# Degradable Emulsion-templated Scaffolds for Tissue

## **Engineering from Thiol-Ene Photopolymerisation**

Sally Caldwell<sup>ab</sup>, David W. Johnson<sup>ab</sup>, Matthew P. Didsbury<sup>ab</sup>, Jun Jie Wu<sup>bc</sup>, Neil R. Cameron\*<sup>ab</sup>

<sup>a</sup> Department of Chemistry, Durham University, South Road, Durham, DH1 3LE, U.K. Email: n.r.cameron@durham.ac.uk.

<sup>b</sup> Biophysical Science Institute, Durham University, South Road, Durham, DH1 3LE, U.K.

 $^{\rm c}$  School of Engineering and Computer Sciences, Durham University, South Road, Durham, DH1 3LE, UK

# **Supplementary Information File**

#### Contents

- HIPE compositions
- Mechanical properties of thiol-ene polyHIPEs
- Influence of fluorescein *o*-acrylate on polyHIPE morphology

## **HIPE Compositions**

The compositions of the HIPEs prepared are shown in Table S1.

PolyHIPE	Porosity (%)	Temperature (°C)	Water (ml)	CHCI <sub>3</sub> (ml)	Trithiol (ml)	Acrylate <sup>a</sup> (ml)
1	80	23	56	7	3.85	3.15
2	80	80	56	7	3.85	3.15
3	90	23	110	5.25	3.85	3.15
4	90	80	110	5.25	3.85	3.15
5	80	23	70	7.0	4.0	3.0
6	80	80	70	7.0	4.0	3.0
7	90	23	126	7.0	4.0	3.0
8	90	80	126	7.0	4.0	3.0

Table S1. Compositions of HIPEs used to Prepare Thiol-Ene PolyHIPEs

<sup>a</sup> PolyHIPEs 1-4 are made using TMTPA, 5-8 from DPEHA.

## **Mechanical Properties of Thiol-Ene PolyHIPEs**

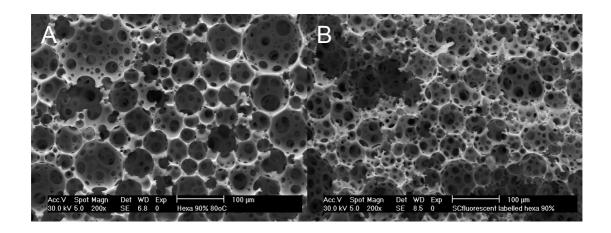
The mechanical behaviour of the trithiol-TMTPA and trithiol-DPEHA materials are demonstrated qualitatively in the accompanying videos.

Trithiol-TMTPA: filename 'TMTPA movie.AVI'

Trithiol-DPEHA: filename 'DPEHA movie.AVI'

## Influence of Fluorescein O-acrylate on PolyHIPE Morphology

SEM images of polyHIPE materials corresponding to PolyHIPE 8 in Table 1, with and without fluorescein *o*-acrylate, are shown in Figure S1. The fluorescent acrylate was added at 2 mol% of the total acrylate group content.



**Figure S1**. SEM images of polyHIPE 8 (see Table 1) without (A) and with (B) added fluorescein *o*-acrylate (2 mol%).