

Electronic Supplementary Information (ESI):

Tough and Degradable Photopolymers Derived from Alkyne Monomers for 3D Printing of Biomedical Materials

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Real-time FT-IR spectroscopy

Figure S1 shows the triple bond conversion of alkyne carbonate/TMPMP formulations (C-H stretch observed at 3288 cm⁻¹) and the double bond conversion of 4MAC and 4AC (C=C stretch at 1640 cm⁻¹) during UV illumination. The monomer conversions (MC) as depicted in Table 1 were determined after 2 min of illumination.

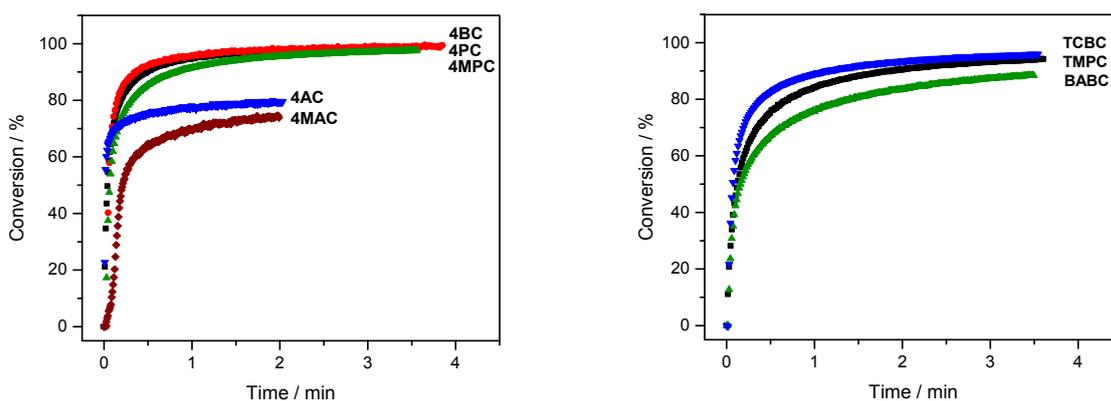


Figure S1: Triple (alkyne carbonates) and double bond ((meth)acrylates) conversion versus illumination time.

Cytotoxicity (ISO 10993-5:2009)

Detailed results [Cell protein content versus monomer concentration, including negative (medium) and positive control (Triton 1%)] obtained by cytotoxicity tests are listed in Figure S2.

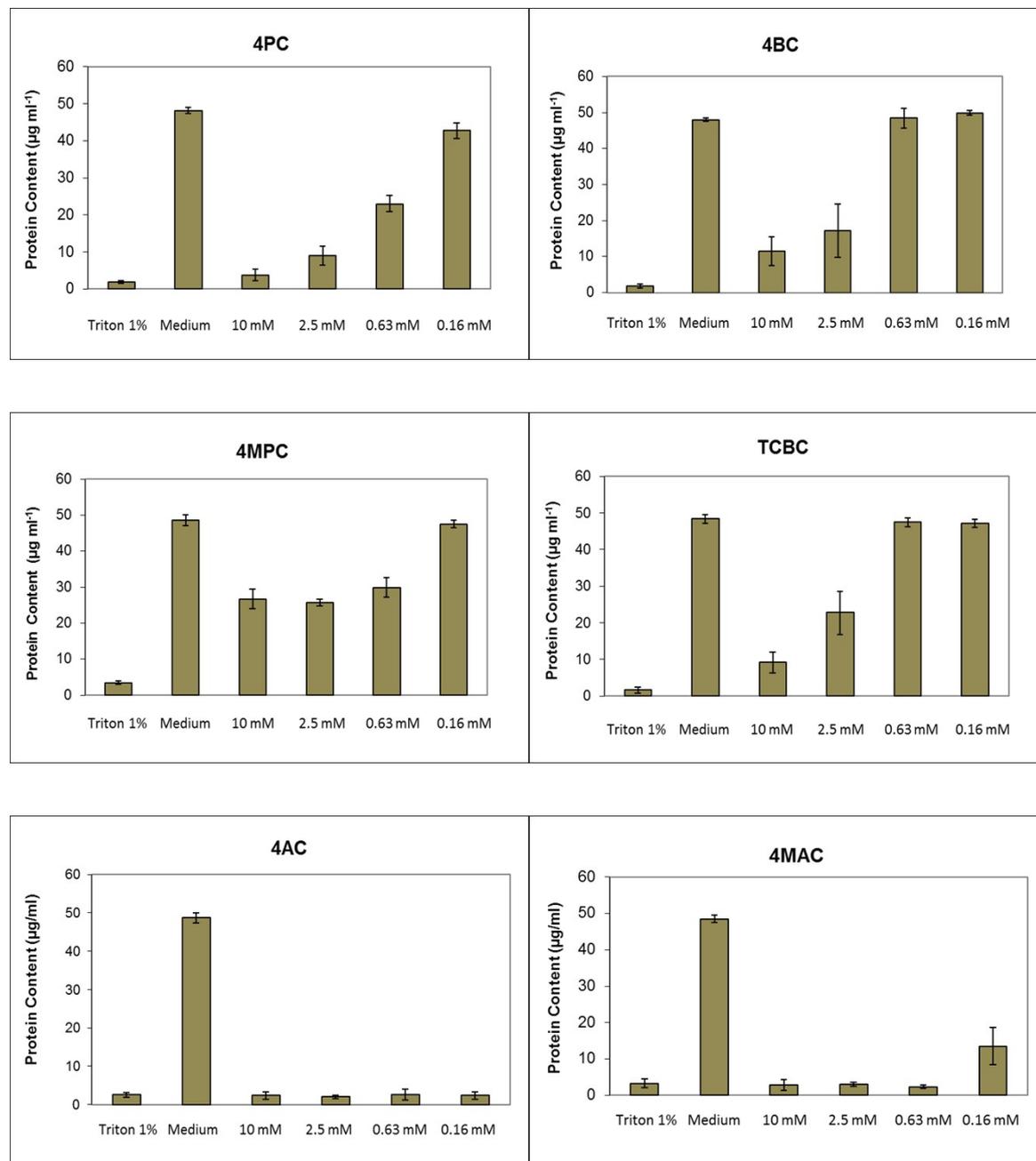


Figure S2: Results obtained from cytotoxicity tests showing the cell protein content versus the monomer concentration of investigated alkyne carbonates and reference substances 4AC and 4MAC.

DMA

Figure S3 shows the DMA plot of 4MAC.

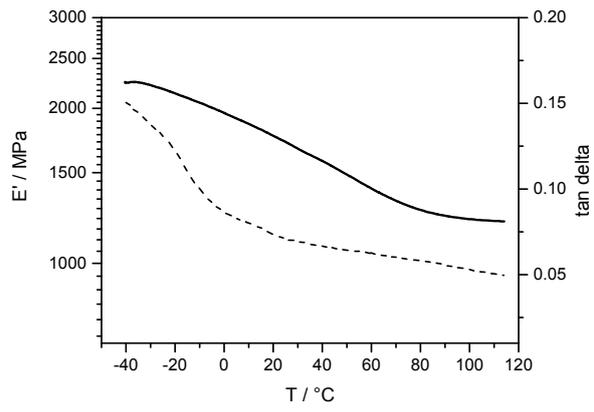


Figure S3: DMA plot of 4MAC showing E' (solid) and tan delta (dashed).