Workshop on Flow-Induced Crystallisation in Polymers

Monday 20th - Wednesday 22nd January 2020
Leeds and Bradford, UK

Monday 20 Jan
Location: Maths Level 8, MALL 1 & 2, School of Mathematics, Univ. Leeds

10:30-11:15 Arrival, coffee, informal discussions and RepTate assistance.
11:15 Welcome and introductions
11:30 Jaap Den Doelder, Dow and TU/e, *Flow-induced crystallization: why industry should care.*

12:00-13:00 Lunch

13:00 Greg Rutledge, MIT, *Simulation of Flow-Induced Crystallization at Atomistic and Molecular Scales.*
13:30 Phil Coates, University of Bradford, *In-situ studies of structure development in micromoulding and solid phase orientation processing of polymers.*
14:00 Gerrit Peters, TU/e, *Flow-Induced Crystallization in Polypropylene: how processing dominates structure development.*
14:30 Daniela Mileva, Borealis, *Cast-film processing effects of isotactic polypropylene homo- and copolymers based on different catalysts.*

15:00-15:30 Coffee

15:30 Ron Larson, University of Michigan, *Role of Nematic Order and Chain Tension in Nucleation and Growth of Polyethylene Crystals.*
16:00 Charley Schaefer, University of York, *Silk: A natural example of a sticky entangled polymer.*

Evening: No session
Tuesday 21 Jan
Location: Maths Level 8, MALL 1 & 2, School of Mathematics, Univ. Leeds

8:45 Julie Kornfield, Caltech, TBC
9:15 Richard Graham, University of Nottingham, Multiscale modelling of flow-induced crystallisation in polymers.
9:45 Alicyn Rhoades, Penn State Behrend, Flow-Induced Crystallization in PEEK: Molecular Weight Effects and Accelerated Kinetics at Low Temperatures.
10:15 Miguel Cordova, Sabic, Is shear-induced crystallization driving morphology in impact polypropylene?

10:45-11:15 Coffee

11:15 Scott Milner, Penn State, TBC
11:45 Wonchalerm Rungswang, SCG Chemicals, TBC.
12:15 Qiyun Tang, Institute of Theoretical Physics, Georg-August Universität Göttingen, Fast evaporation enables 2D polymer single crystals.

12:45-13:45 Lunch

13:45 Jorge Ramirez, Universidad Politecnica de Madrid, Introduction to RepTate.
14:00 Richard Graham, University of Nottingham, Modelling FIC in RepTate.
14:15 RepTate demonstration and discussion

15:00-15:30 Coffee
15:30 RepTate demonstration and discussion

18:45 Workshop dinner, University House, University of Leeds, LS2 9JT.
**Wed 22 Jan**

8:30-9:00 Transport to Bradford- Coach pick-up at 8:30 at meet in the reception of the Radisson Blu Hotel (LS1 8TL)

9:00 Arrival and introductions
9:30 Tim Gough. University of Bradford, *Introduction to Bradford Polymer IRC*

9:45 Max Babenko, University of Bradford, *Linkam studies of Flow Induced Crystallisation.*

10:05 Max Babenko, University of Bradford, *Flow Induced Crystallisation in Injection Moulding.*

**10:30 – 11:00 Coffee**

11:15 *Interactive lab demo #1 – see table below for group timings.*
11:50 *Interactive lab demo #2 – see table below for group timings.*

**12:30 to 13:30 Lunch (with poster session)**

13:30 *Interactive lab demo #3 – see table below for group timings.*
14:10 *Interactive lab demo #4 – see table below for group timings.*

**15:00 – 15:15 Coffee**


**17:00 Close**

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<th>Activity</th>
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<td>Micro and ultrasonic moulding (WB11)</td>
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<tr>
<td>Flow Induced Crystallisation (WB11)</td>
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<td>High shear rheology (WB11)</td>
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<td>Thermal analysis of 3D printing (WB17)</td>
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All Wednesday activities will be held within the Polymer IRC laboratories at the University of Bradford (number 3 on pdf map).

All talks held in Richmond Building Room WB19.