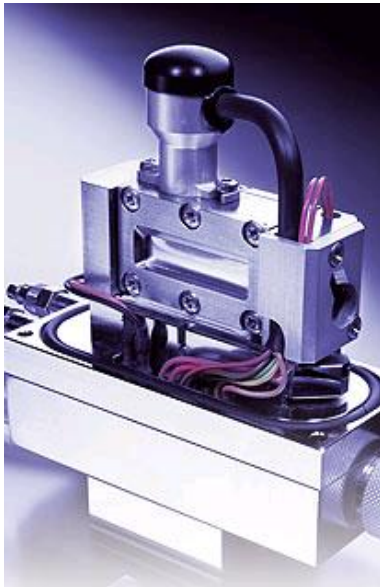


Humidity Chamber

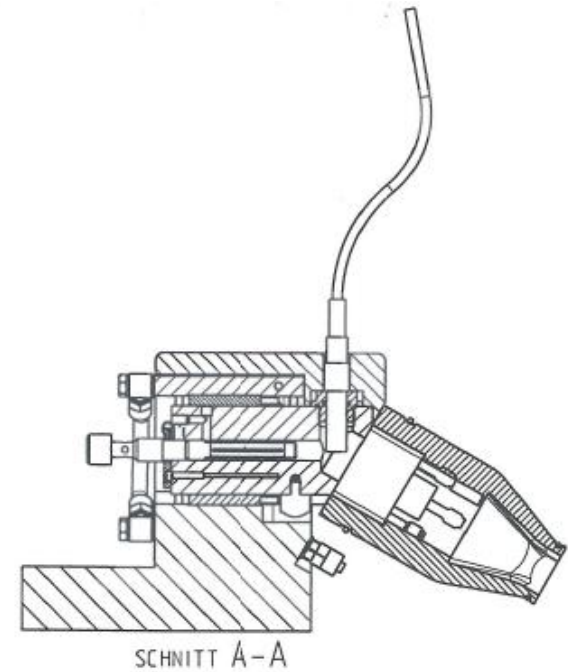
N.K. Szekely, A. Radulescu and H. Frielinghaus

Jülich Centre for Neutron Science JCNS

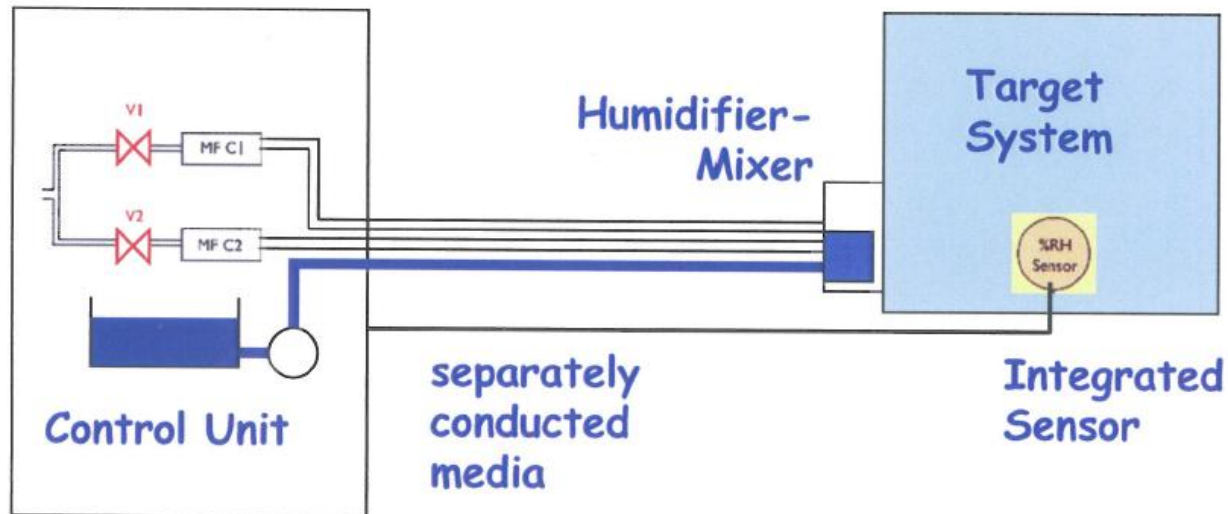
Humidity chamber



RH: 5 - 95%
Temperature: 10-60 °C

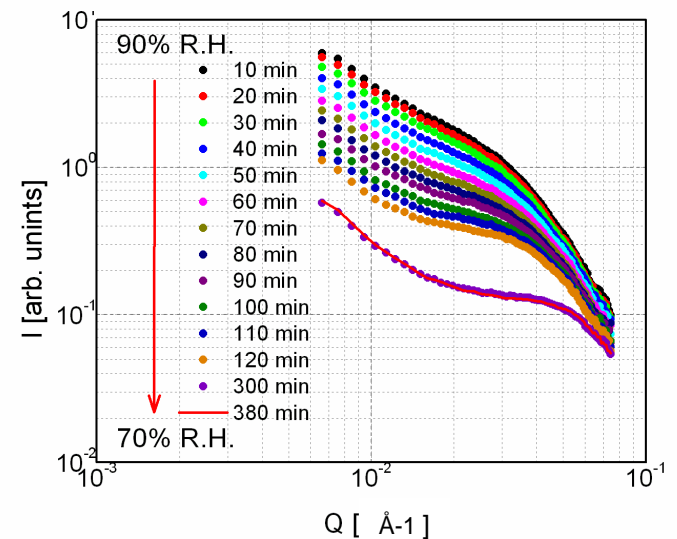
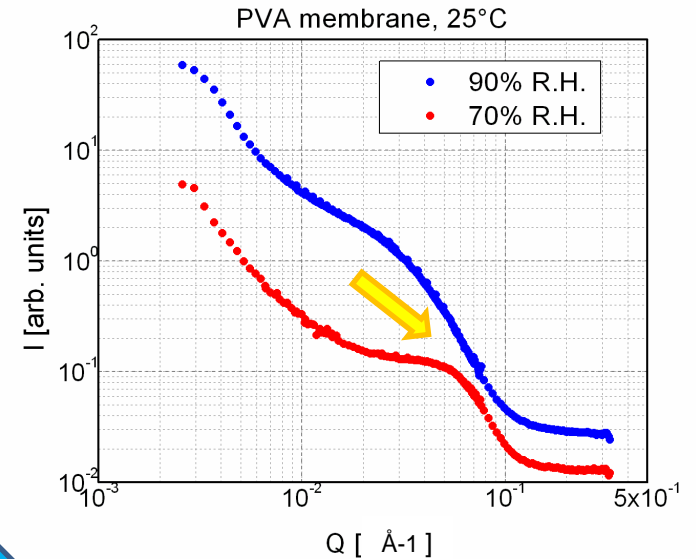
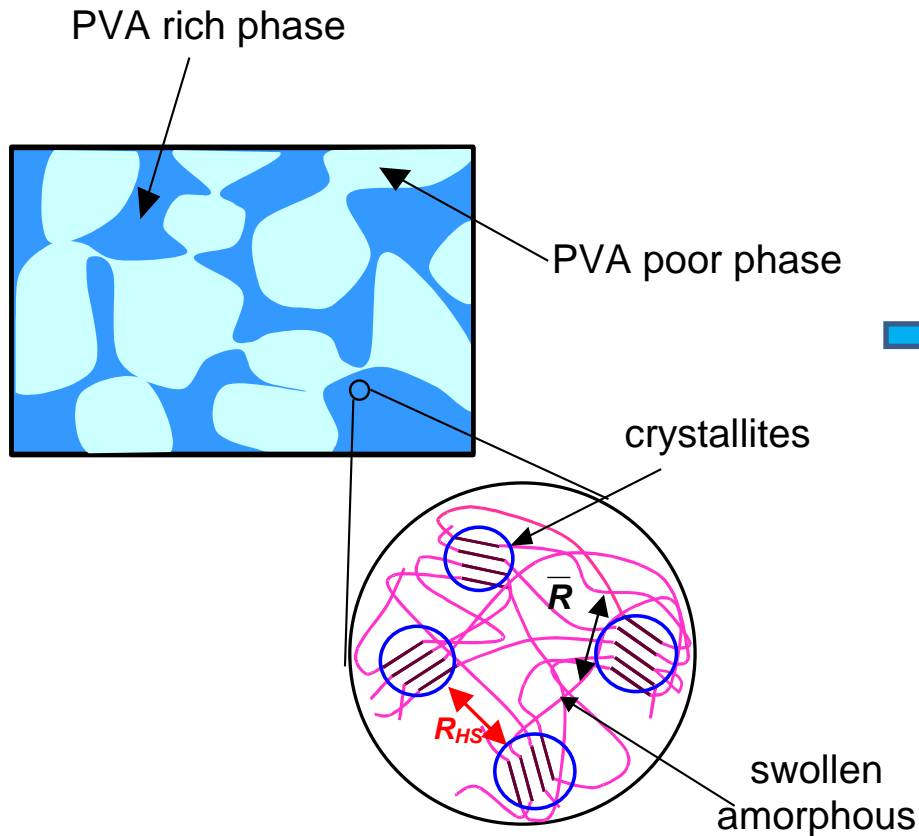


Humidity chamber



New sample environment: humidity chamber

test & commissioning with
PVA – cross-linked polymer & crystallite junctions



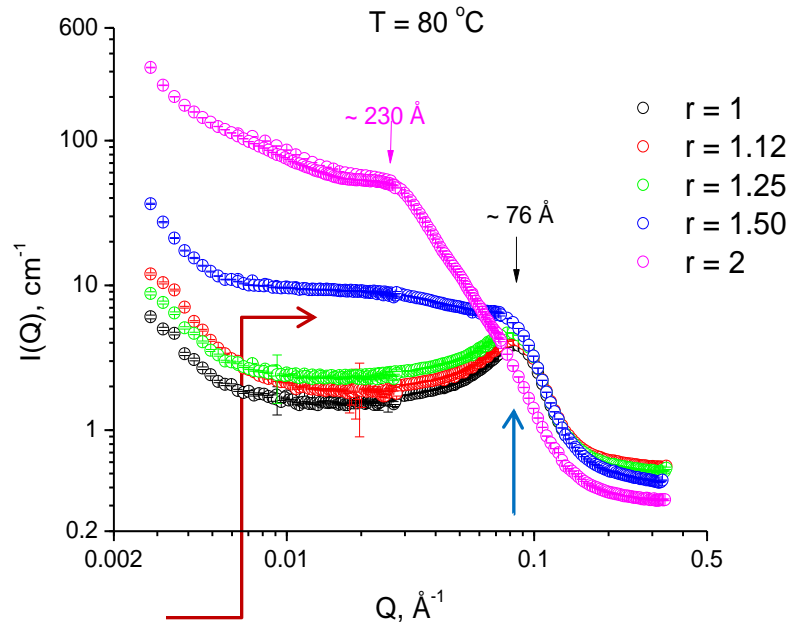
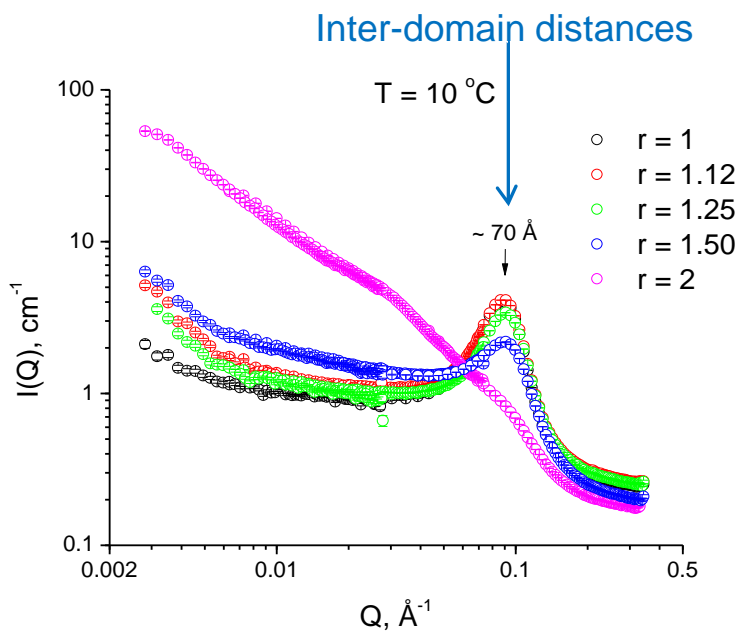
α,ω -diamino terminated poly(oxypropylene)-poly(oxyethylene)-poly(oxypropylene) (POP-POE-POP) block copolymer + diglycidyl ether of Bisphenol A propoxylate (PDGEBA)

$r=2[\text{NH}_2]_0/[\text{E}]_0$: $r=1.00, 1.12, 1.25, 1.50$ and 2.00

swollen to equilibrium in D₂O

POE-water interaction $\left\{ \begin{array}{l} \text{temperature} \\ \text{pressure} \end{array} \right.$ dependent

Structure \longleftrightarrow temperature



Evolving higher scale structure

Open Tasks:

- Find standard samples for SANS (reproducibility)
- Other solvents (oils, later THF...)
sensor calibration
- Bigger samples, more samples...
- Reflectometry, GISANS

Thank you for your attention!