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.

![Cytotoxicity Test Results](image)

**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).