Optically Transparent Recombinant Silk-Elastinlike Protein Polymer Films

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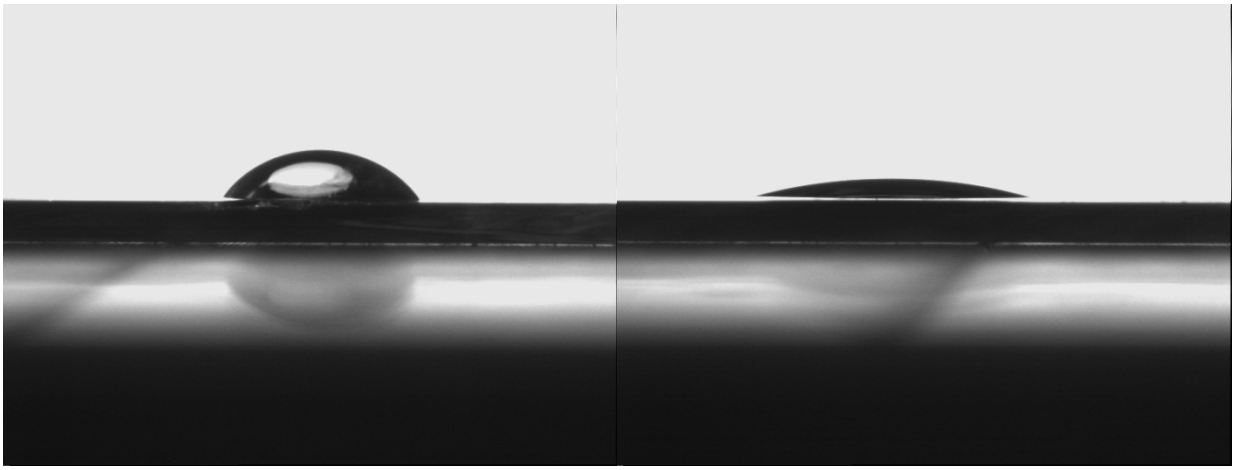

Fig. S1. Water droplets on a non-treated SELP-47K film at t = 0 (left) and t = 1 min (right).

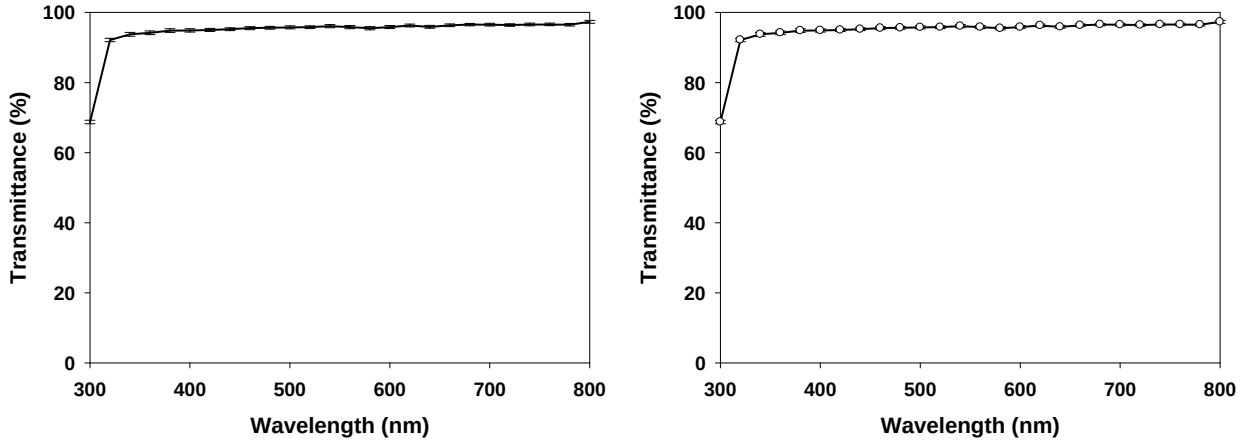

Fig. S2. Transmittance of MeOH-treated SELP-47K films of 30 μm thickness. Measurements were done on three films of each type. Error bars for triplicate measures are shown (left). Error bars and symbols are shown (right).

Soluble fraction study of SELP-47K protein films: The soluble fraction of MeOH- and MeOH-GTA-treated SELP-47K film was evaluated in 2 ml of PBS containing 0.2 mg/ml NaN_3 for a week[1,2]. Prior to study the mass of the film was determined. At predetermined time points, three of the films were removed from PBS, extensively washed in DI water, reweighed after dried in a fume hood with laminar air flow overnight at room temperature. The remaining fraction was determined by dividing the mass at each time point by the initial mass.

1. Dinerman, A.A., et al., *Swelling behavior of a genetically engineered silk-elastinlike protein polymer hydrogel.* Biomaterials, 2002. **23**(21): p. 4203-10.
2. Pritchard, E.M., et al., *Incorporation of proteinase inhibitors into silk-based delivery devices for enhanced control of degradation and drug release.* Biomaterials, 2011. **32**(3): p. 909-18.

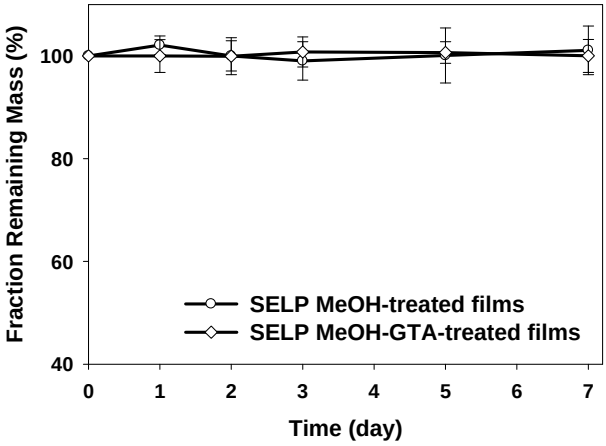

Fig. S3. Removal of the soluble fractions of MeOH- and MeOH-GTA-treated SELP-47K films. Measurements were done on three films of each type. Error bars for triplicate measures are shown.

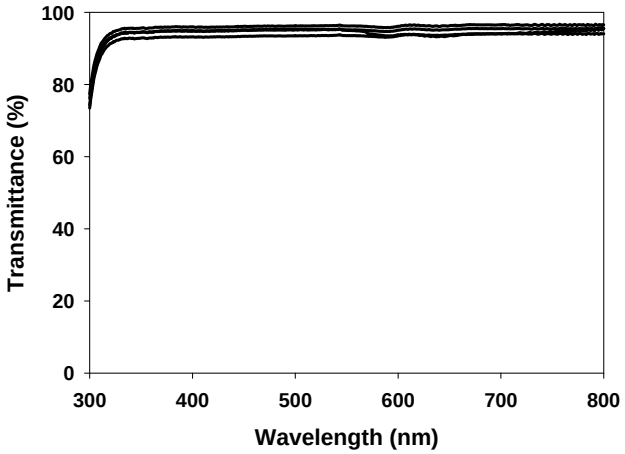

Fig. S4. Transmittance of hydrated non-treated SELP-47K films of various thickness, 20, 32, 40, 86 μm (from top to bottom).

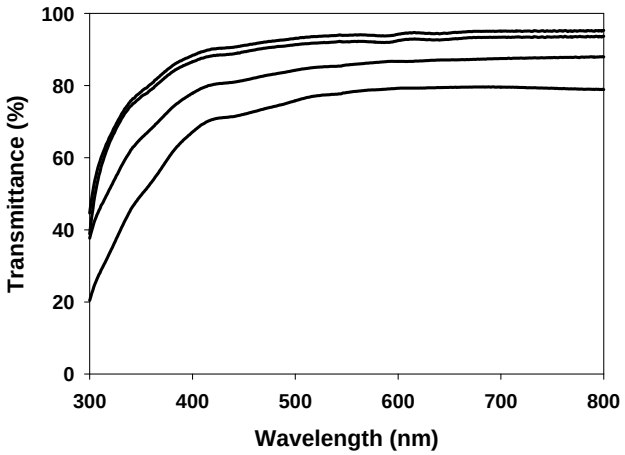

Fig. S5. Transmittance of hydrated MeOH-GTA-treated SELP-47K films of various thickness, 16, 28, 64, 92 μm (from top to bottom).