

**Royal Society of Chemistry**



**Faraday Discussion 136:  
Crystal Growth and Nucleation**

**University College London, United Kingdom  
2 – 4 April 2007**

**FINAL PROGRAMME**

## Monday 2 April

11:30	<b>Registration</b> (Christopher Ingold Building) <b>Tea and coffee</b> (Nyholm Room)
13:45	<b>Welcome and Introductions:</b> Richard Catlow, <i>University College London, UK</i>
<b>Session 1</b>	Session Chair: Roger Davey, <i>University of Manchester, UK</i>
14:00 <b>Paper 1</b>	<b>Introductory Lecture: Lessons from biomineralization: comparing the growth strategies of mollusk shell prismatic and nacreous layers</b> Lia Addadi <i>Weizmann Institute, Israel</i>
15:00 <b>Paper 2</b>	<b>Sintering, crystallisation and biodegradation behaviour of Bioglass®-derived glass-ceramics</b> Aldo R Boccaccini*, Qizhi Chen, Leila Lefebvre, Laurent Gremillard and Jérôme Chevalier <i>Imperial College London, UK</i>
<b>Paper 3</b>	<b>The formation of nanoscale structures in soluble phosphosilicate glasses for biomedical applications: MD simulations</b> Antonio Tilocca*, Alastair N Cormack and Nora H de Leeuw <i>University College London, UK</i>
16:00	<b>Afternoon Tea</b> (Nyholm Room)
16:30 <b>Paper 4</b>	<b>Towards an atomic-scale understanding of crystal growth in solution</b> Elias Vlieg*, Menno Deij, Daniel Kaminski, Hugo Meekes and Willem van Enkevort <i>Radboud University Nijmegen, The Netherlands</i>
<b>Paper 5</b>	<b>A multi-technique approach for probing the evolution of structural properties during crystallization of organic materials from solution</b> Colan E Hughes, Said Hamad, Kenneth D M Harris*, C Richard A Catlow and Peter C Griffiths <i>Cardiff University, UK</i>
<b>Paper 6</b>	<b>An examination of polymorphic stability and molecular conformational flexibility as a function of crystal size associated with the nucleation and growth of benzophenone</b> Robert B Hammond, Klimentina Pencheva and Kevin J Roberts* <i>University of Leeds, UK</i>
18:00	<b>Close of Sessions</b>
19:00 – 21:30	<b>Poster Session &amp; Wine Reception</b> (North Cloisters)
20:00	<b>Buffet Dinner organised by the British Association of Crystal Growth (JBR)</b>

## Tuesday 3 April

<b>Session 2</b>	Session Chair: Richard Catlow, <i>University College London, UK</i>
09:30 <b>Paper 7</b>	<b>Insights into the crystal growth mechanisms of zeolites from combined experimental imaging and theoretical studies</b> Ben Slater, Tetsu Ohsuna, Zheng Liu and Osamu Terasaki* <i>Stockholm University, Sweden</i>
<b>Paper 8</b>	<b>Crystal growth in nanoporous framework materials</b> Michael W Anderson*, Jonathan R Agger, L Itzel Meza, Chin B Chonga and Colin S Cundy <i>University of Manchester, UK</i>
<b>Paper 9</b>	<b>New insights in to the formation of microporous materials by in situ scattering techniques</b> Gopinathan Sankar*, Tatsuya Okubo, Wei Fan and Florian Meneau <i>Daresbury Laboratory and the Davy Faraday Research Laboratory, UK</i>
11:00	<b>Morning Coffee</b> (Nyholm Room)
11:30 <b>Paper 10</b>	<b>Cocrystal architecture and properties: design and building of chiral and racemic structures by solid-solid reactions</b> Tomislav Friščić and William Jones* <i>University of Cambridge, UK</i>
<b>Paper 11</b>	<b>The nucleation of inosine: the impact of solution chemistry on the appearance of polymorphic and hydrated crystal forms</b> Renato A Chiarellaa, Amy L Gillon, Rebecca C Burton, Roger J Davey*, Ghazala Sadiq, Anthony Auffret, Marina Cioffi and Christopher A Hunter <i>University of Manchester, UK</i>
<b>Paper 12</b>	<b>Membrane protein crystallization in lipidic mesophases. A mechanism study using X-ray microdiffraction</b> Vadim Cherezov and Martin Caffrey* <i>University of Limerick, Ireland</i>
13:00	<b>Close of Session and Lunch/Posters</b> (North Cloisters)
<b>Session 3</b>	Session Chair: Kevin Roberts, <i>University of Leeds, UK</i>
14:30 <b>Paper 13</b>	<b>Test of Cairns-Smith's 'crystals-as-genes' hypothesis</b> Theresa Bullard, John Freudenthal, Serine Avagyan and Bart Kahr* <i>University of Washington, USA</i>
<b>Paper 14</b>	<b>Precipitation of <math>\alpha</math> L-glutamic acid: determination of growth kinetics</b> Jochen Schöll, Christian Lindenberg, Lars Vicum, Jörg Brozio and Marco Mazzotti* <i>ETH Zurich, Switzerland</i>
<b>Paper 15</b>	<b>Precursor structures in the crystallization / precipitation processes of <math>\text{CaCO}_3</math> and control of particle formation by polyelectrolytes</b> J Rieger*, T Frechen, G Cox, W Heckmann, C Schmidt and J Thieme <i>BASF Aktiengesellschaft, Germany</i>
16:00	<b>Afternoon Tea</b> (Nyholm Room)
16:30 <b>Paper 16</b>	<b>Does supercooled liquid-Si have a density maximum?</b> Masahito Watanabe*, Masayoshi Adachi, Tetsuya Morishita, Kensuke Higuchi, Hidekazu Kobatake and Hiroyuki Fukuyama <i>Gakushuin University, Japan</i>

<b>Paper 17</b>	<b>Simulating ice nucleation, one molecule at a time, with the ‘DFT microscope’</b> Angelos Michaelides* <i>Fritz-Haber-Institut der Max-Planck-Gesellschaft, Germany and University College London, UK</i>
<b>Paper 18</b>	<b>Nucleation in alkali metal chloride solution observed at the cluster level</b> Akihiro Wakisaka* <i>National Institute of Advanced Industrial Science and Technology, Japan</i>
18:00	<b>Close of Sessions</b>
19:00	<b>Pre-Dinner Drinks</b> (North Cloisters) – by ticket only
19:30	<b>Conference Dinner</b> (Old Refectory) – by ticket only

Wednesday 4 April 2007

<b>Session 4</b>	Session Chair: Nora de Leeuw, <i>University College London, UK</i>
09:30 <b>Paper 19</b>	<b>The effect of oxygen-containing reagents on the crystal morphology and orientation in tungsten oxide thin films deposited via atmospheric pressure chemical vapour deposition (APCVD) on glass substrates</b> Geoffrey Hyett, Christopher S Blackman and Ivan P Parkin* <i>University College London, UK</i>
<b>Paper 20</b>	<b>Stabilization of metastable phases in spatially restricted fields: the case of the Fe<sub>2</sub>O<sub>3</sub> polymorphs</b> Martí Gich*, Anna Roig, Elena Taboada, Elies Molins, Caroline Bonafos and Etienne Snoeck <i>Institut de Ciència de Materials de Barcelona-CSIC, Spain</i>
<b>Paper 21</b>	<b>Using <i>in-situ</i> synchrotron radiation wide angle X-ray scattering (WAXS) to study CaCO<sub>3</sub> scale formation at ambient and elevated temperature</b> Tao Chen*, Anne Neville, Ken Sorbie and Zhong Zhong <i>University of Leeds, UK</i>
11:00	<b>Morning Coffee</b> (Nyholm Room)
11:30 <b>Paper 22</b>	<b>Nucleation and control of clathrate hydrates: insights from simulation</b> C Moon, R W Hawtin and P Mark Rodger* <i>University of Warwick, UK</i>
<b>Paper 23</b>	<b>Crystallization of carbon tetrachloride in confined geometries</b> Adil Meziane, Jean-Pierre E Grolier, Mohamed Baba and Jean-Marie Nedelec* <i>Université Blaise Pascal, France</i>
12:30 <b>Paper 24</b>	<b>Concluding Remarks</b> Pat Unwin <i>University of Warwick, UK</i>
13:00	<b>Acknowledgements:</b> Nora de Leeuw, <i>University College London, UK</i>
13:15	<b>Close of Meeting</b>

\*Denotes presenting author to whom affiliation applies