



UNIVERSITY OF LEEDS

## Crystallisation Science & Engineering

School of Chemical and Process Engineering (SCaPE)

Monday 16 – Wednesday 18 January 2017

Programme		
Monday 16 January 2017		
09:00	Registration and coffee	
09:30	Introduction	
<b>Crystallisation Fundamentals</b>		
09:45 – 10:35	Crystallisation route map	<b>Prof. Kevin Roberts</b> SCaPE, University of Leeds
10:35 – 11:25	Crystal morphology & habit modification	<b>Dr Ian Rosbottom</b> SCaPE, University of Leeds
11:25 – 11:40	<b>Coffee</b>	
11:40 – 12:30	Fundamentals of polymorphism	<b>Dr. Vasuki Ramachandran</b> SCaPE, University of Leeds
12:30 – 13:20	Solid-State Analysis	<b>Dr Gerry Steele</b> PharmaCryst Consulting Ltd
13:20 – 14:05	<b>Lunch</b>	
14:05 – 14:55	Screening for polymorphs (Solid form selection)	<b>Bob Docherty</b> Pfizer, Sandwich
14:55 – 15:45	Characterisation of pseudo polymorphs (TGA, DVS, IGC)	<b>Dr Gerry Steele</b> PharmaCryst Consulting Ltd
15:45 – 16:00	<b>Tea</b>	
<b>Laboratory Demonstrations</b>		
16:00 – 17:15	D1 – Cooling Crystallisation	<b>Dr Diana Camacho Corzo and David Booth</b> SCaPE, University of Leeds
	D2 – Raman Spectroscopy	<b>Dr Xiaojun Lai</b> SCaPE, University of Leeds
17:15	<b>End of day one</b>	
19:00	<b>Course dinner</b>	

Tuesday 17 January 2017		
Industrial Crystallisation		
08:45	<b>Coffee</b>	
09:00 – 09:50	Industrial crystallisation processes: Batch & continuous	<b>Prof. Chris John Price</b> Chemical & Process Engineering, University of Strathclyde
09:50 – 10:40	Hydrodynamics, mixing & heat transfer in crystallisers	<b>Dr Tariq Mahmud</b> SCaPE, University of Leeds
10:40 – 10:55	<b>Coffee</b>	
10:55 – 11:45	Crystallisation processes development from lab to plant	<b>Prof. Frans Muller</b> SCaPE, University of Leeds
11:45 – 12:35	Solvent selection: Properties and solubility	<b>Prof. John Blacker</b> Institute of Process Research & Development, University of Leeds
12:35 – 13:20	<b>Lunch</b>	
13:20 – 14:00	Supercritical Fluid Crystallisation	<b>Lyn Daintree</b> CrystecPharma
Measurements & Control		
14:00 – 14:40	Particle size measurements & characterisation	<b>Dr Tina Bonakdar</b> SCaPE, University of Leeds
14:40 – 14:55	<b>Tea</b>	
14:55 – 15:35	Particle properties & performance	<b>Dr Richard Storey</b> Astra Zeneca
15:35 – 16:15	Process spectroscopic techniques (IR, UV-vis, Raman)	<b>Dr Xiaojun Lai</b> SCaPE, University of Leeds
16:15 – 16:55	Control of crystallisation processes for PSD	<b>Dr Tariq Mahmud</b> SCaPE, University of Leeds
16:55	Poster and drinks reception followed by close of day two	

Wednesday 18 January 2017		
08:45	Coffee	
Co-Crystals		
09:00 – 11:00	Fundamentals of co-crystallisation and case studies of recent developments	Dr Mingzhong Li De Montfort University Prof. Anant Paradkar University of Bradford
11:00 – 11:15	Coffee	
Crystallisation Modelling & Software Demonstrations		
11:15 – 12:05	Molecular to crystal science modelling route map	Dr. Robert Hammond SCaPE, University of Leeds
12:05 – 12:55	Software Demonstration: VISUAL HABIT	Dr Jonathan Pickering SCaPE, University of Leeds
12:55 – 13:40	Lunch	
13:40 – 14:30	Population balance modelling of crystallisation processes	Dr Antonia Borissova SCaPE, University of Leeds
14:30 – 15:20	Model-based design of crystallisation process	Niall Mitchell Process Systems Enterprise (PSE), London
15:20 – 16:10	Software Demonstration: gCRYSTAL	Niall Mitchell, PSE
16:10 – 16:25	Wrap-up and feedback from delegates	Dr Xiaojun Lai & Dr Tariq Mahmud