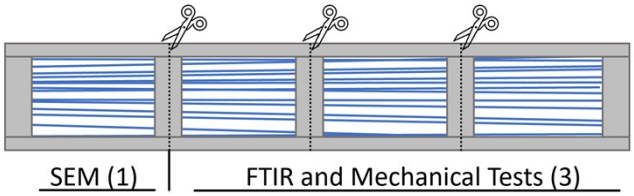
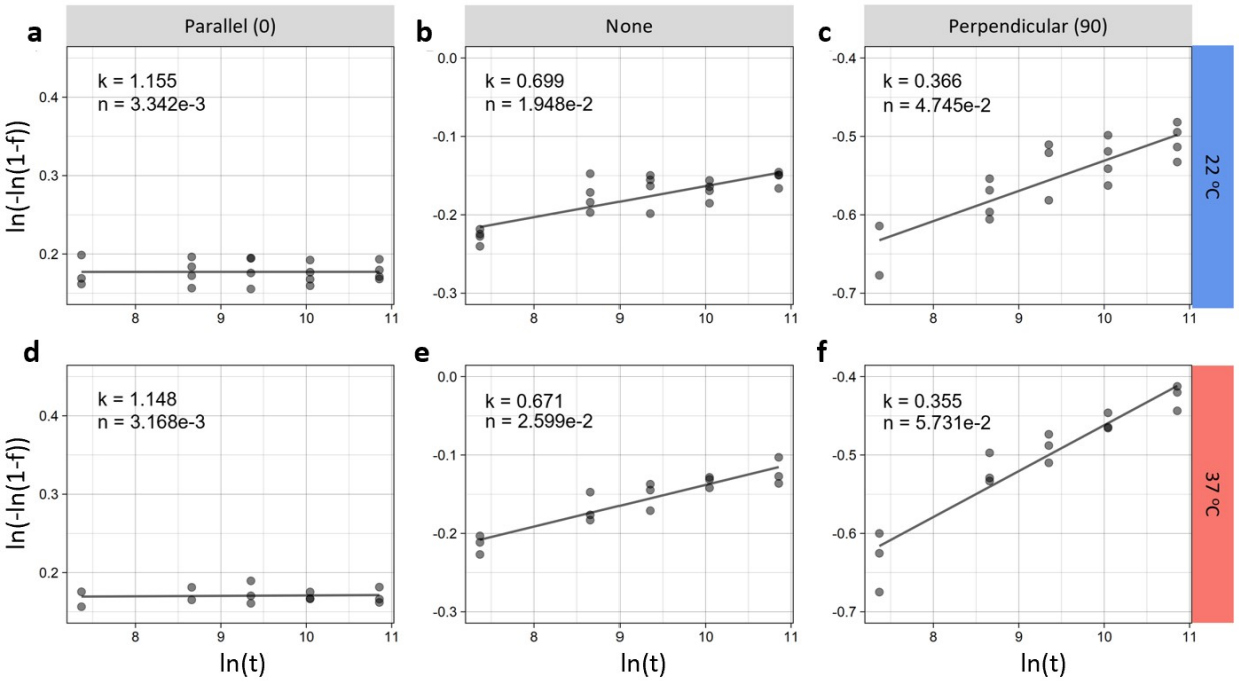
Electronic Supplementary Material (ESI) for Materials Advances.

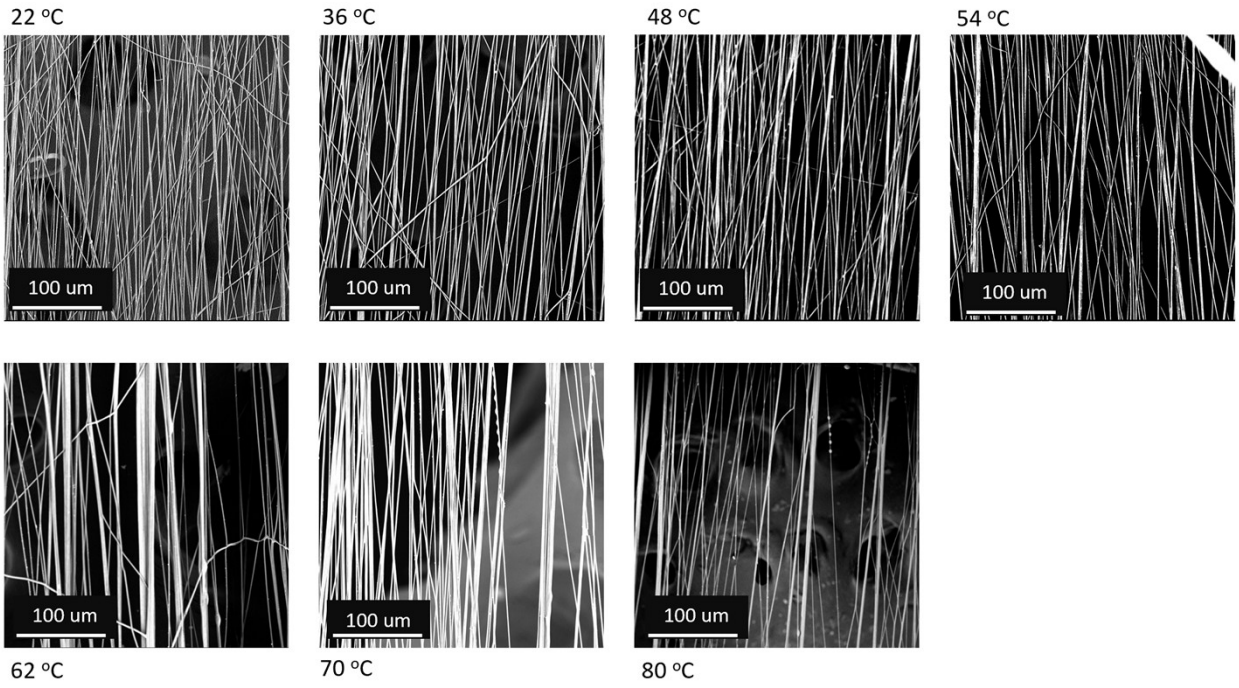
Supplementary Figures and Tables



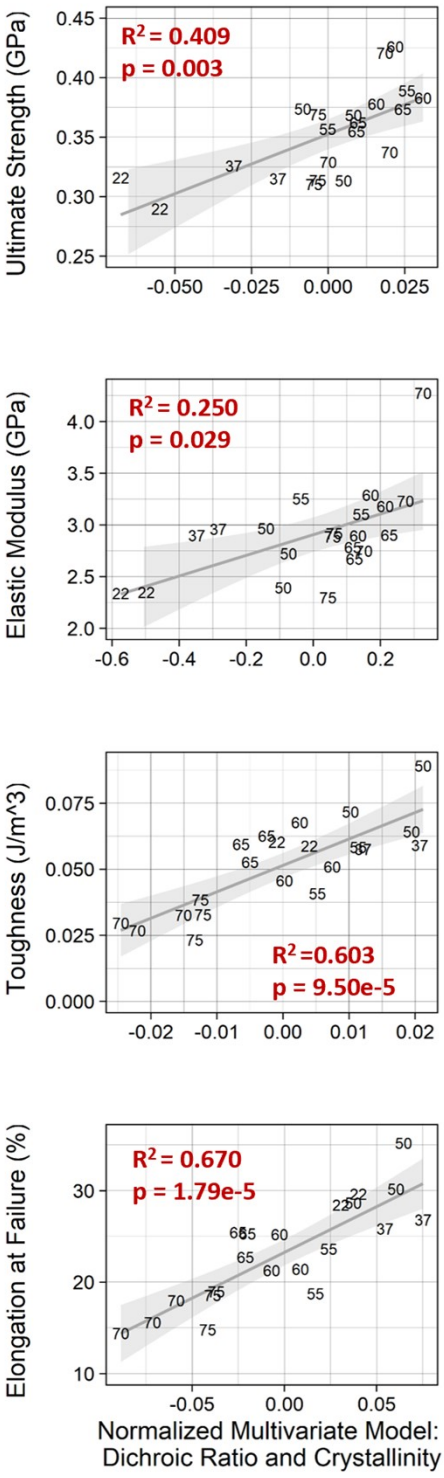
Supplemental #1: Depiction of a single strip of fibers being segmented into quadruplicates for analysis. Each strip is subject to a single annealing treatment before being separated for analysis.



Supplemental #2: Avrami fits for long-term crystallization kinetics.



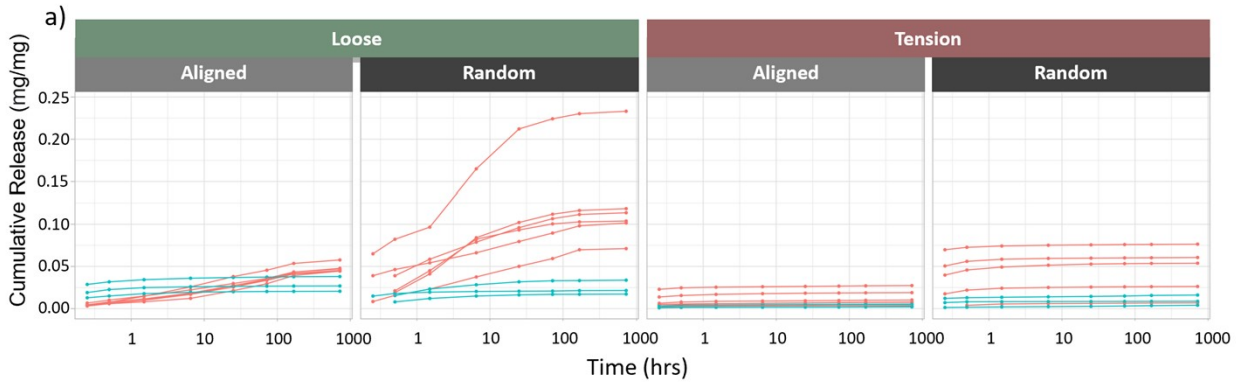
Supplemental #3: Representative SEM images showing morphology changes as a function of temperature. Starting at 60 °C, individual nanofibers begin fusing together into bundles.



Supplemental #4: Multivariable Linear Model of Mechanical Properties: shows the mechanical measurements as the dependent variable of a multivariable linear model that uses dichroic ratio and crystallinity as inputs.

	Crystallinity	DR	Cryst/DR
UTS	0.025	0.020	1.247
YM	0.265	0.111	2.377
Tough.	-0.008	0.008	-0.916
Elong.	-0.037	0.018	-2.115

Supplemental #5: Loadings of multivariable linear model. The first two columns show the loadings of the multivariable linear model for percent crystallinity and dichroic ratio, respectively. The third column (Cryst/DR) is the ratio of the first two columns, which shows the degree to which one molecular property makes a larger contribution to a given mechanical property.



Supplemental #6: Absolute cumulative release. Same data as reported in figure 8a, except not normalized to maximum release.