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Supporting information

for

Multi-responsive polypeptide hydrogels derived from *N*-carboxyanhydride terpolymerizations for delivery of nonsteroidal anti-inflammatory drugs (NSAIDs)

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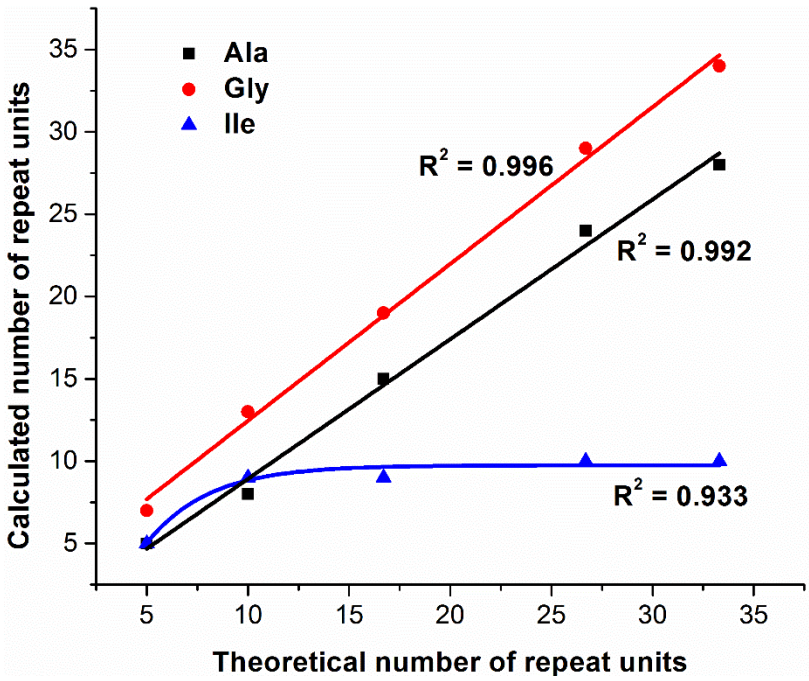

Figure S1. Calculated number of repeat units as a function of theoretical number of repeat units of Ala, Gly and Ile in the polymers **1** - **5**.

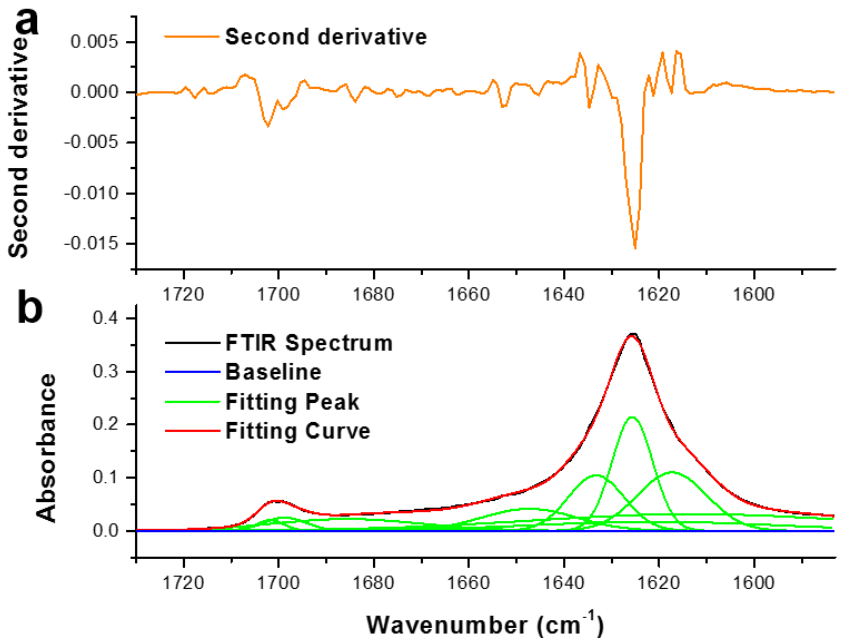

Figure S2. (a) Second derivative and (b) ATR-FTIR spectra (black), fitting curve (red), baseline (blue) and fitting peaks (green) for a hydrogel formed from polymer **1** in the solid state.

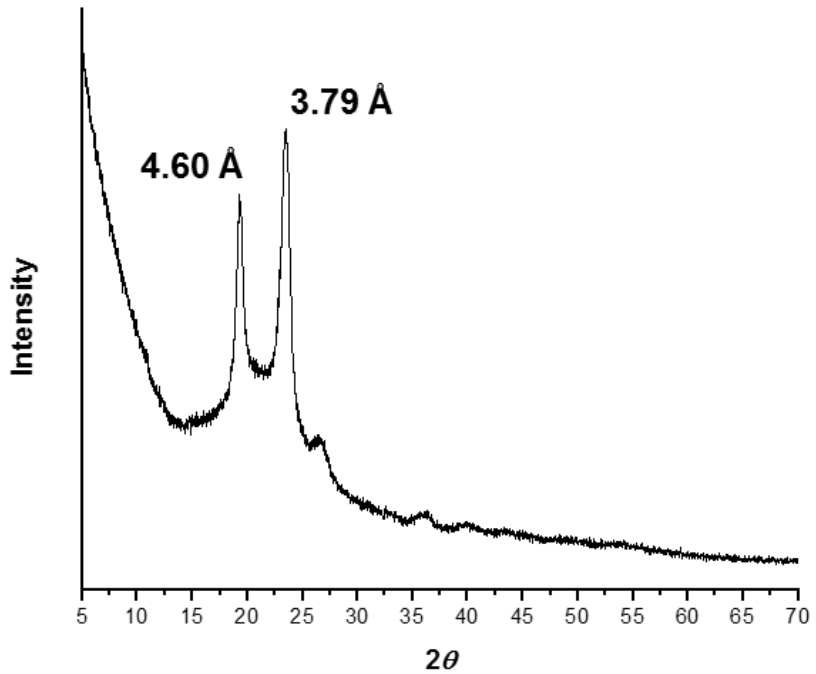

Figure S3. WAXS pattern of polymer **1** in the solid state.

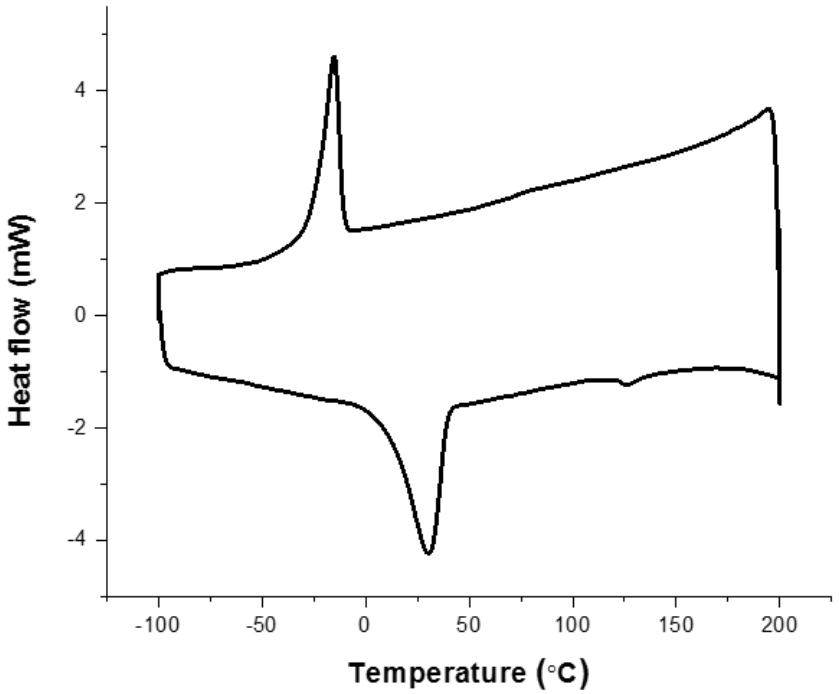

Figure S4. DSC traces of polymer **1** in the solid state. In the DSC traces, the sample was heated from -100 °C to 200 °C, then cooled to -100 °C, each with a rate of 10 °C/min. The second heating and cooling traces are shown.

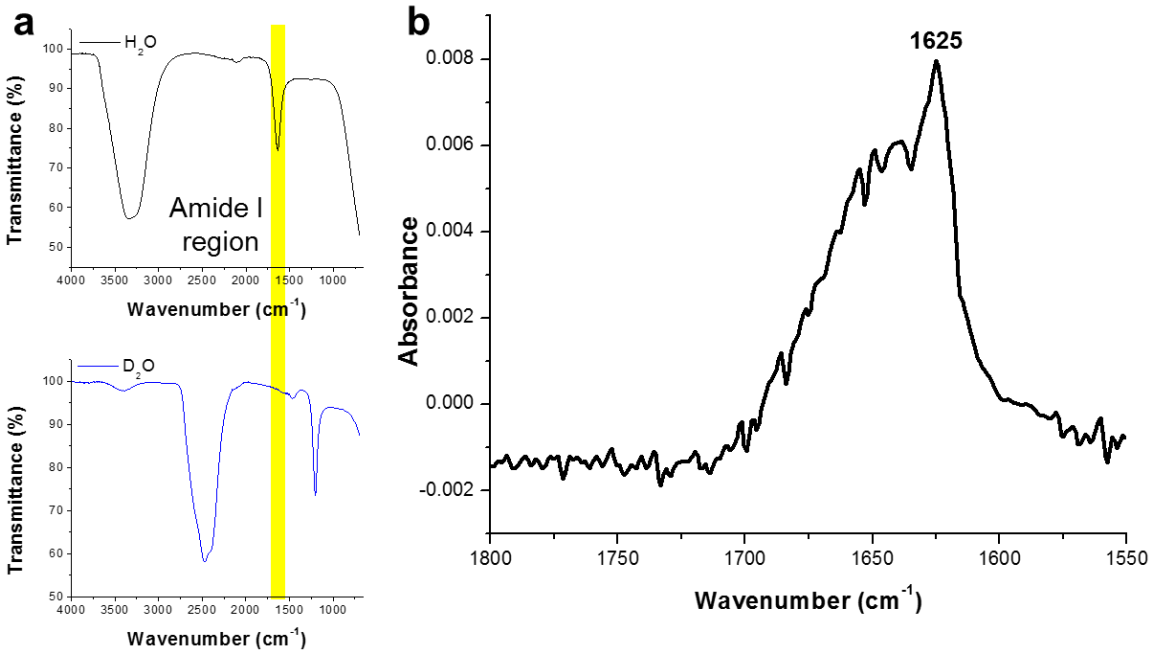

Figure S5. (a) FTIR spectra of H_2O and D_2O. (b) *In situ* FTIR spectrum of a hydrogel formed from polymer **1** in the gel state hydrated with D_2O.

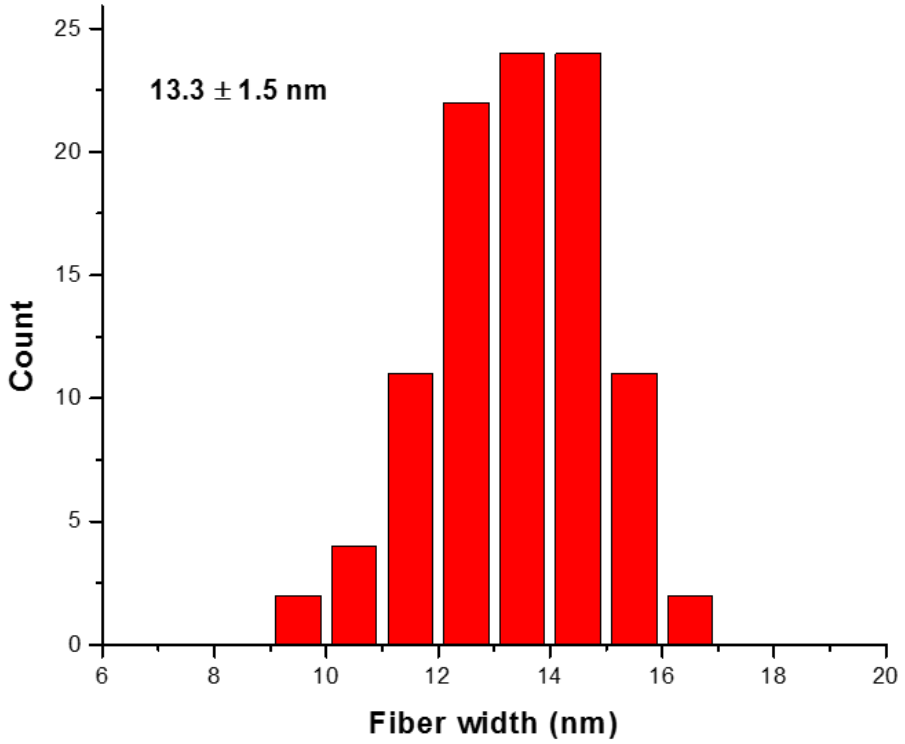

Figure S6. Fiber width distribution in a hydrogel formed from polymer **1** obtained from the TEM image by counting 100 fibers.