

Sunday 3 September

Parallel Tutorial Sessions

14:00 - 18:30	Registration	
	THEATRE D - ICON	THEATRE E - INTEL
15:00 - 18:00	Fundamentals of Crystallization Product quality and crystallization methods <i>Joop ter Horst</i> Solubility and crystal nucleation <i>Joop ter Horst</i> Crystal growth and agglomeration <i>Adrian Flood</i> Product quality and crystallization <i>Adrian Flood</i>	Modelling, Monitoring and Control of Crystallization Systems Operation and modelling of industrial crystallization processes <i>Herman Kramer</i> Process monitoring and model-free control <i>Elene Simone</i> Model-based optimization and control of batch and continuous crystallization systems <i>Zoltan Nagy</i> Unique quality, control, process, and regulations challenges in pharma continuous crystallization <i>Nima Yazdan Panah</i> Modeling and optimization workshop using the CrySiV software package <i>Botond Szilagyi</i>
18:30 - 20:00	Welcome Reception - UCD O'Brien Science Centre	

Monday 4 September

	THEATRE B - ELAN	THEATRE D - ICON	THEATRE E - INTEL
8:30 - 8:40	Opening Session CHAIR: <i>Marco Mazzotti</i>		
8:40 - 9:20	Invited Plenary: Crystal engineering: from form to function <i>Michael Zaworotko</i>		
9:20 - 9:40	98 - From a single crystal to a crystal population: Measuring secondary nucleation rate through single crystal seeding <i>M. L. Briuglia, J. H. ter Horst, & J. Sefcik</i>		
9:40 - 10:00	55 - Continuous manufacturing: Is the process mean stationary? <i>L.L. Simon</i>		
10:00 - 10:40	TEA/COFFEE BREAK		
	THEATRE B - ELAN	THEATRE D - ICON	THEATRE E - INTEL
10:40 - 11:00	Characterization & Monitoring CHAIR: <i>Peter Daudey</i> 120 - Divergent polymorphs and solid-state phase transition of 4,4'-bipyridine and squaric acid aalts <i>J. Stevens, M. Walczak, C. Jaye, D. Fischer</i>	Fundamentals CHAIR: <i>Heiko Briesen</i> 13 - Effect of process parameters on the crystallization of cholesterol particles using liquid antisolvent process <i>S. Bachchlav, S. Roy, M. Mukhopadhyay</i>	Applications/Product Engineering CHAIR: <i>Philippe Carvin</i> 154 - Oiling-out crystallization of beta-alanine in binary solvent <i>M. Sun, J. Wang, J. Gong</i>
11:00 - 11:20	56 - Water: the key factor both in the jellylike phase formation and crystallization of cefquinome <i>L. Wang</i>	83 - Additive effects on the appearance and crystallisation kinetics of polymorphs of p-aminobenzoic acid <i>R. Davey, J. Black, R. Willacy</i>	62 - Crystallization-based isolation of a target compound from complex multicomponent mixtures originating from plant processing <i>H. Lorenz, A. Seidel-Morgenstern, P. Schulze, E. Horosanskaia</i>
11:20 - 11:40	208 - Simultaneous measurement of the crystal size distribution and suspension flowability <i>H. Eloranta, M. Halaka, M. Honkanen</i>	20 - Effect of Al³⁺ on hydrothermal formation of calcium sulfate hemihydrate: a combined experimental and molecular dynamics simulation study <i>F. Hao, T. Lui, Y. Xu, X. Song, J. Yu</i>	184 - Precipitation of fine API slurries via Ehrfeld® valve assisted micromixer: Impact of stabilizers on nucleation behavior and particle size (IPDO IPM-00468) <i>R. Susarla, I. Prashanth, S. Ramakrishnan</i>
11:40 - 12:00	102 - Characterisation of hexadecane and octadecane binary system: revealed by XRD and DSC <i>X. Tang, X. Lai, K. Roberts, P. Dowding, I. More</i>	65 - Inhibition of mineral crystallization on seed surface and on heat exchange surface materials by using organic additives in conditions of industrial recirculating cooling circuits <i>N. Chhim, T. Neveux, C. Bouteleux, S. Teychene, B. Biscans</i>	39 - Diverse applications of rotor-stator wetmilling to control API attributes <i>A. Cote, A. Fine, I. Lee, E. Margelefsky, A. Moment, L. Schenck, E. Sirota</i>
12:00 - 12:20	86 -Tuning process parameters for the heterogeneous nucleation of active pharmaceutical ingredients on excipients <i>R. Arribas Bueno, C. Crowley, P. Davern, S. Hudson, K. Hodnett</i>	219 - The role of impurity induced growth defects in crystal habit modification <i>X. Lai</i>	45 - Development and optimization of a mixed suspension mixed product removal (MSMPR) crystallization process incorporating wet-milling <i>Y. Yang, C. Mitchell, C. Papageorgiou, N. Mitchell, S. Bermingham</i>
12:20 - 13:30	LUNCH		
13:30 - 15:00	POSTER SESSION		
	THEATRE B - ELAN	THEATRE D - ICON	THEATRE E - INTEL
15:00 - 15:40	Invited Plenary: Controlling the polymorph that crystallises by exploiting the opposite time dependencies of the competing nucleation rates <i>Richard Sear</i> CHAIR: <i>Beatrice Biscans</i>		
15:40 - 16:00	53 - Fine tuning of continuous crystallization of L-glutamic acid in an MSMPR-Tubular crystallizer series <i>S. Rohani, Z. Gao, Y. Wu, J. Gong, J. Wang</i>		
16:00 - 16:20	136 - The role of oiling out in crystallization <i>I. de Albuquerque, M. Mazzotti</i>		
16:20-16:50	TEA/COFFEE BREAK		
	THEATRE B - ELAN	THEATRE D - ICON	THEATRE E - INTEL
16:50 - 18:10	Design, scale-up, modelling & control CHAIR: <i>Steven Ferguson</i> 68 - Manufacturing the stable polymorph in continuous crystallization - milling processes <i>T. Kollges, T. Vetter</i>	Fundamentals CHAIR: <i>Rob Geertman</i> 17 - Crystal nucleation rates of organic melt droplets via a microfluidic crystallizer <i>B. Spiegel, A. Käfer, M. Kind</i>	Novel directions/Industrial challenges CHAIR: <i>Manfred Stepanski</i> 131- Electric-field-enhanced crystallization in multi-component mixtures <i>W. Li, J. ter Horst, H. Kramer, C. Moreno Leon</i>
17:10 - 17:30	97 - Process synthesis of a continuous crystallization section for an ammonia-based CO2 capture process <i>F. Milella, D. Sutter, J. Pérez-Calvo, M. Gazzani, M. Mazzotti</i>	42 - The nucleation kinetics of aromatic carboxylic acids <i>Y. Xiao, T. Vetter, S. Sachitanathan, S. Tang, R. Davey, A. Cruz-Cabeza, J. Wang, H. Hao</i>	202 - Investigating grain growth of perovskite films from one-step and two-step deposition methods: implications for photovoltaic application <i>A. Lewis, Y. Zhang, P. Gao, M. Nazeeruddin</i>
17:30 - 17:50	140 - Continuous diastereomeric salt crystallization using ternary phase diagram: Ibuprofen lysine case study <i>M. Simon, R. Jones, P. Donnellan, B. Glennon</i>	110 - Solvent and composition effects on co-crystal nucleation <i>O. Olalere, M. Briuglia, J. Sefcik, J. Ter Horst</i>	180 - When purer does not mean better <i>E. Verdurand, M. Iggland, B. Zerrer</i>
17:50 - 18:10	123 - Continuous crystallization in a helically-coiled flow tube facilitates control over the crystal size and shape distribution <i>V. Wiedmeyer, A. Voigt, K. Sundmacher</i>	105 - Examination of nucleation kinetics and mechanism of hexadecane and octadecane mixtures as a function of solution environment <i>X. Tang, X. Lai, D. Camacho, P. Kaskiewicz, K. Roberts, P. Dowding, I. More</i>	19 - Functionalized nanoparticles for reversible control of crystallization and solubility <i>L. Dwyer, S. Kulkarni, L. Nicoud, A. Myerson</i>

Tuesday 5 September

	THEATRE B - ELAN	THEATRE D - ICON	THEATRE E - INTEL
8:40 - 10:00	CHAIR: Jan Sefcik		
8:40 - 9:00	144 - Preferential crystallization of a racemic compound via its conglomerate co-crystal <i>W. Li, J. ter Horst, H. Kramer, C. Moreno Leon</i>		
9:00 - 9:20	209 - Impact of scale-up and dispersed excipients on the nucleation of active pharmaceutical ingredients <i>V. Verma, R. Arribas-Bueno, C. Crowley, K. Hodnett, S. Hudson, P. Davern</i>		
9:20 - 10:00	Invited Plenary: Symmetry Breaking in chiral crystallization: Pharmaceuticals and the origin of life <i>Cristobal Viedma</i>		
10:00 - 10:40	TEA/COFFEE BREAK		
	THEATRE B - ELAN	THEATRE D - ICON	THEATRE E - INTEL
10:40 - 12:20	Design, scale-up, modelling & control <i>CHAIR: Philip Donnellan</i>	Fundamentals <i>CHAIR: Thomas Vetter</i>	Novel directions/Industrial challenges <i>CHAIR: Elodie Verdurand</i>
10:40 - 11:00	109 - The potential of size and shape feedback control for crystal populations <i>S. Botschi, M. Morari, M. Mazzotti</i>	149 - Primary nucleation: statistical analysis and stochastic models <i>G. Maggioni, L. Bosetti, L. Bezinge, M. Benisch, E. dos Santos, M. Mazzotti</i>	218 - Continuous crystallization of pharmaceuticals: state of the art and future directions <i>S. Ferguson</i>
11:00 - 11:20	51 - Implementation of a Monte Carlo population balance model in the development of pharmaceutical batch crystallizations <i>J. Tabora, J. Sweeney, N. Domagalski, M. Mellmer, R. Braatz</i>	134 - Coupling Small Angle X-ray Scattering and droplet microfluidics towards in-situ observation of pre-nucleation clusters <i>S. Teychené, D. Radajewski, I. Rodríguez- Ruiz, T. Bizien, B. Biscans, F. Bonneté</i>	78 - Continuous crystallization and transient isolation of a GMP intermediate <i>C. Polster, J. Groh, K. Cole, C. Burcham</i>
11:20 - 11:40	126 - Case-study of an investigation of crystallization kinetics in a difficult system: dealing with fast kinetics <i>M. Iggländ, E. Verdurand, H. Mumtaz, N. Misailidis</i>	49 - Molecules as building blocks for a CFD-PBE model to describe the effect of fluid dynamics on nanoparticle formation <i>D. Marchisio, A. Lavino, N. Di Pasquale, P. Carbone</i>	26 - Enhanced product quality control through a novel MSMR cascade with separated zones of crystallization phenomena <i>M.C. Ostermann, M. Termühlen, S. Wibbeler, G. Schembecker, K. Wohlgemuth</i>
11:40 - 12:00	50 - Dissolution kinetics of a BCS Class II active pharmaceutical ingredient using population balance model <i>Y. Gao, P. Donnellan, Y. He, V. Kamaraju, G. Hou, B. Glennon</i>	152 - Modification of calcium oxalate crystallization by tetrazoles <i>F. Jones, C. McMulkin, M. Massi</i>	75 - Selective separation from solid side streams by crystallization at lower temperature <i>M. Hasan, M. John, M. Louhi-Kultanen</i>
12:00 - 12:20	158 - Growth and nucleation kinetics in continuous mixed-solvent crystallization systems <i>J. Schall, J. Mandur, A. Myerson, B. Trout</i>	196 - Morphological population balance modelling for simulating crystal size and shape evolution in pharmaceutical crystallisation processes <i>C. Ma, K. Roberts</i>	168 - Prediction of melting point of the co-crystals prior to the synthesis: ANN models <i>R. Gamidi, M. Ukrainczyk, J. Zeglinski, A. Rasmuson</i>
12:20 - 13:20	LUNCH		
12:30 - 13:30	Sponsored Symposium Innovative melt crystallization technology for high-purity applications SULZER		
13:20 - 14:50	POSTER SESSION 2		
	THEATRE B - ELAN	THEATRE D - ICON	THEATRE E - INTEL
14:50 - 15:10	Design, scale-up, modelling & control <i>CHAIR: Marjatta Louhi-Kultanen</i>	Fundamentals <i>CHAIR: Tariq Mahmud</i>	Novel directions/Industrial challenges <i>CHAIR: Mei Lee</i>
14:50 - 15:10	151 - Development and evaluation of bench-scale cooling / freeze crystallization processes for recovery of itaconic acid from fermentation broth <i>M. Roelands, C. Roa, D. Verdoes, I. Hernandez Mireles, P. Koenst, J. Urbanus</i>	69 - Measurement and modeling of the phase transformation between carbamazepine crystals and carbamazepine:nicotinamide (1:1) cocrystals <i>A. Flood, T. Suwannikom, N. Mitchell</i>	130 - Simultaneous crystallization of potassium and sodium chloride from aqueous solution <i>F. Penha, M. Seckler</i>
15:10 - 15:30	48 - Bridging from nano- to macroscale for crystal growth and dissolution prediction <i>E. Elts, M. Greiner, H. Briesen</i>	167 - Organic crystal structure prediction - from fundamental research to industrial application <i>M. Neumann</i>	165 - Pressure-responsive, nanostructured fluids: new media for controlled antisolvent crystallization <i>N. Grimaldi, I. Rosbottom, D. Harbottle, B. Sylvain, J. Veciana, S. Sala, K. Roberts, A. Triolo, A. Brauer, N. Ventosa</i>
15:30 - 15:50	84 - Towards the virtual design of experiments (vDoE) of a cooling crystallization process via the application of population balance modelling <i>N. Mitchell, K. Girard, P. Rose, M. Birch, B. Chekal, S. Bermingham</i>	213 - Polymorph selection by vapor phase deposition on functionalized substrates <i>M. Solomos, S. Swift</i>	47 -Crystallization of photomechanical 4-cyano-4'-pentyloxy azobenzene crystals and their reversible bending mechanisms <i>Y. Hao, H. Shuai, G. Yanmei, H. Hongxun, Y. Haifeng</i>
15:50 - 16:20	TEA/COFFEE BREAK		
	THEATRE B - ELAN	THEATRE D - ICON	THEATRE E - INTEL
16:20 - 17:00	CHAIR: Mike Zaworotko		
16:20 - 17:00	Invited Plenary: Painting a molecular picture of polymorph crystallization <i>Susan Reutzel-Edens</i>		
17:00 - 17:20	117 - Interferometry as a tool to determine the influence of whey salts on lactose crystallization <i>C. Choszcz, C. Eder, H. Briesen</i>		
17:20 - 17:40	41 - Continuous crystallization to separate enantiomers exploiting two coupled fluidized bed crystallizers <i>A. Seidel-Morgenstern, E. Temmel, K. Kerst, D. Khlopov, A. Bartz, G. Janiga, M. Mangold, H. Lorenz</i>		
17:40 - 18:10	EFCE Award		
19:30	Conference Dinner The Round Room, Mansion House, Dublin		

Wednesday 6 September

	THEATRE B - ELAN	THEATRE D - ICON	THEATRE E - INTEL
	Characterization & Monitoring	Design, scale-up, modelling & control	Applications/Product Engineering
8:40 - 9:00	113 - Tubing microfluidic: from crystallization to X-ray diffraction <i>C. Gerard, S. Zhang, A. Ikni, G. Ferry, L. Vuillard, J. Boutin, L. Chavas, T. Huet, N. Ferte, R. Grossier, N. Candoni, S. Veesler</i> CHAIR: Reginald Tan	215 - Extending the design space of an anti-solvent and cooling crystallization process exhibiting a synergistic solubility to improve the physical properties of an API <i>M. Boukerche, W. Knabe, N. Mitchell</i> CHAIR: Daniele Marchisio	159 - Anti-solvent crystallization of tubular vinpocetine and the enhanced dissolution in aqueous solution <i>P. Sun, J. Wang, J. Gong</i> CHAIR: Ron Rousseau
9:00 - 9:20	95 - Real-time Raman monitoring of calcium phosphate precipitation in a semi-batch stirred crystallizer <i>B. Han, J. Puranen, M. Louhi-Kultanen</i>	37 - Application of ultrasound waves for size-dependent particle separation for crystallization processes <i>E. Simone, M. Holmes, M. Povey</i>	204 - API particle formation: technological approaches to forming unique API characteristics <i>K. Donnelly, A. Przybyl, R. Wareham</i>
9:20 - 9:40	93 - Preparation, characterisation and crystallisation of chiral multi-component materials (MCMs): the case of naproxen and 2-aminopyridine <i>A. Cousen, A. Dunn, J. ter Horst, C. Wilson</i>	182 - Application of mechanistic models for the online control of crystallization processes <i>Y. Salman, C. Ma, J. Mack, T. Mahmud, N. Mitchell, K. Roberts</i>	100 - Enantioseparation of a chiral API by a combined preferential crystallization - selective dissolution process <i>E. Temmel, H. Buchholz, H. Lorenz, A. Seidel-Morgenstern</i>
9:40 - 10:00	169 - Development of combined continuous reaction and crystallization process using PAT tools <i>G. Pascaul, P. Donnellan, B. Glennon, R. Jones</i>	194 - Modelling of precipitation in a continuous fluidized bed reactor with mechanical stirring <i>M. Bertrand, L. Mojica, H. Muhr, E. Plasari, F. Auger, A. Michaut</i>	163 - Crystallization in composite hydrogels for controlling polymorphism <i>M. Reus, H. Kramer, B. Eral</i>
10:00 - 10:20	33 - Growth of colloidal particles during sol-gel phase transition of resorcinol-formaldehyde solution under high pressure <i>T. Yamamoto, M. Tayakout-Fayolle, T. Kakibe, H. Satone, K. Iimura, K. Itoh, K. Maeda</i>	32 - Kinetic modelling of an industrial crystallisation process <i>G. Taylor, N. Mitchell</i>	116 - Continuous production of fine crystalline particles by using uniform liquid-liquid interface <i>H. Takiyama</i>
10:20 - 10:50	TEA/COFFEE BREAK		
	CHAIR: Heike Lorenz		
10:50 - 11:10	166 - Crystal transformation permits deracemization of a racemic compound without grinding <i>C. Xiouras, J. ter Horst, T. Van Gerven, G. Stefanidis</i>		
11:10 - 11:30	4 - Increase of production capacity using gassing crystallization <i>K. Wohlgemuth, R. Scheel, G. Schembecker, K. Wohlgemuth</i>		
11:30 - 12:10	Invited Plenary: The quest for a platform particle <i>Phil Dell-Orco</i>		
12:10 - 12:30	Closing		

