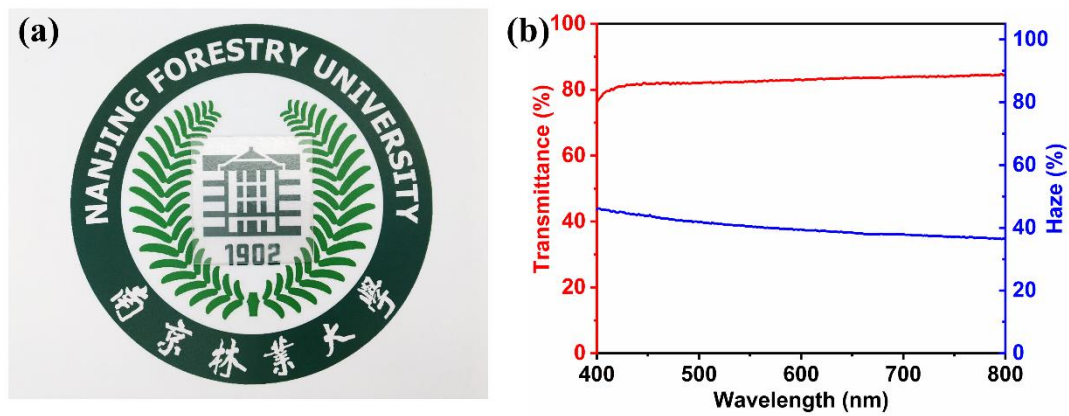
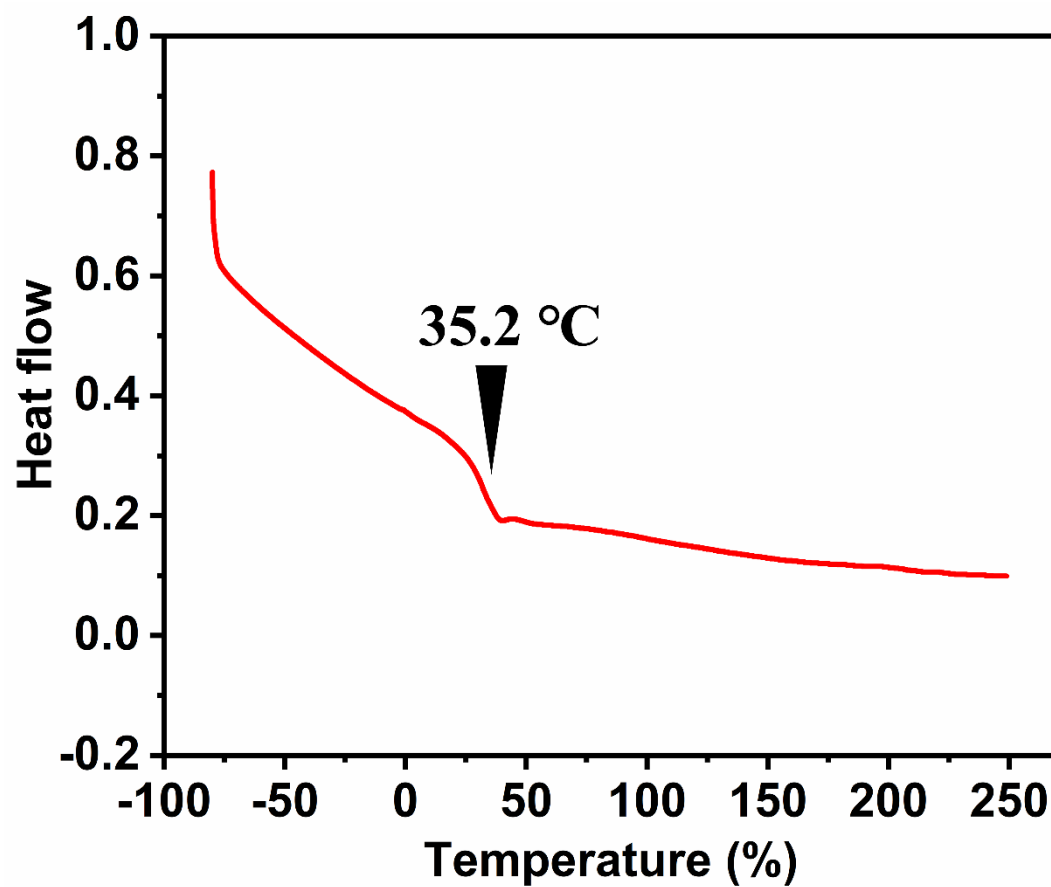


Supplementary Information

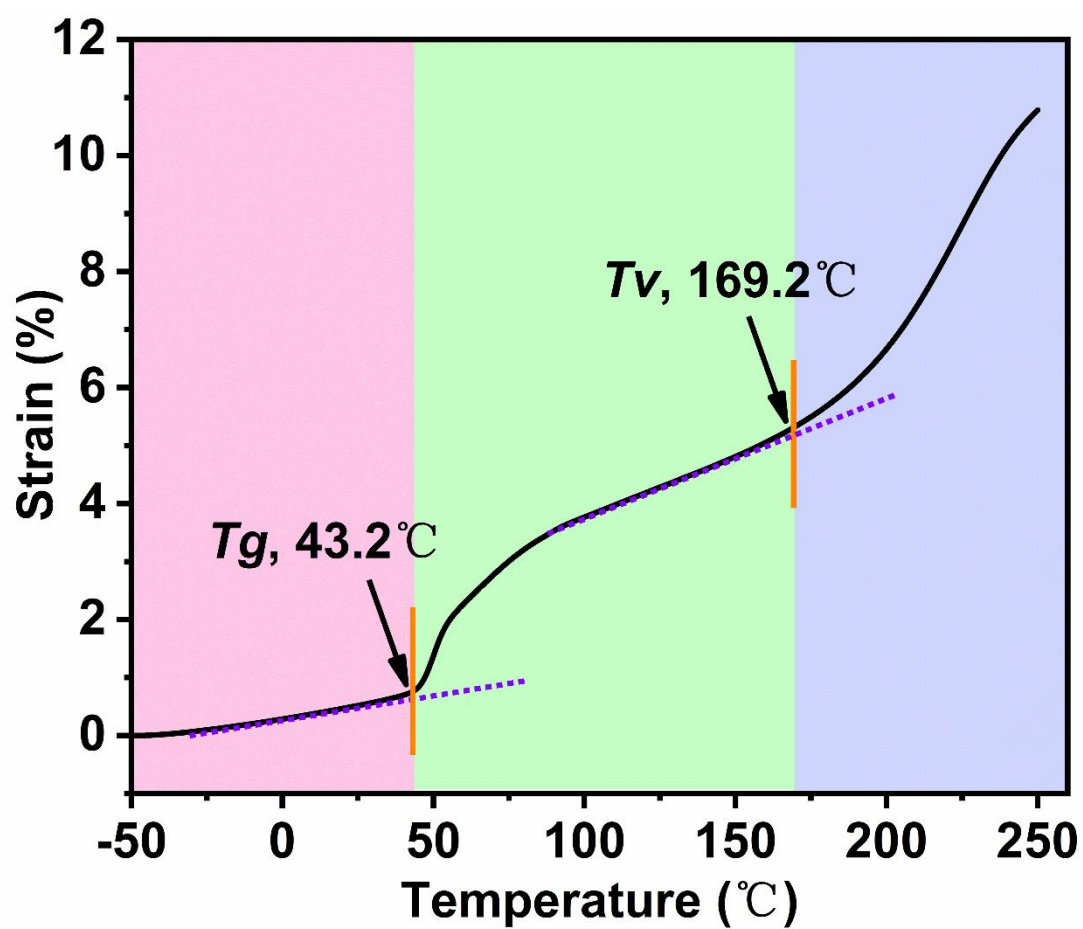
An editable shape-memory transparent wood for smart building materials



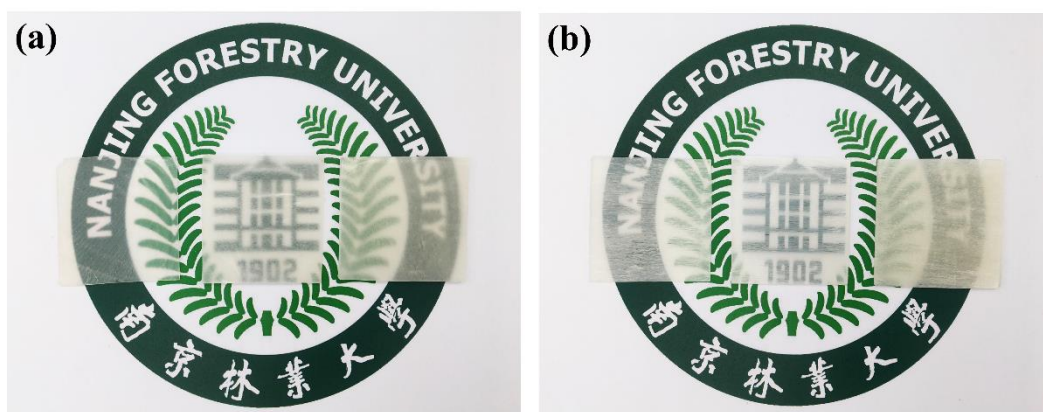
Supplementary Figure 1. The transparent appearance, and transmittance and haze of vitrimers.



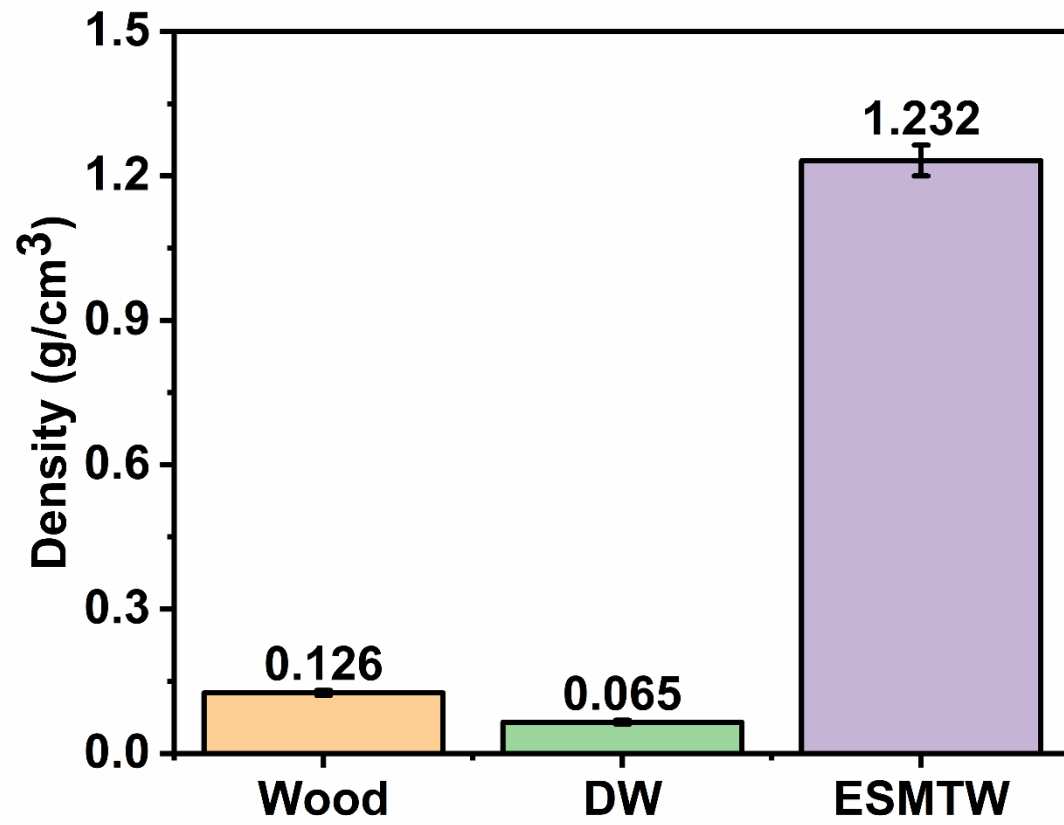
Supplementary Figure 2. DCS curve of vitrimers.



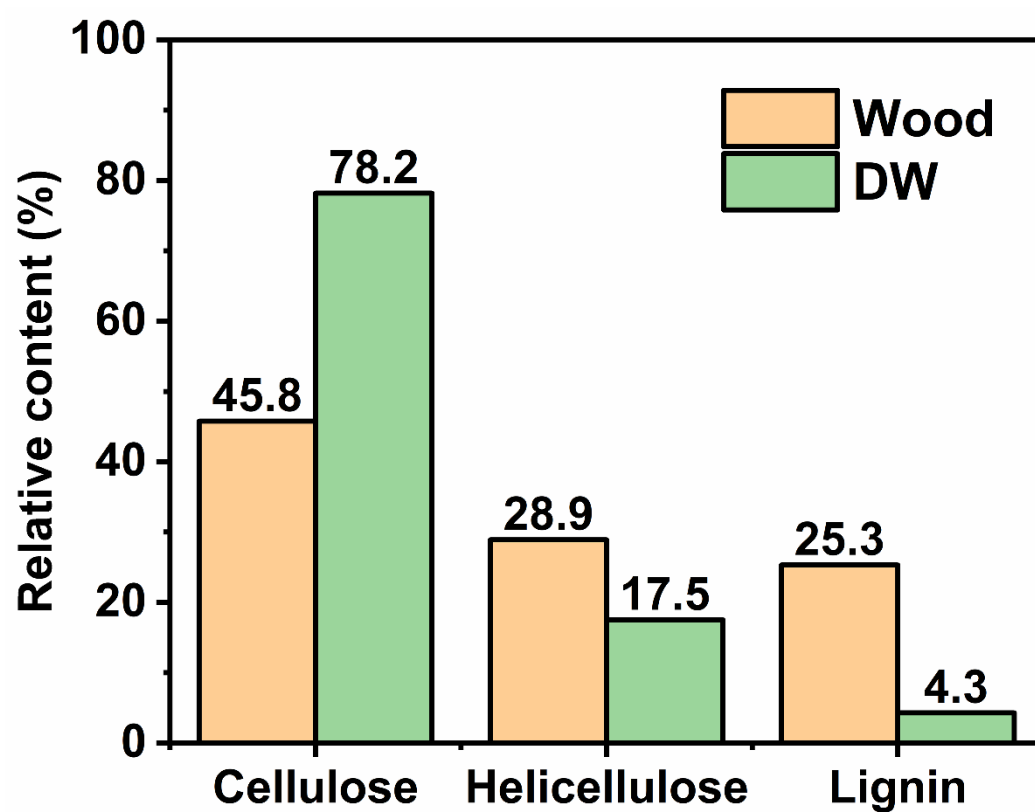
Supplementary Figure 3. Dilatometry experiment of vitrimers.



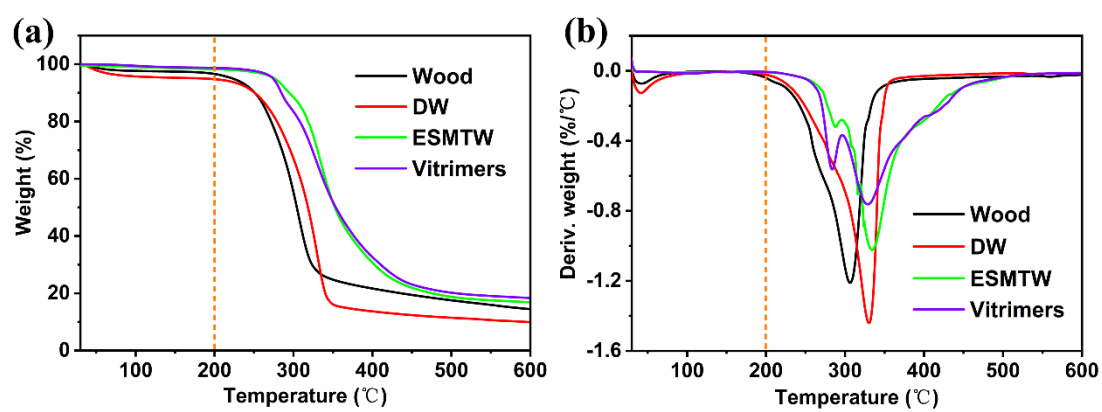
Supplementary Figure 4. The transparent appearance of (a) T-ESMTW and (b) L-ESMTW with thickness of 1 mm, 2 mm, 3 mm from left to right, respectively.



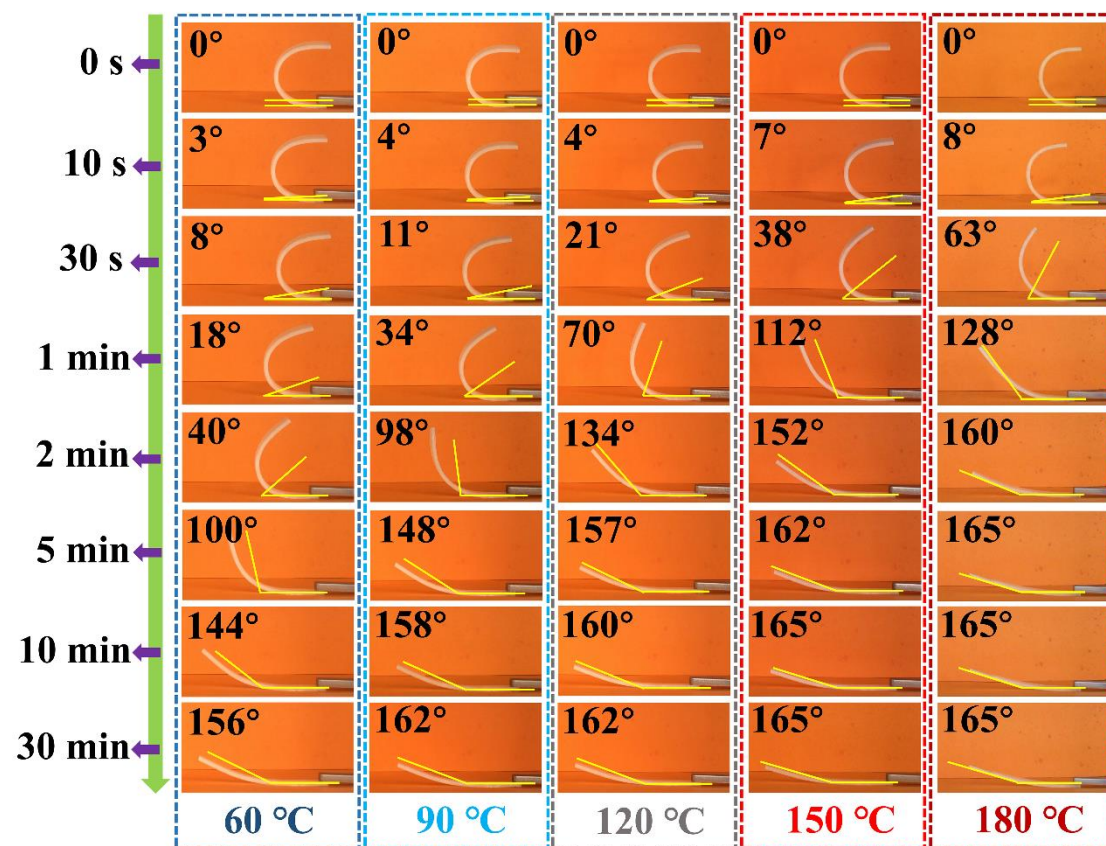
Supplementary Figure 5. Density of wood, DW, and ESMTW.



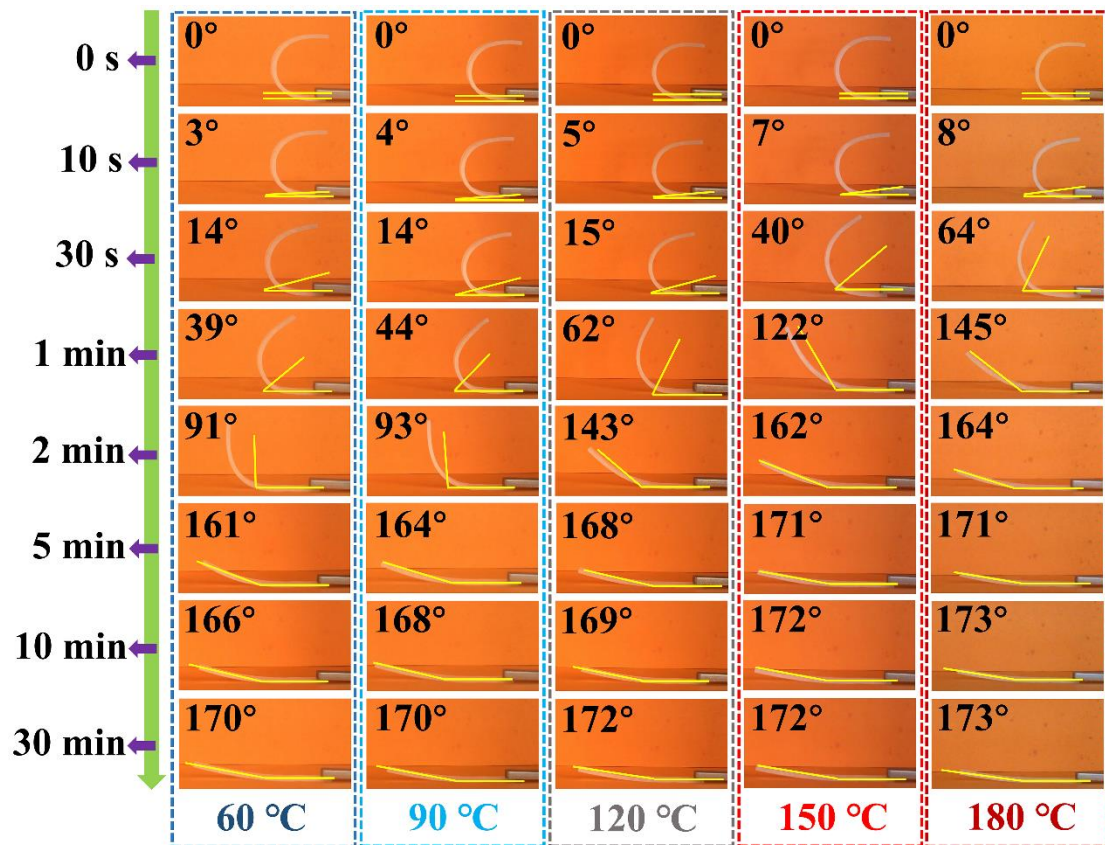
Supplementary Figure 6. Component content of cellulose, hemicellulose and lignin for wood and DW.



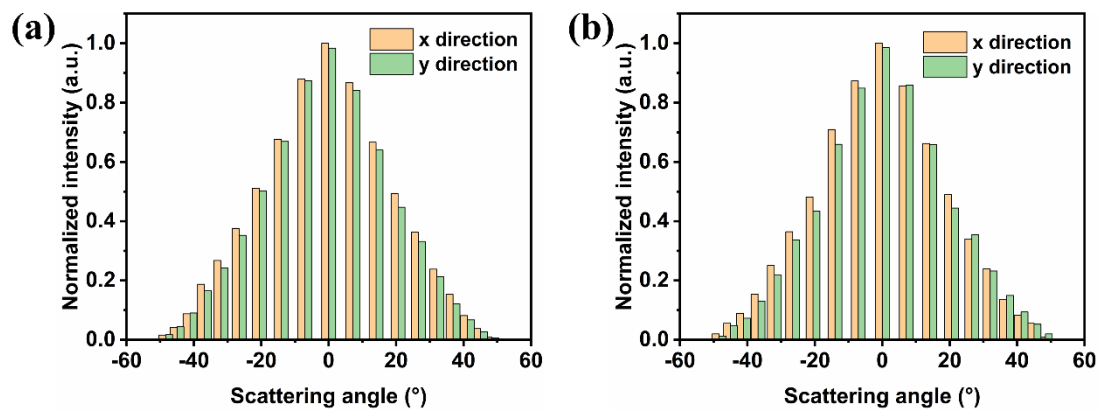
Supplementary Figure 7. TG and DTG curves of wood, DW, ESMTW, and vitrimers.



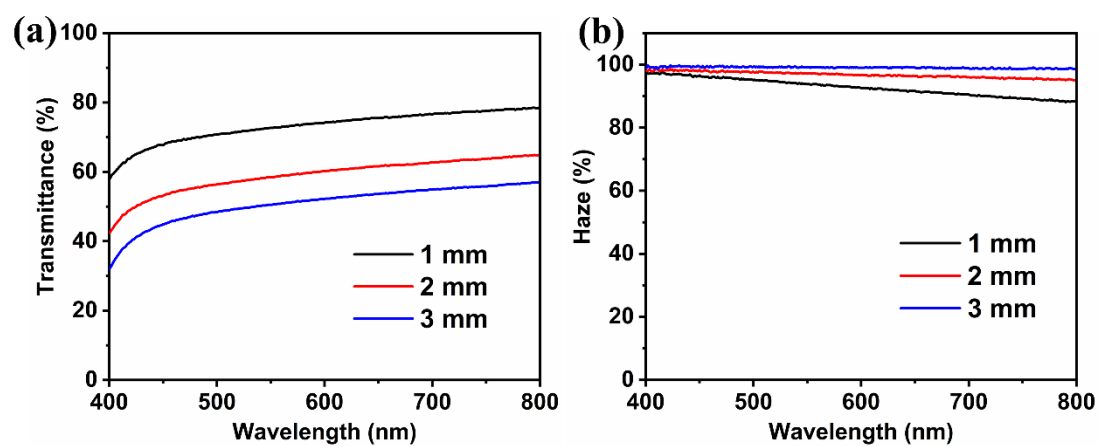
Supplementary Figure 8. Photographs of shape recovery performance of T-ESMTW at 60 °C, 90 °C, 120 °C, 150 °C, and 180 °C within 30 min.



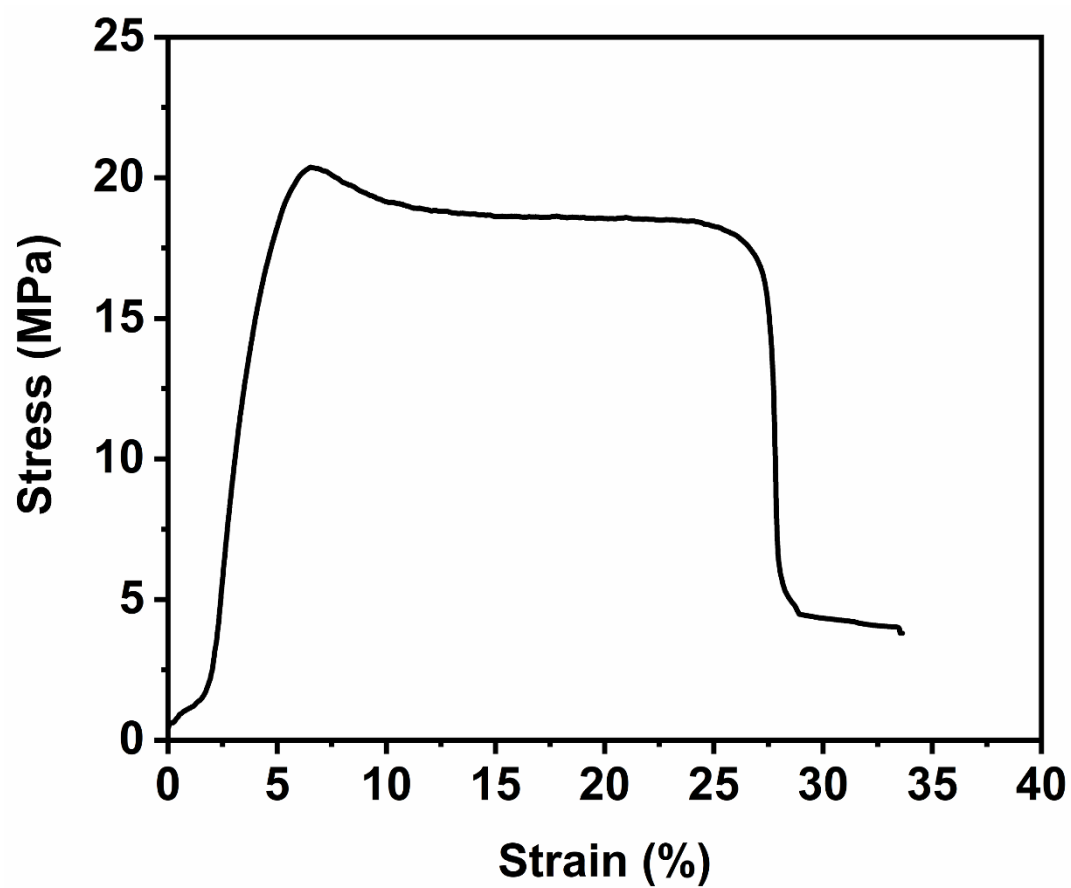
Supplementary Figure 9. Photographs of shape recovery performance of L-ESMTW at 60 °C, 90 °C, 120 °C, 150 °C, and 180 °C within 30 min.



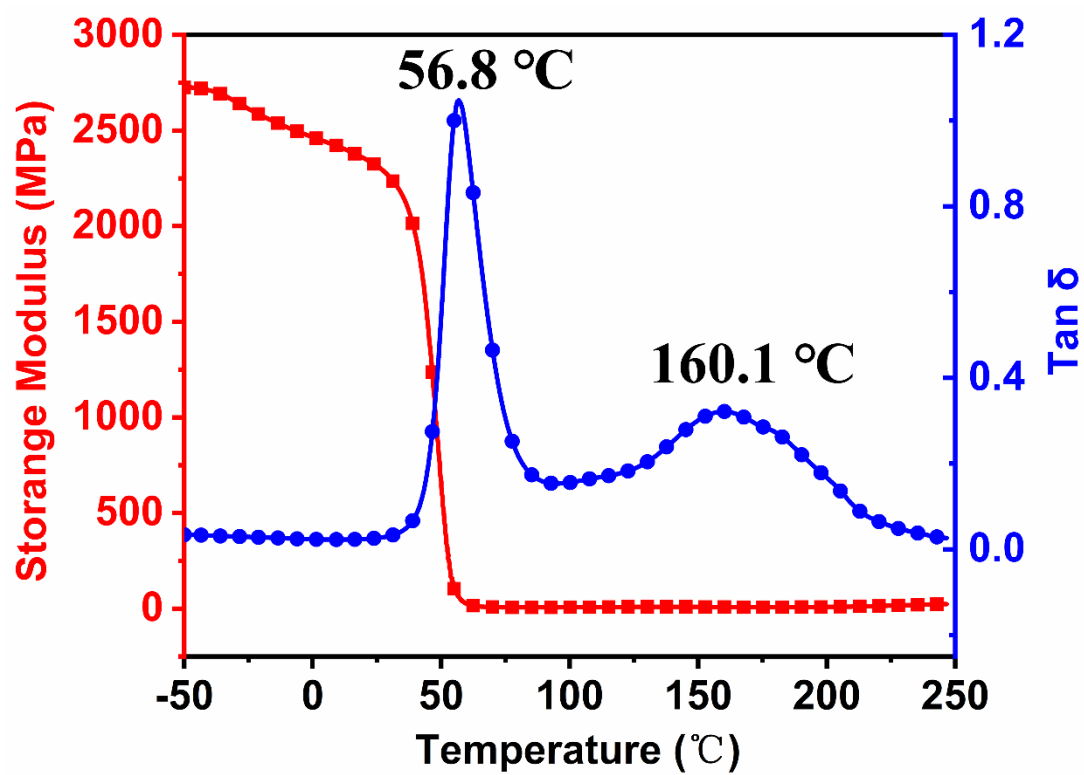
Supplementary Figure 10. The normalized intensity distribution of scattered light in the x- and y-direction for T-ESMTW with the incoming angle of 30° (a) and 60° (b). The beam intensity did not exhibit obvious deviation from a standard Gaussian distribution.



Supplementary Figure 11. Transmittance and haze of T-ESMTW with different thickness of 1 mm, 2 mm, and 3 mm.



Supplementary Figure 12. The stress-strain curve of vitrimers.



Supplementary Figure 13. DMA curve of vitrimers.

Supplementary Movie 1. Flexibility in 60 °C and rigidity in 0°C of T-ESMTW.

Supplementary Movie 2. Flexibility in 60 °C and rigidity in 0°C of L-ESMTW.

Supplementary Movie 3. Shape-memory behavior of T-ESMTW.

Supplementary Movie 4. Shape-memory behavior of L-ESMTW.

Supplementary Movie 5. Editable shape-memory behavior of T-ESMTW.

Supplementary Movie 6. Editable shape-memory behavior of L-ESMTW.