

Supporting Information for

An Entropy-Elastic Gelatin-Based Hydrogel System

Giuseppe Tronci, Axel Thomas Neffe, Benjamin Franklin Pierce, and Andreas Lendlein*

Optical profilometry

Surface profiles of dry films and scaffolds were obtained with an optical profilometer type MicoProf 200, equipped with a white-light chromatic sensor CWL 300 (Fries Research & Technology GmbH, Bergisch Gladbach, Germany), using the data acquisition software AQUIRE (version 1.21) and the data evaluation software MARK III (version 3.8b). All scans were performed at a measuring rate of 300 Hz. First, an overview scan size of $4 \times 0.25 \text{ mm}^2$ was obtained. Within that area, scans with $50 \times 50 \text{ }\mu\text{m}^2$ size at three different locations were performed.

Optical profilometry was used to analyze the extent of bubble/foaming suppression in the resulting material, and showed relatively film flat surfaces with an averaged roughness (R_a) in the range of $0.1\text{-}1 \text{ }\mu\text{m}$. One example is shown in Figure 1. Therefore, homogeneous bulk films could be produced after only 10 min of reaction time.

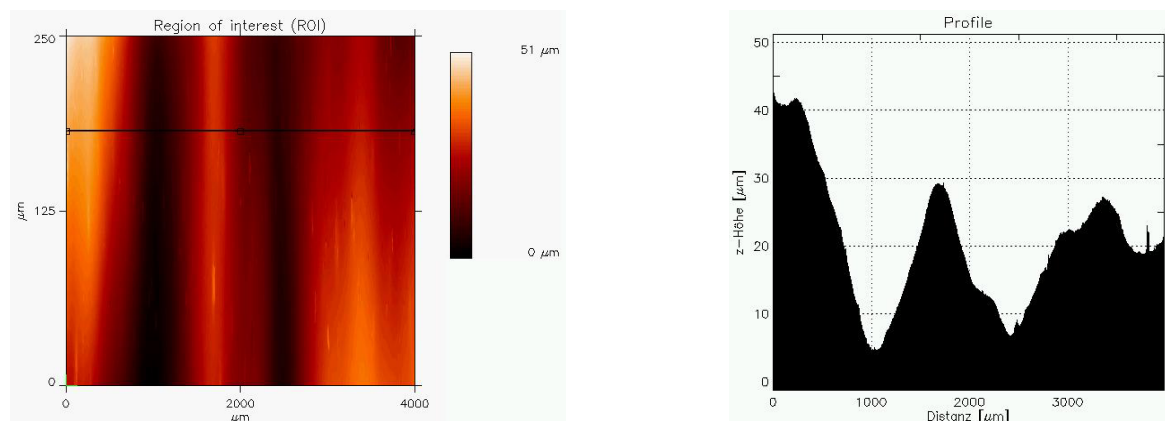


Figure 1: Overview scan size (Left) and relative profile (right) of a crosslinked gelatin film (G7_HNCO8), displaying an averaged roughness (R_a) and root mean square roughness (R_q) of roughly 0.1 and $0.272 \text{ }\mu\text{m}$, respectively.