

# Making Polyurethane Flexible Foams from Soybean Oil-derived Polyol

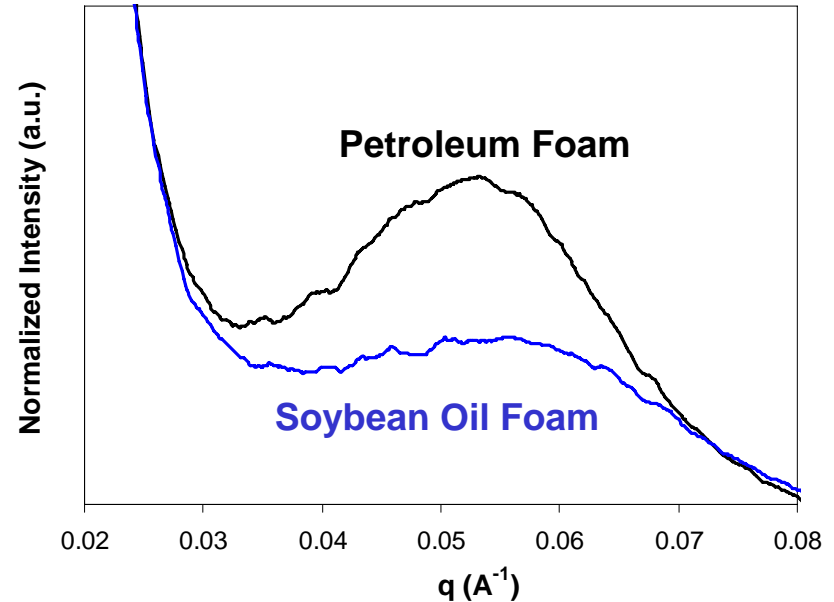
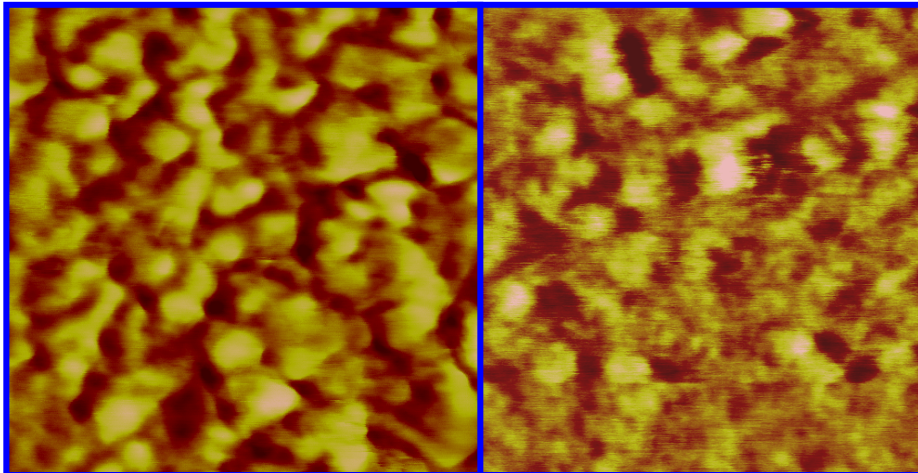
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- Polyurethane Foam Morphology (tapping AFM)
  - ◆ Degree of phase separation (qualitative)
  - ◆ Phase contrast (hardness difference between phases)
- Small Angle X-ray Scattering (2 $\theta$ -line)
  - ◆ Electron density contrast

Petroleum Foam

Soybean Oil Foam



- Soybean Oil-based Foam
  - ◆ Phase mixing is visible
  - ◆ Less phase contrast / hardness difference between phases on average

All work were carried out at Characterization Facility at the University of Minnesota