger, more flexible pharmaceuticals	Lauren Connor	Novartis	Switzerland
Session G2	**Advances in industrial crystallization processes 4 - Auditorium A**			
G2.1	Integrated continuous crystallization and isolation using a carousel filter dryer	Andrew Cashmore	Massachusetts Institute Of Technology	USA
G2.2	Towards autonomous continuous slug flow crystallization for small-scale applications	Kerstin Wohlgemuth	TU Dortmund University	Germany
G2.3	Machine Learning-Derived Correlations for Scale-Up and Technology Transfer of Primary Nucleation Kinetics	Cameron Brown	University of Strathclyde	UK
G2.4	Automated In-line Sampling and Analysis of Crystal Slurries in Industrial Processes	Markus Honkanen	Pixact Ltd	Finland
Session G3	**Process modelling, design & control & digital design 5 - Level 1 Auditorium**			
G3.1	Systematic design and optimization of multistage antisolvent continuous crystallization processes	Wei Li	Loughborough University	UK
G3.2	Correlating Particle Informatics with Surface Wetting Measurements	Alexandru Moldovan	Cambridge Crystallographic Data Centre	UK
G3.3	Systematic Framework for Model-Based Digital Design of Polymorphic Crystallization	Ilke Akturk	Purdue University	USA
G3.4	Computer-Aided Solvent Section for Designing API Crystallizations to be Nucleation or Crystal Growth Dominant	Jacek Zeglinski	APC Ltd.	Ireland