## **Electronic Supplementary Information**

## Mimicking Muscle Fiber Structure and Function Through Electromechanical Actuation of Electrospun Silk Fiber Bundles

S. Y. Severt,<sup>a</sup> S. L. Maxwell,<sup>a</sup> J. S. Bontrager,<sup>a</sup> J. M. Leger<sup>a,b</sup> and A. R. Murphy<sup>a</sup>

<sup>a</sup>Department of Chemistry and <sup>b</sup>Department of Physics and Astronomy, Western Washington University, 516 High St., Bellingham, WA 98225, United States.

\*E-mail: amanda.murphy@wwu.edu



**Fig. S1** Representative stress-strain curves for the different bundle types tested while submerged in deionized water at room temperature. While the initial failure point was consistent between samples, the fiber bundles often frayed, which resulted in a broad distribution in the point of complete rupture.