AA monomer is added to polymerized PEG & PAA is polymerized to form an interpenetrating network with the PEG. Result is a viscous gel with much higher elastic modulus and tensile strength than the copolymer PEG-PAA gel. Resulting hydrogel can be employed for medical devices, e.g. artificial cornea or cartilage. Correlation length of interpenetrating gel is determined from SAXS data.

Goal: To understand the structure of a PEG-PAA hydrogel and perform in-situ tensile testing to characterize structure as a function of tensile properties.

Artificial Cornea

- Core consisting of PEG/PAA with a photo-lithographically patterned skirt.
- Porous skirt designed to allow cell integration into the device.