

Supplementary Material

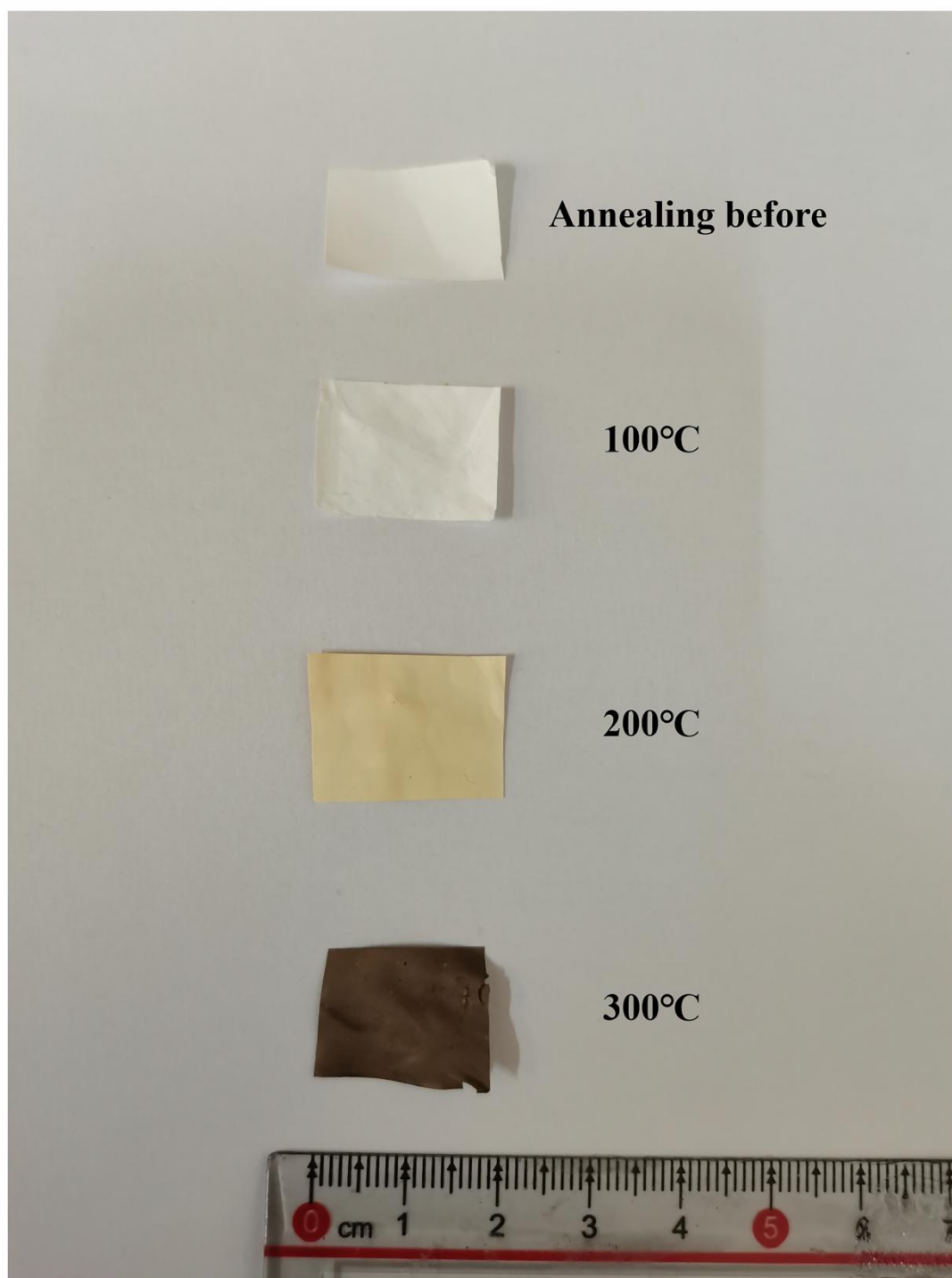
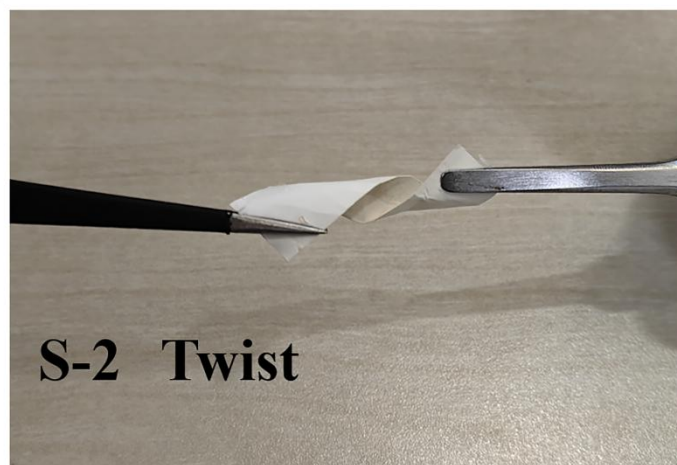


Figure S1. Photograph of nanofiber films synthesized under different conditions.

A



B



C

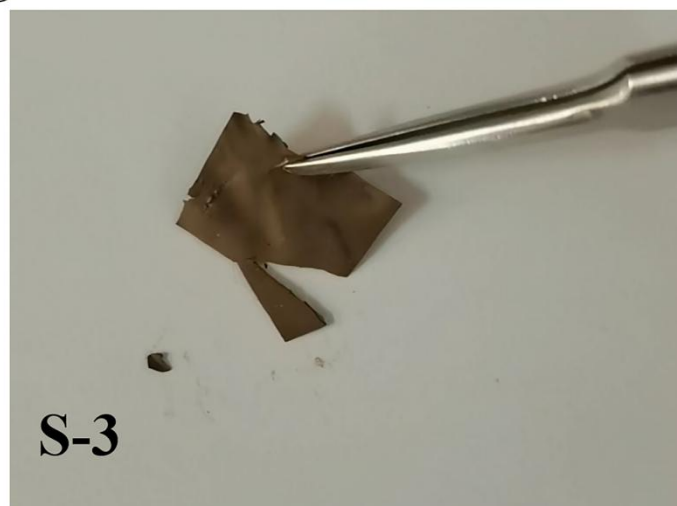


Figure S2. A) Fold and bend S-1 (annealed at 100 °C). B) Distortion test of S-2 (annealed at 100 °C). C) Broken S-3 after bending in half (annealed at 300 °C).

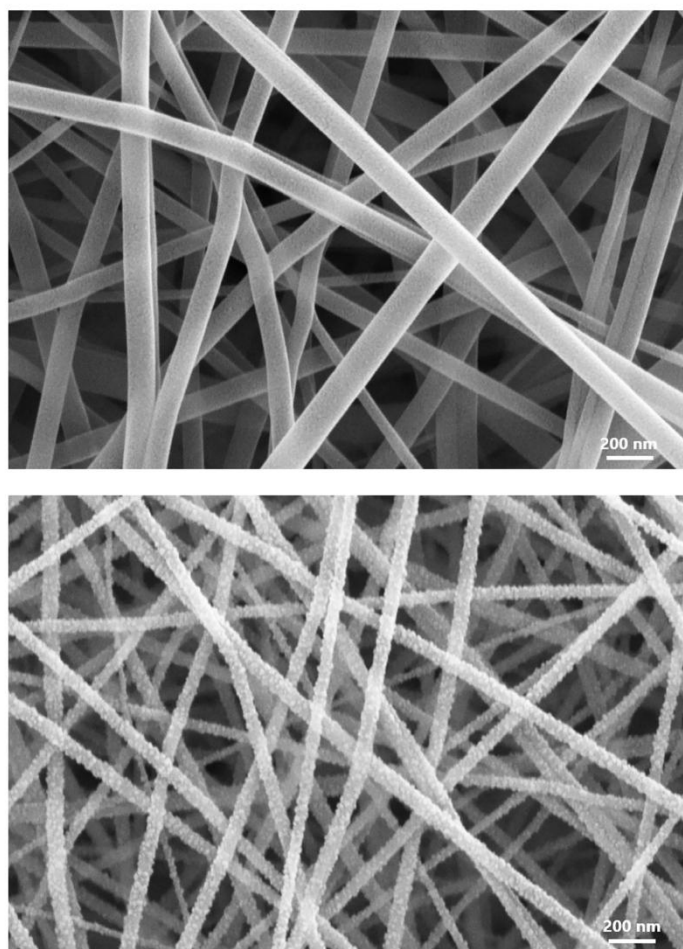


Figure S3. SEM images of S-1 (up) and S-3 (down).

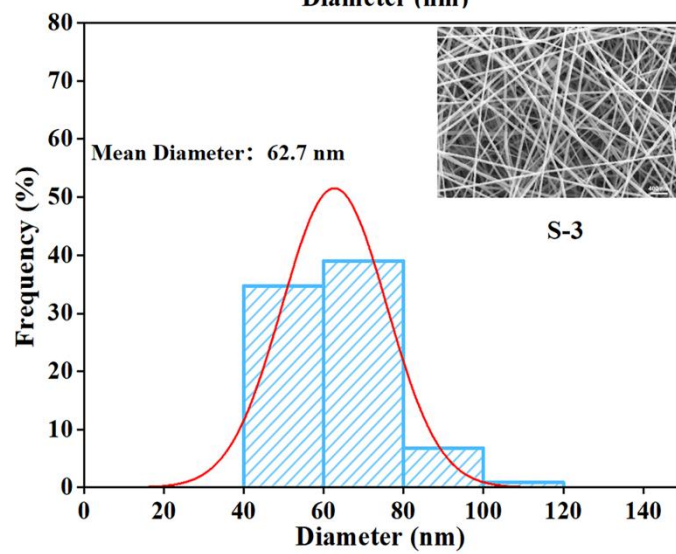
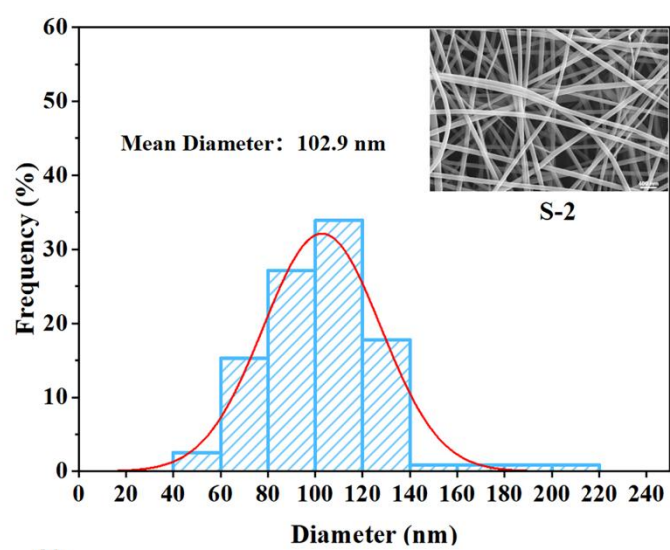
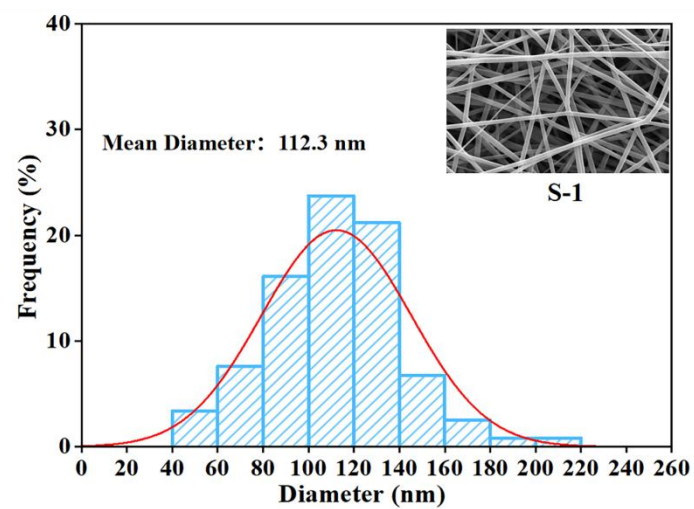


Figure S4. Fiber diameter distribution of S-1, S-2, S-3.

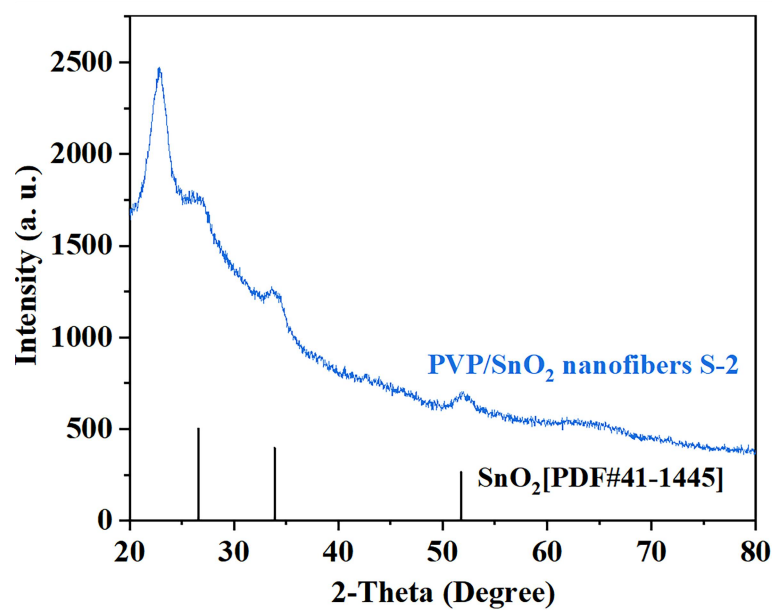


Figure S5. XRD patterns of PVP/SnO₂ nanofibers S-2.

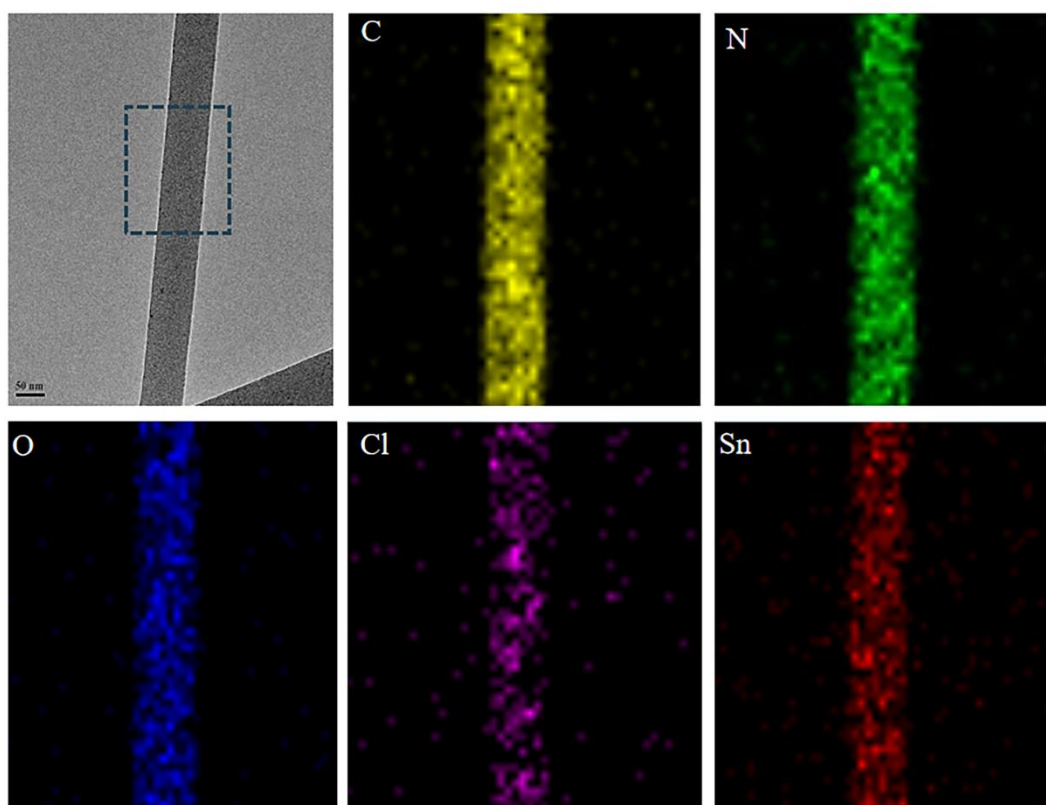


Figure S6. Mapping image of C, N, O, Cl and Sn in S-2 nanofibers.

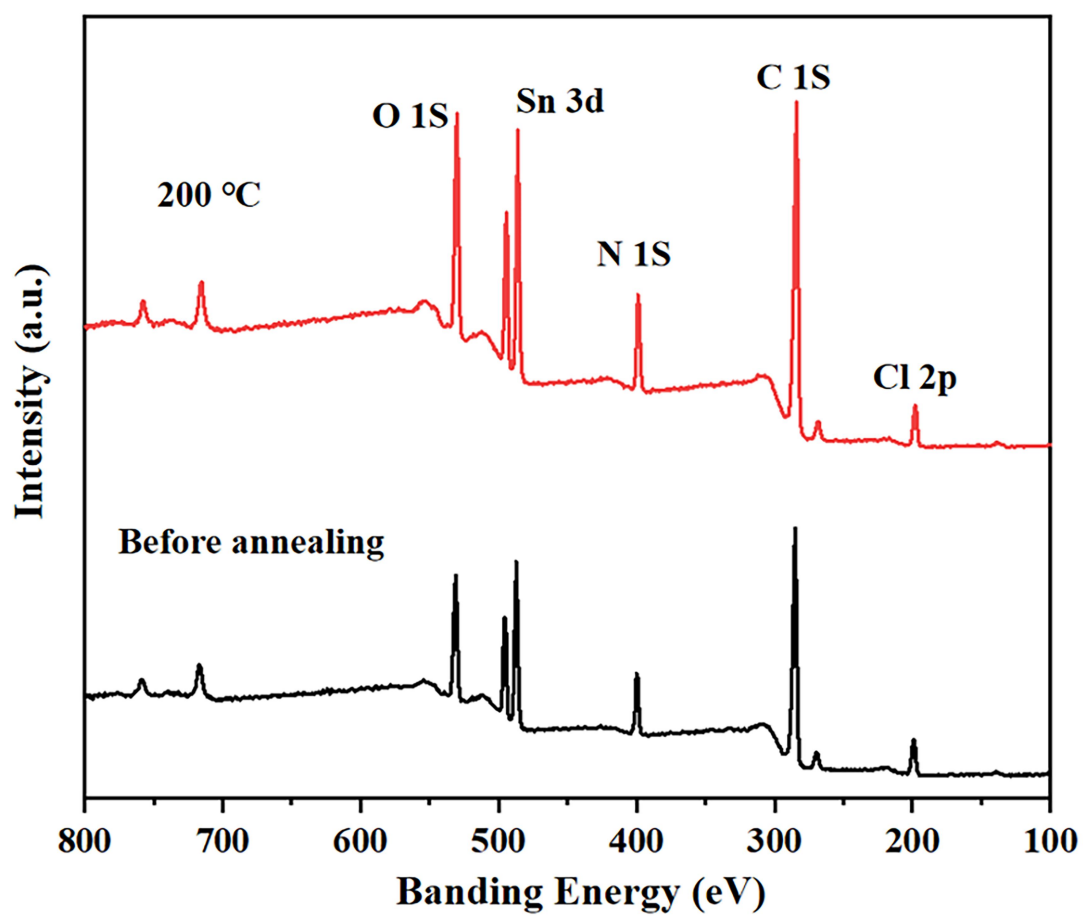


Figure S7. XPS survey scan spectra of S-0 and S-2.

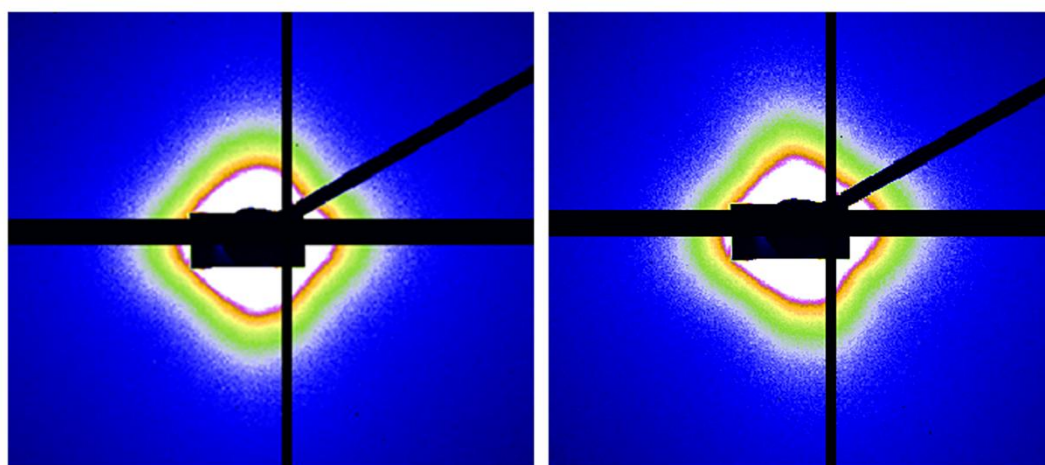


Figure S8. 2D-SAXS profiles of assembled sensors before (left) and after (right) compression testing.

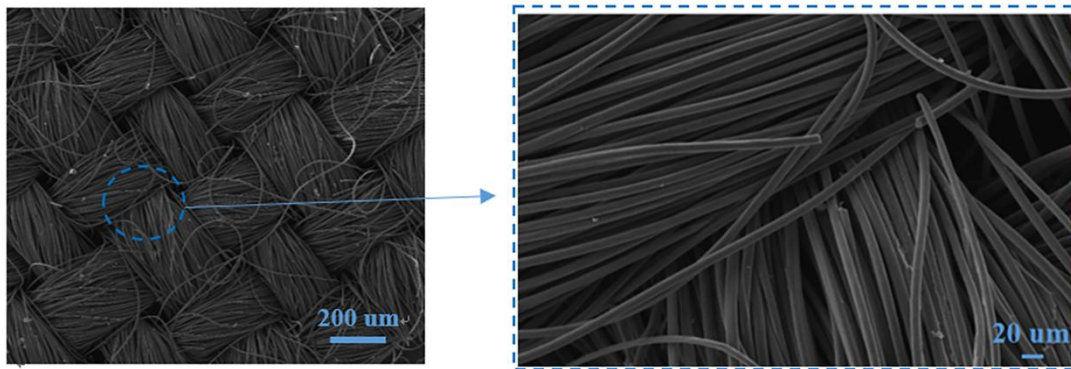


Figure S9. SEM images of carbon cloth.

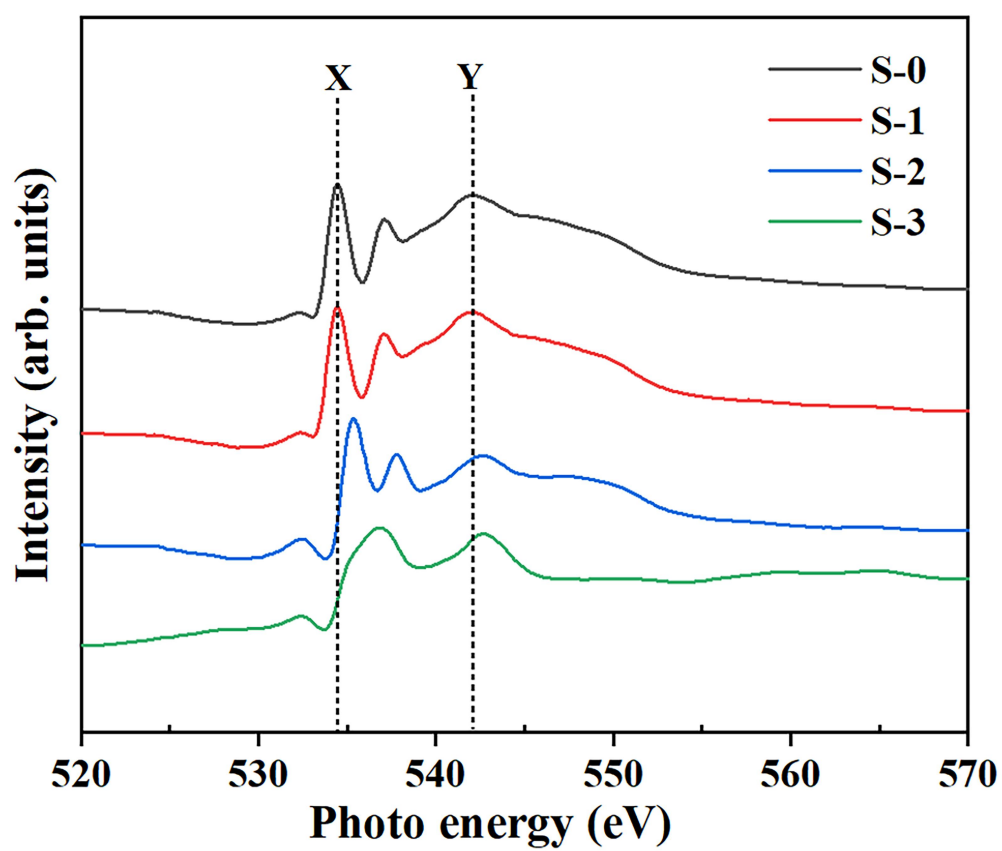


Figure S10. Oxygen K-edge XANES spectra of S-0, S-1, S-2, and S-3.

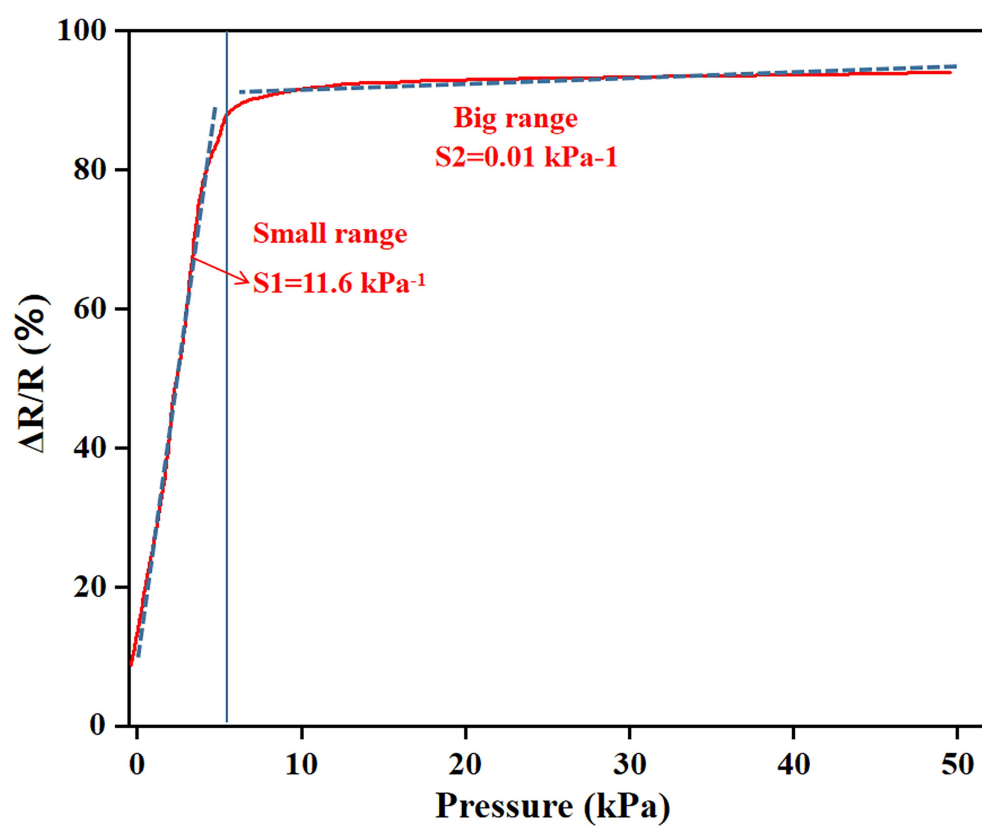


Figure S11. Pressure response curve of a sensor assembled with a single sensing layer.

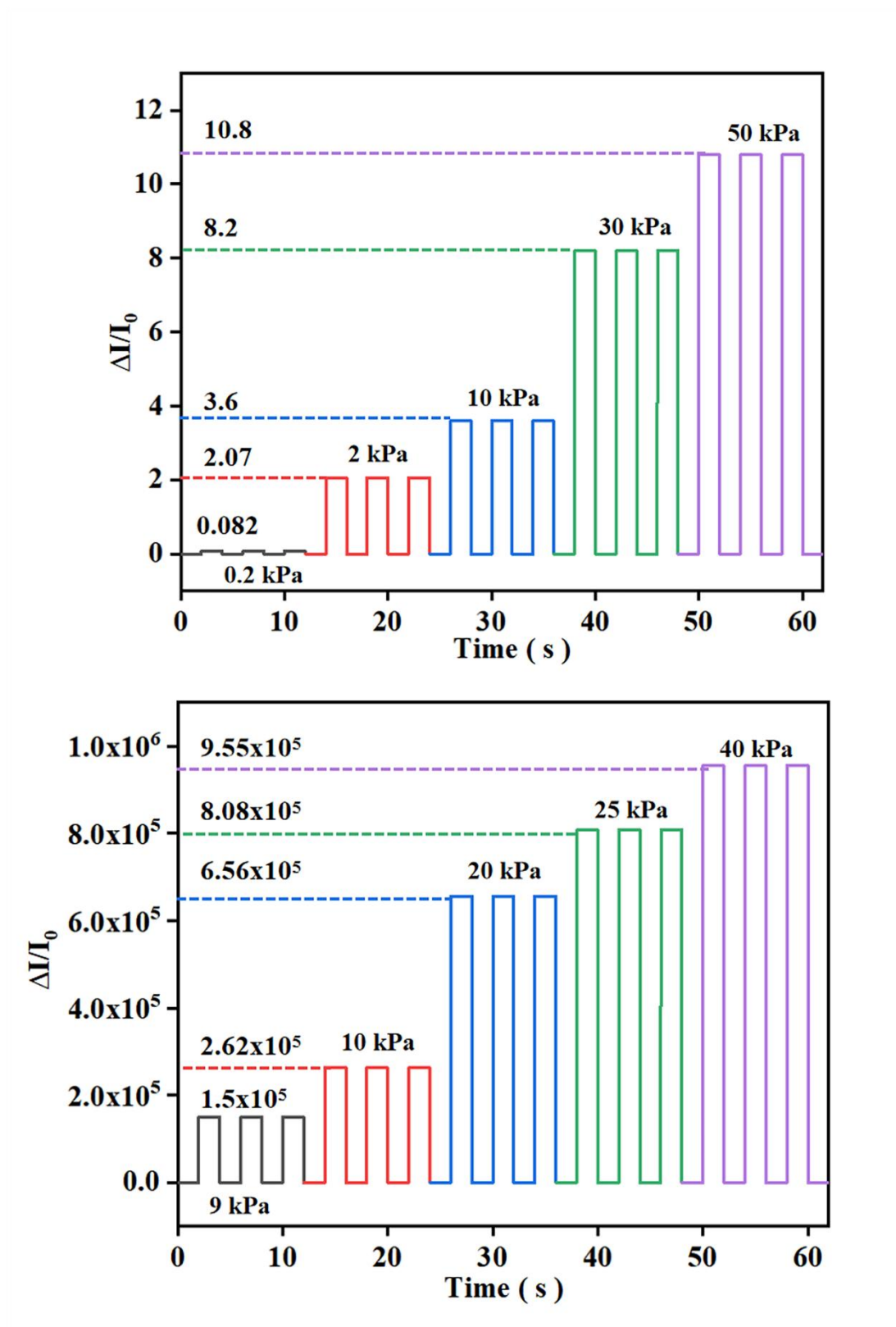


Figure S12. Cyclic response of sensors assembled with single-layer (up) and three-layer (down) sensing layers under different pressures.

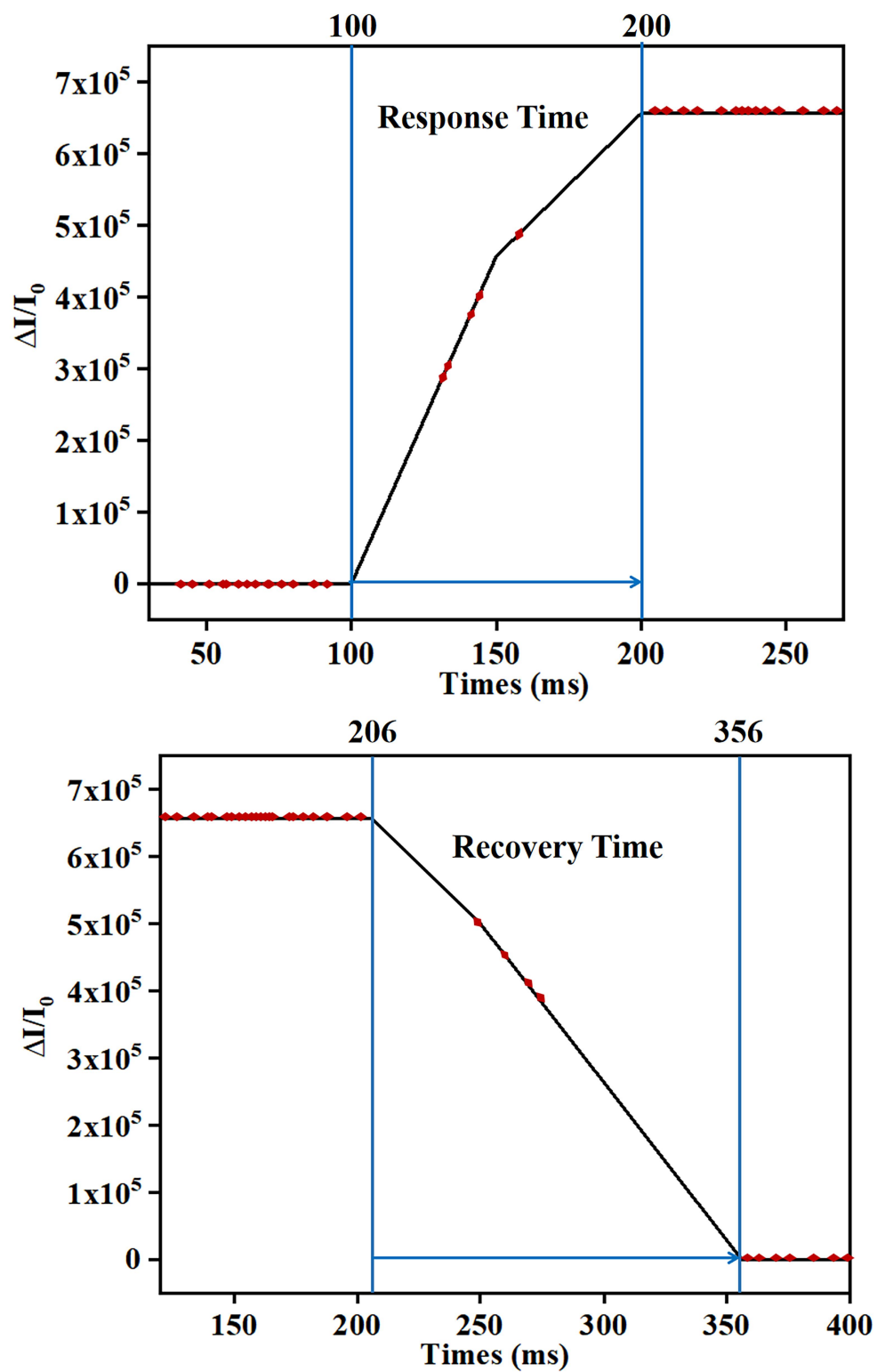


Figure S13. Response (up) and recovery (down) speed of sensors assembled with three sensing layers.

Table S1. Structural parameters obtained by the Sn EXAFS spectra for S-2 sample.

Element	Path	N	r (Å)	σ^2
Sn	Sn-O	4.323	2.053	0.008
	Sn-Cl	3.798	2.218	0.005
	Sn-Sn	1.978	3.243	0.013