

Interfacial Crystallization and Supramolecular Self-Assembly of Spider Silk Inspired Protein at the Water-Air Interface

Pezhman Mohammadi ^{1,*}, Fabian Zemke ^{2,†}, Wolfgang Wagermaier ² and Markus B. Linder ³

¹ VTT Technical Research Centre of Finland Ltd., FI-02044 Espoo, Finland

² Department of Biomaterials, Max Planck Institute of Colloids and Interfaces, D-14476 Potsdam, Germany; f.zemke@tu-berlin.de (F.Z.); wolfgang.wagermaier@mpikg.mpg.de (W.W.)

³ Department of Bioproducts and Biosystems, School of Chemical Engineering, Aalto University, FI-02150 Espoo, Finland; markus.linder@aalto.fi

* Correspondence: Pezhman.mohammadi@vtt.fi

† Current address: Fachgebiet Keramische Werkstoffe Chair of Advanced Ceramic Materials, Institute of Materials Science and Technology, Technische Universität Berlin, 10623 Berlin, Germany.

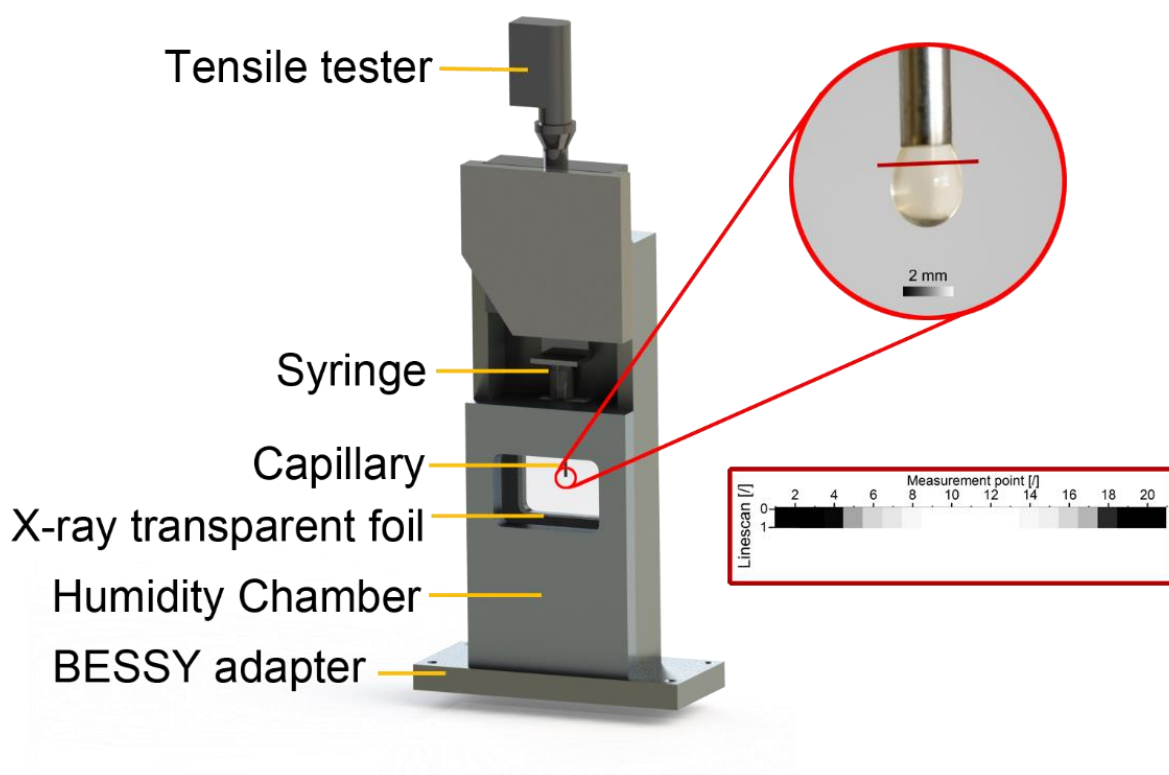


Figure S1. Overview of the used humidity measurement chamber with a motorized tensile testing machine, syringe/cannula, and x-ray transparent polymeric windows. The red circle marks the area of interest, where the droplet was formed.

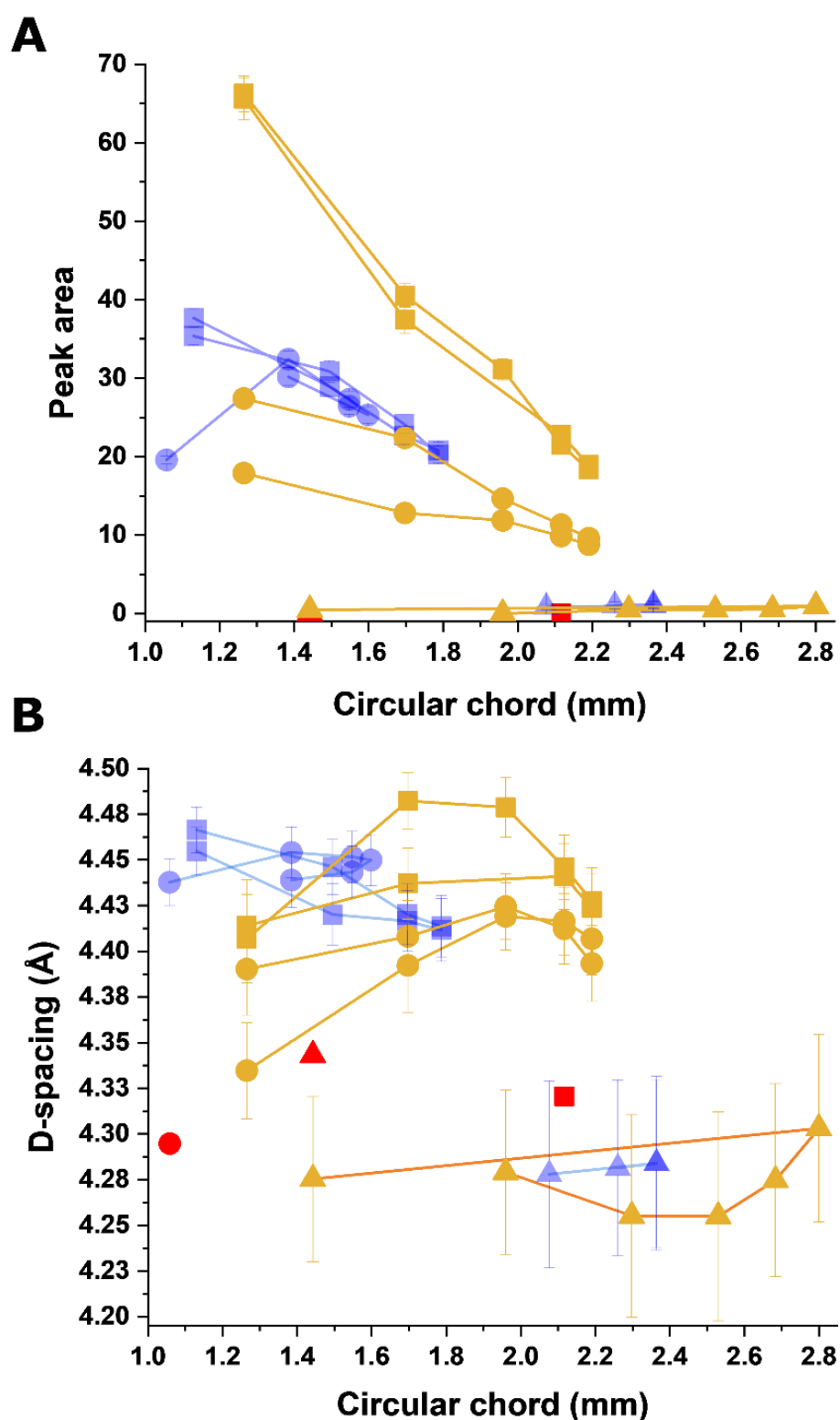


Figure S2. Effect of concentration and humidity on the formation of β -sheets analyzed by *in-situ* x-ray scattering. **(A)** Peak area fit over the circular chord for 0.2% w/v, 2% w/v and 15% w/v protein samples at 20% RH, 40% RH and 80% RH. **(B)** Peak fit position over the circular chord of the droplet corresponding to A. For better clarity, data points for 80% RH for all three concentrations were removed due to the unreliability of detections.