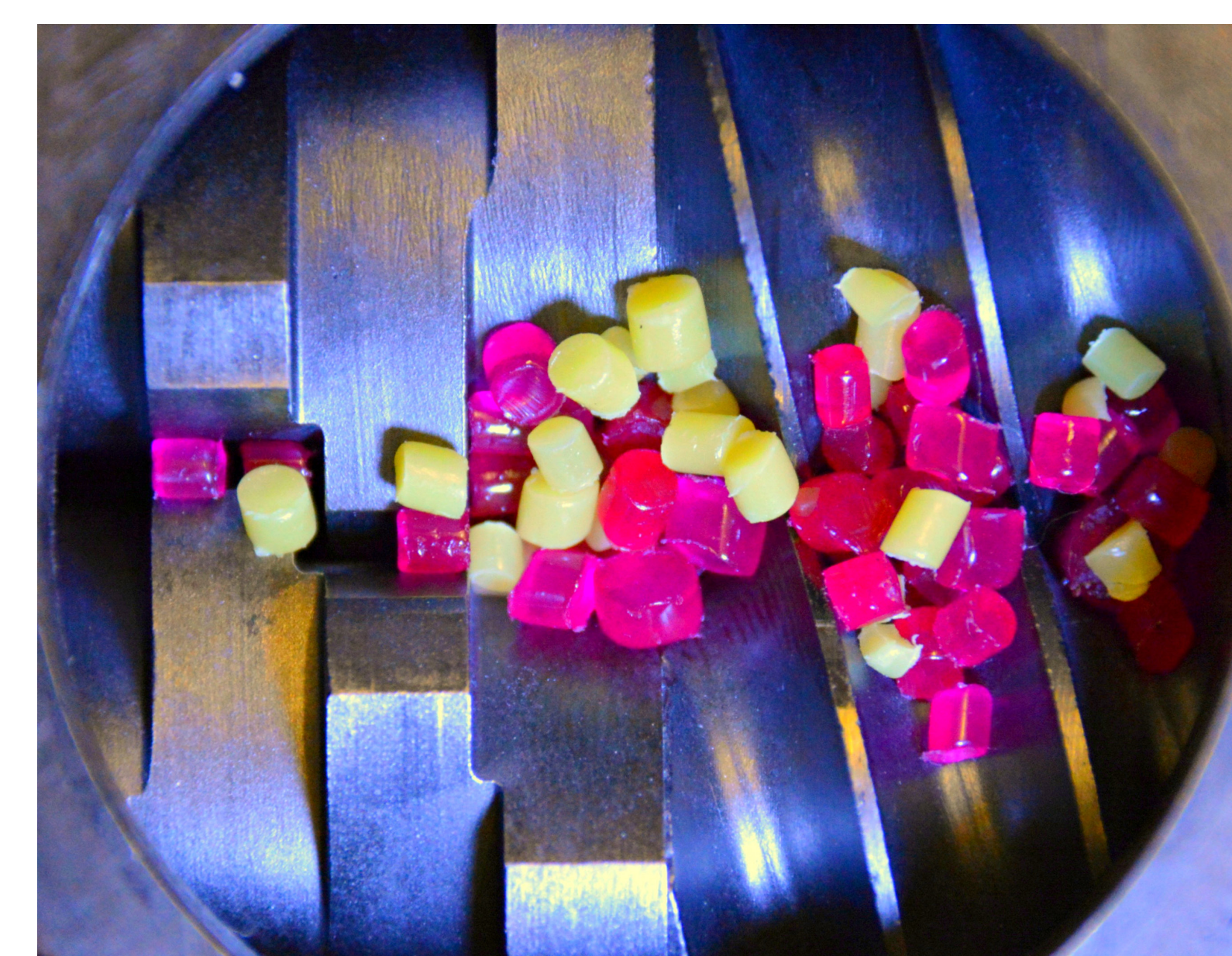


Adhesives and Polymer Materials

Synthesis and Formulation

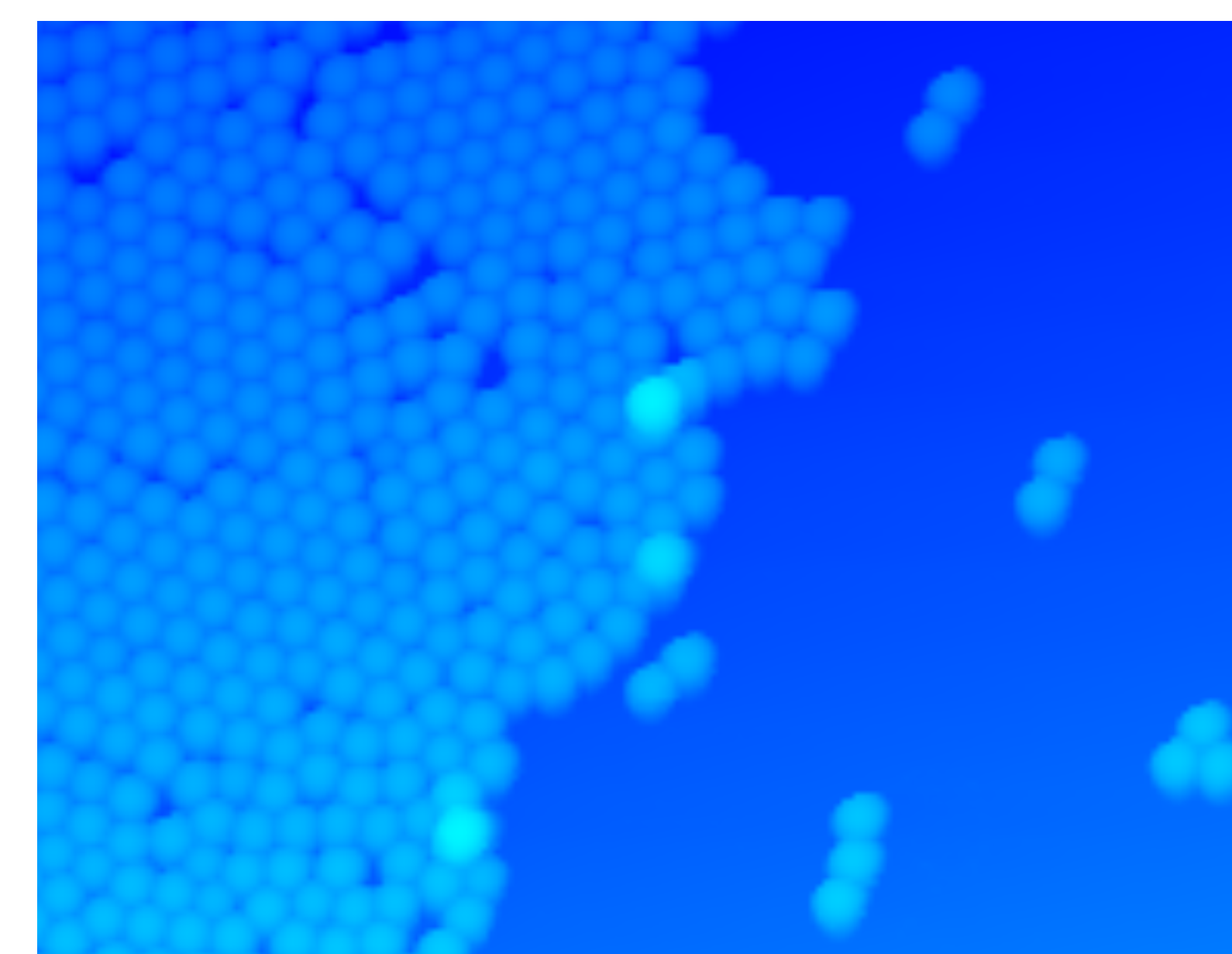
- Adhesive formulation and synthesis
 - Batch reactor for complex formulations
 - Continuous extrusion for hot melt adhesives
 - Film, pellet and powder processing
 - Tape development with slot die coating
- Polymer compounding and extrusion
 - Reactive extrusion for modification of polymers
 - Grafting of polymers for innovative functionalization and modification
 - Thermoplastic polymer blending
 - Film production with chill roll
- Online reaction control with IR spectroscopy
- Functionalization of nano particles



Twin-screw extruder

Characterization

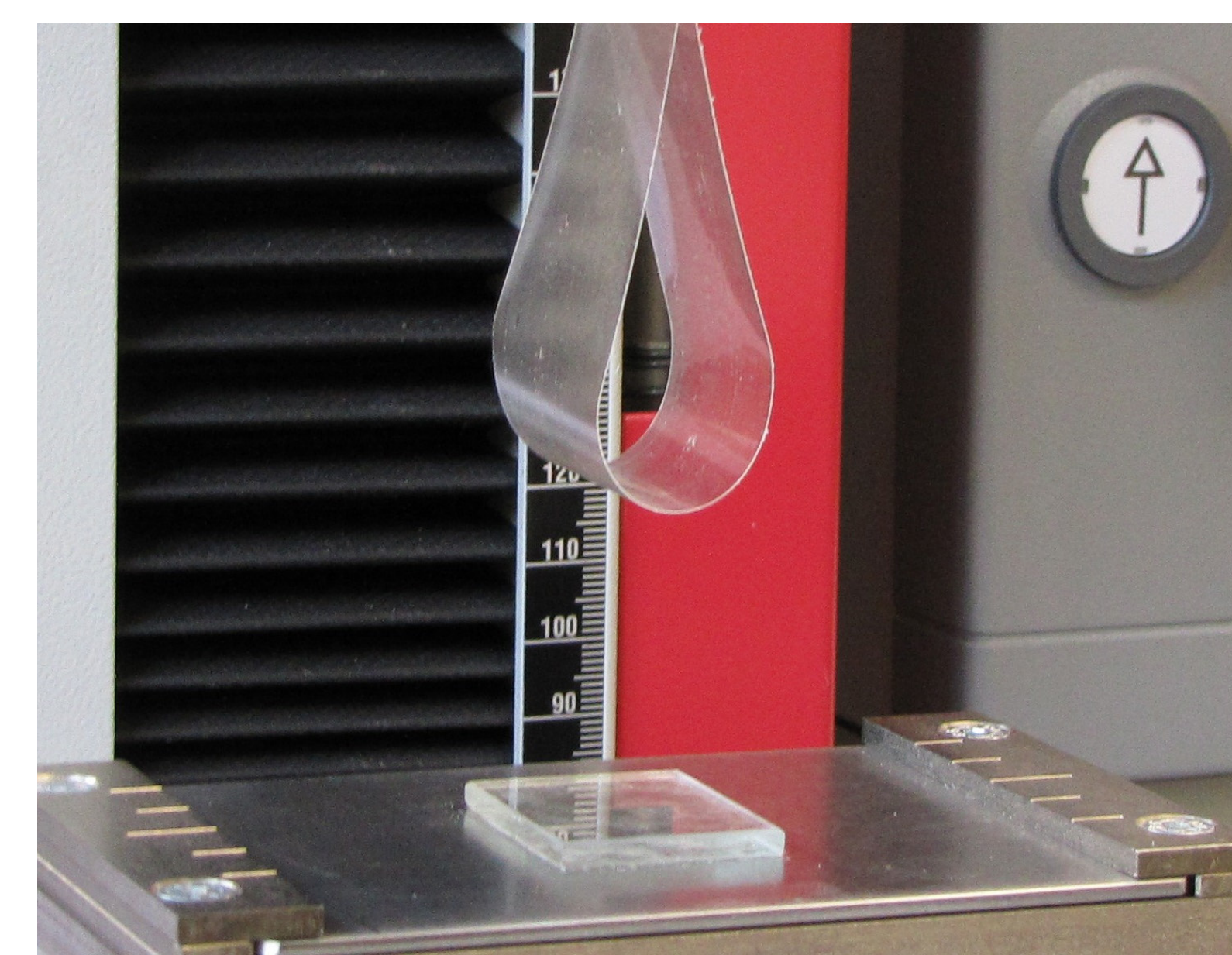
- Adhesive performance tests
- Curing behavior studies
- Thermal and mechanical analysis
- Flow properties determination with rheological methods
- Morphological and surface analysis



AFM image of a polystyrene emulsion

Applications

- Adhesive development
 - Formulation and process optimization of hot-melt and pressure sensitive adhesives
 - Latent reactive adhesives based on PU
 - Shrinkage of epoxy adhesives
- Polymer development
 - Grafting of polymers for improved adhesion and compatibility studies
 - Reactive extrusion for efficient processes
 - New polymeric materials through blending
 - Emulsion polymerization
 - Polymer degradation studies
 - 1K and 2K injection molding for specimen preparation



Adhesive testing (loop test)

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