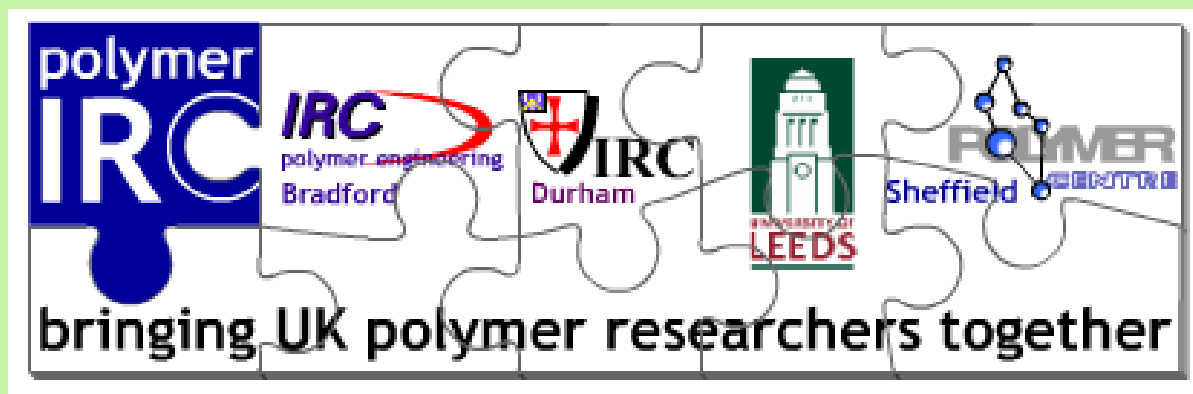


*Chemistry*

*Polymer Materials Science*



*Engineering*

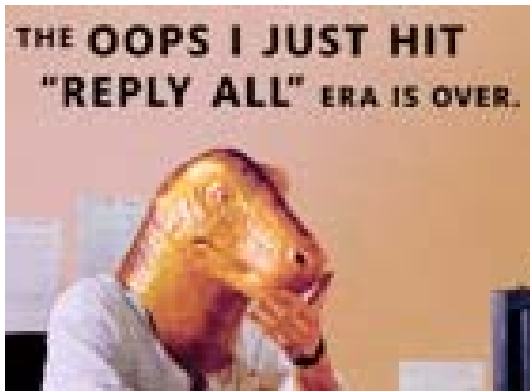
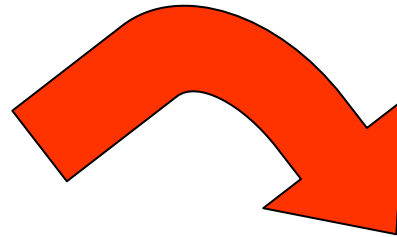
*Physics/Chemistry/Appl. Maths*

# The Polymer IRC

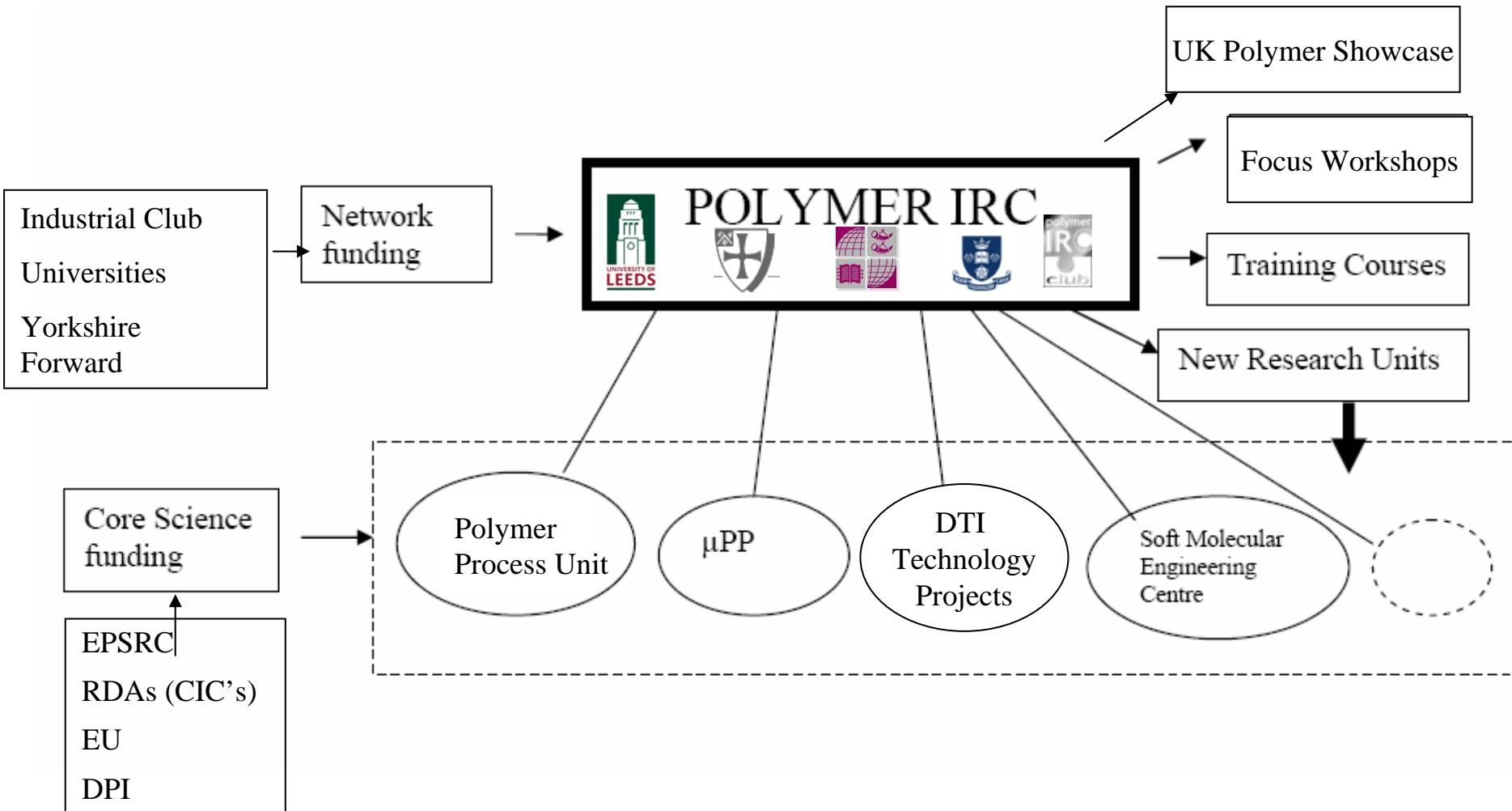


- A focal point for UK Polymer/Soft Matter Science since 1989
- Connecting Industry and Academia
- Linking Chemistry-Physics-Engineering
- >100 staff over 4 sites + >150 PhDs and PDRAs
- Research spend of ~£5M p.a.
- Core Science + Knowledge Transfer
- Industrial training and conferences

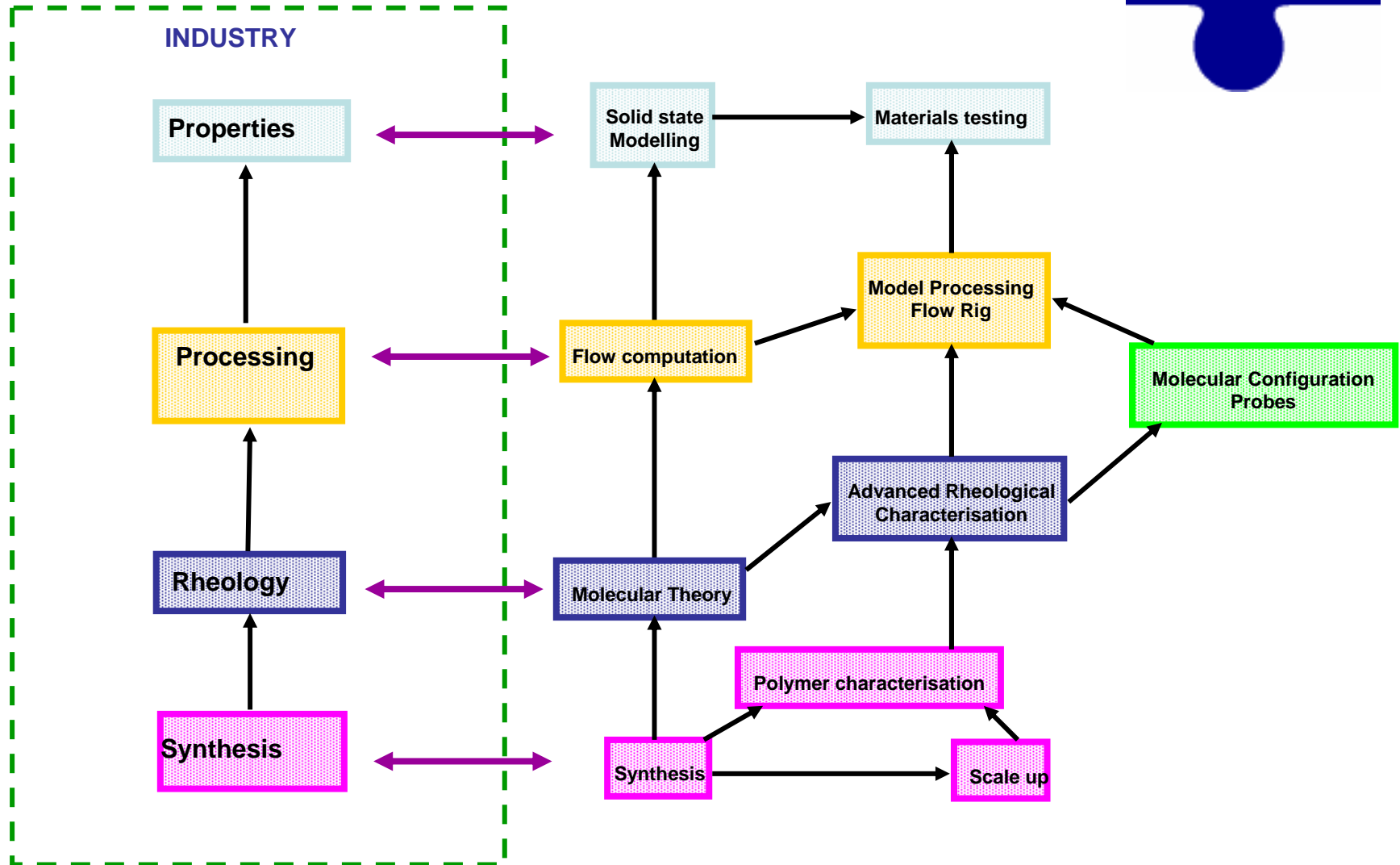
# *Evolve or Die!*



# Structure



# The Scaffold Concept





## Current Industrial Club:

**The low-subscription IRC Industrial Club gives industry rapid access to know-how, science, training and research teams across the IRC. Benefits include:**

- Easy access to teams and facilities;
- Guaranteed Showcase Places;
- Road-Mapping Workshops;
- Discounts on Training Courses;
- Technology alerts.

DSM

ICI

Invista Performance Technologies

Dupont Teijin Films

Infineum

Mitsubishi

Unilever + Unilever Corporate Research

Victrex

Smith and Nephew

Dow

CYTEC

Arizona Chemical

Artenius

Bayer

Proctor and Gamble

4 Core Universities

Vertellus Chemicals

Huntsman Core Technology Group

Scott Bader

Mitsui Chemical

Goodfellow

SABMiller



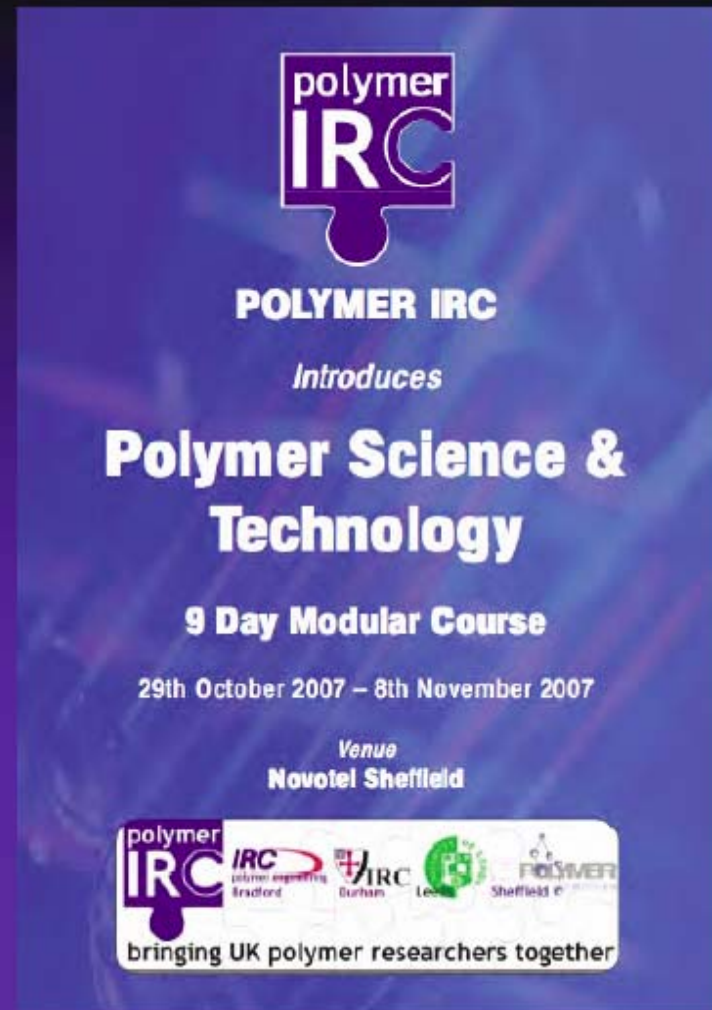


## Activities:

- Industrial Club meetings - spring and autumn
- “UK Polymer Showcase Autumn Meeting”
  - This year York, 16 – 18 September
- Evolving research programme
- Training courses for PhDs and industry
- Rapid-Reaction Platform for projects and networks
- Scoping Workshops

## Annual Polymer Materials Course

- Week One
  - Basic Polymer Science
  - Polymer Characterisation & Analysis
  - Polymer Chemistry
  - Polymer Engineering (Polymer Processing)
  - Polymer Physics
- Week Two
  - Multi-phase Polymer Materials and Composites
  - Polymer Dynamics and Macromolecular Rheology
  - Polymeric Biomaterials
  - Polymer Nanotechnology



The poster features a purple background with a faint, abstract pattern of lines and dots. At the top center is the 'polymer IRC' logo, which consists of the word 'polymer' in a white sans-serif font above the letters 'IRC' in a larger, bold, white sans-serif font, all contained within a purple square with rounded corners. Below the logo, the text 'POLYMER IRC' is written in a bold, white, sans-serif font. Underneath that, the word 'Introduces' is written in a smaller, italicized, white sans-serif font. The main title 'Polymer Science & Technology' is prominently displayed in a large, bold, white sans-serif font. Below the title, the text '9 Day Modular Course' is written in a bold, white sans-serif font. The dates '29th October 2007 – 8th November 2007' are listed in a smaller, white sans-serif font. The venue 'Novotel Sheffield' is mentioned in a bold, white sans-serif font. At the bottom, there is a white banner containing the 'polymer IRC' logo on the left, followed by four smaller logos for partner institutions: 'IRC polymer engineering Bradford', 'ARC Durham', 'Leeds', and 'POLYMER Sheffield'. Below these logos, the text 'bringing UK polymer researchers together' is written in a bold, black sans-serif font.

**polymer  
IRC**

**POLYMER IRC**

*Introduces*

**Polymer Science &  
Technology**

**9 Day Modular Course**

29th October 2007 – 8th November 2007

*Venue*  
**Novotel Sheffield**

**polymer  
IRC** **IRC** **ARC** **Leeds** **POLYMER**  
polymer engineering Bradford Durham Sheffield

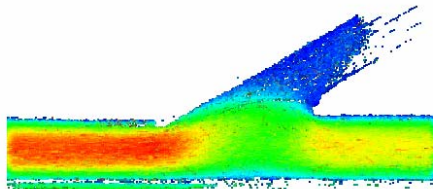
**bringing UK polymer researchers together**



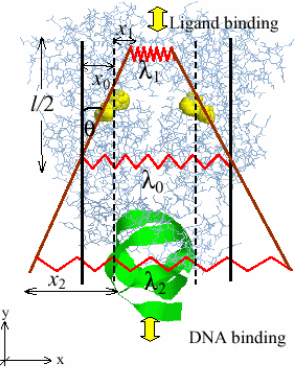
# Current Themes :

## (1) Novel Architectures

- Control of polymer processing
- Drug delivery
- Smart sensors

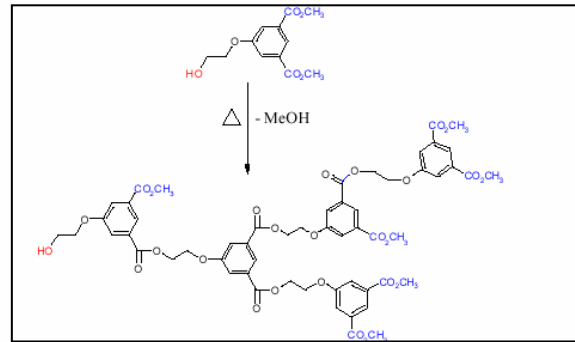


LDPE coextrusion: real time velocity field measurements by video particle tracking:  
67% mass flow in bottom, layer ratio: 1: 0.49 – flow instability



## (4) Biopolymer Science

- Cell culture media
- Renewable materials
- Bio-nano devices



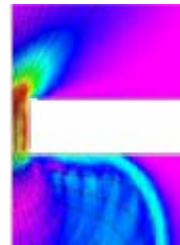
## (2) Reactive Blending

- Advanced composites for aerospace
- Molecular design of adhesives
- High performance packaging



## (3) Polymers for electronics

- Novel photovoltaics
- Conductive polymers
- Flexible batteries



## (5) Microscale Polymer Processing

- Molecular design of new resins
- Multi-scale modelling of processes
- Advanced property control

