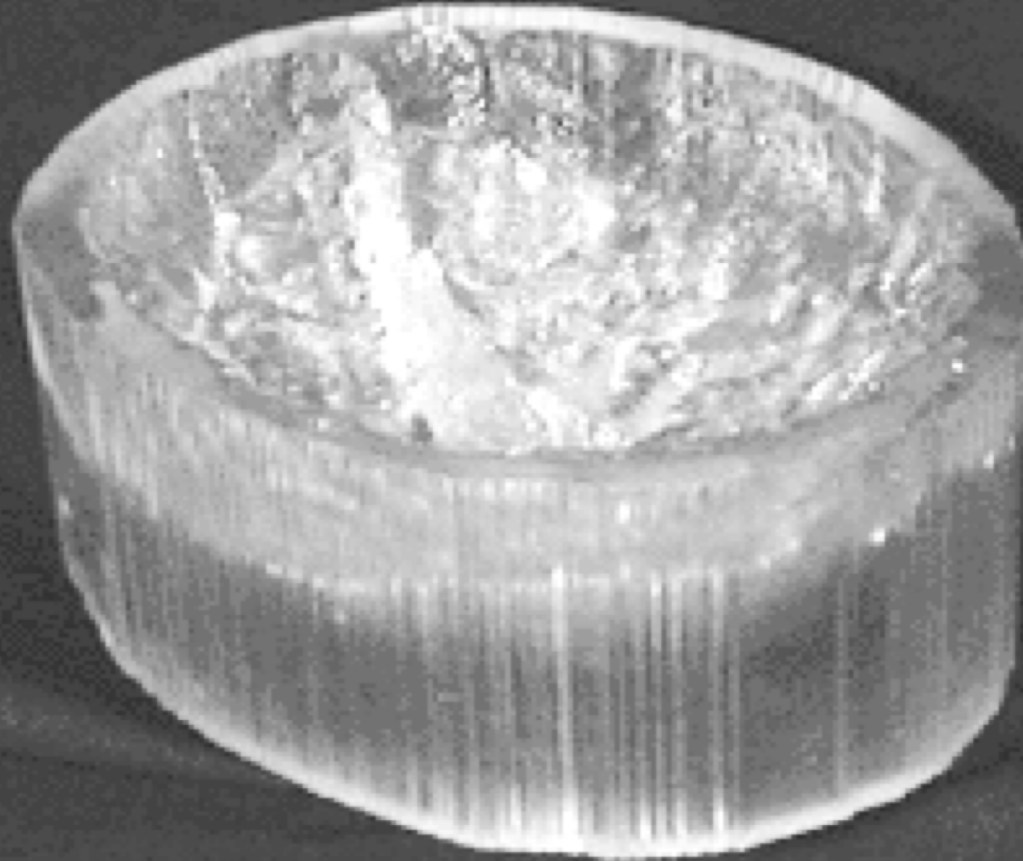


PHAS Colloquium:

Deformable tissue-mimicking materials for biomedical optics



ABSTRACT

It is often challenging to find realistic tissue-mimicking phantoms with appropriate properties for imaging and quality assurance applications. Ideally, such a phantom would look and behave like the tissue it was meant to simulate. Poly (vinyl alcohol) (PVA) is a simple, biocompatible polymer that can be dissolved in water to create a hydrogel. The hydrogel can then be crystallized into a rubbery material through repeated thermal cycling. The properties of these cryogels (PVA-C) can be tuned so that suitable phantoms for ultrasound, MRI, x-ray, and optical imaging are possible. In this presentation we will discuss how the optical properties of the PVA-C may be controlled through the formulation and thermal cycling. The resulting cryogels scatter light like biological tissues, with the ability to adjust the absorption characteristics by adding appropriate chromophores.

Image Description: PVA cryogel phantom of a brain.
Image Credit: K. J. M. Surry
Poster Designed By: Neil McCall (neilmcl@my.yorku.ca)

DATE: February 5th, 2019
TIME: 2:30 PM
LOCATION: PSE 317

SPEAKER
Kevin Diamond
McMaster University

**THERE WILL
BE SNACKS**
ALL ARE WELCOME