Supporting Information

Bio-inspired Metamaterial Structure Small-Diameter Vascular Grafts for Emulation of Native Arterial Mechanics

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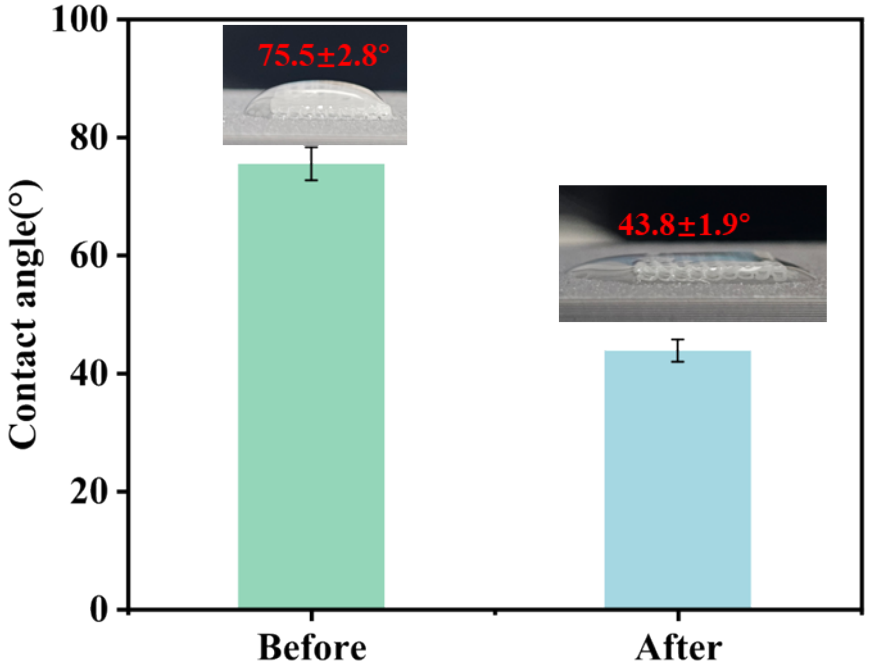

Figure S1. Water contact angles on PCL scaffold before and after NaOH treatment. Data are presented as the mean ± SD. n = 3.

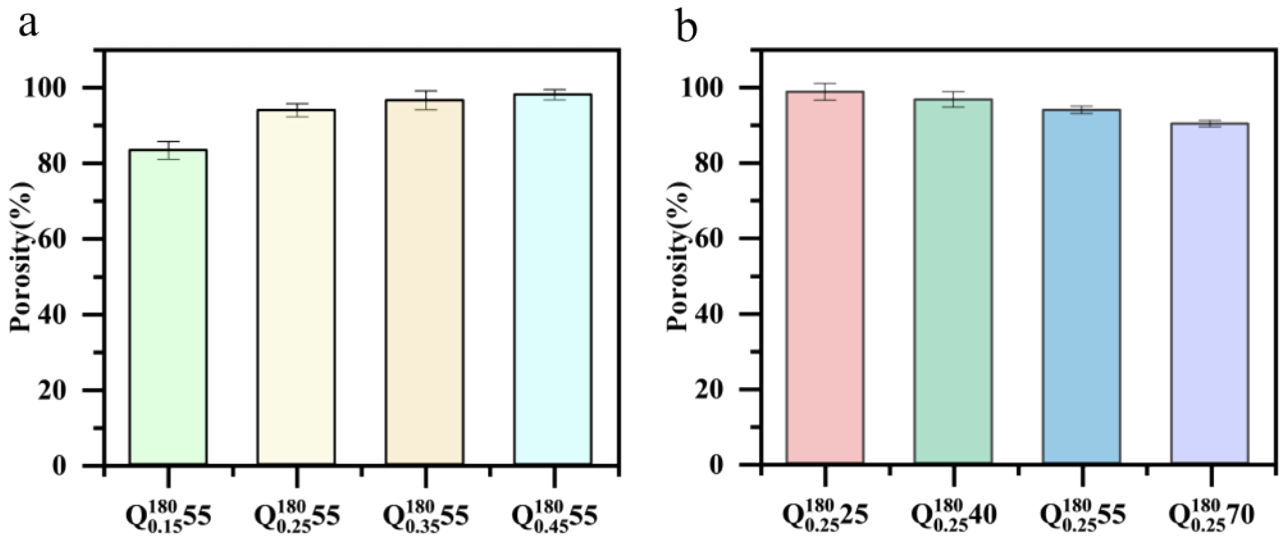

Figure S2. Porosity of negative Poisson's ratio tubular scaffolds under different parameters**(a)** Different fiber arc radii**(b)** Different fiber diameters.

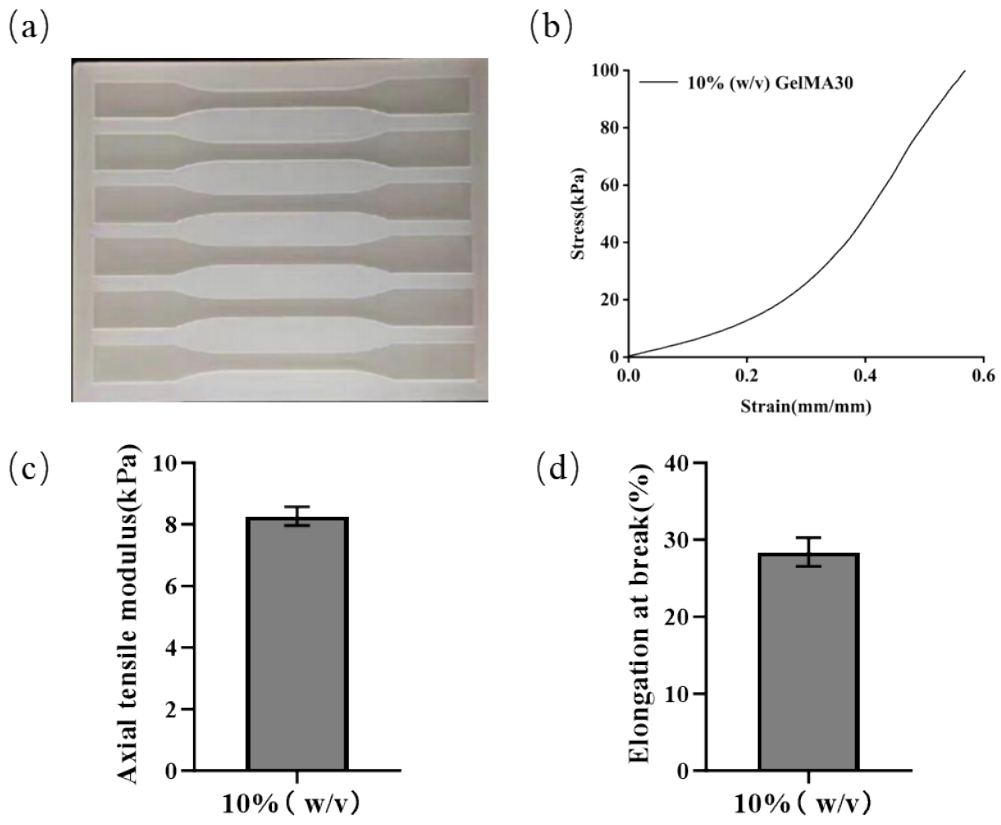

Figure S3.**(a)** Hydrogel dumbbell-shaped tensile mold. Mechanical properties of GelMA hydrogel : **(b)** Stress-strain curves **(c)** Tensile modulus **(d)** Elongation at break.

Figure S4. Poisson's ratio of the negative Poisson's ratio tubular fiber network: (a) Poisson's ratio at different fiber arc radii; (b) Poisson's ratio at different fiber diameters.

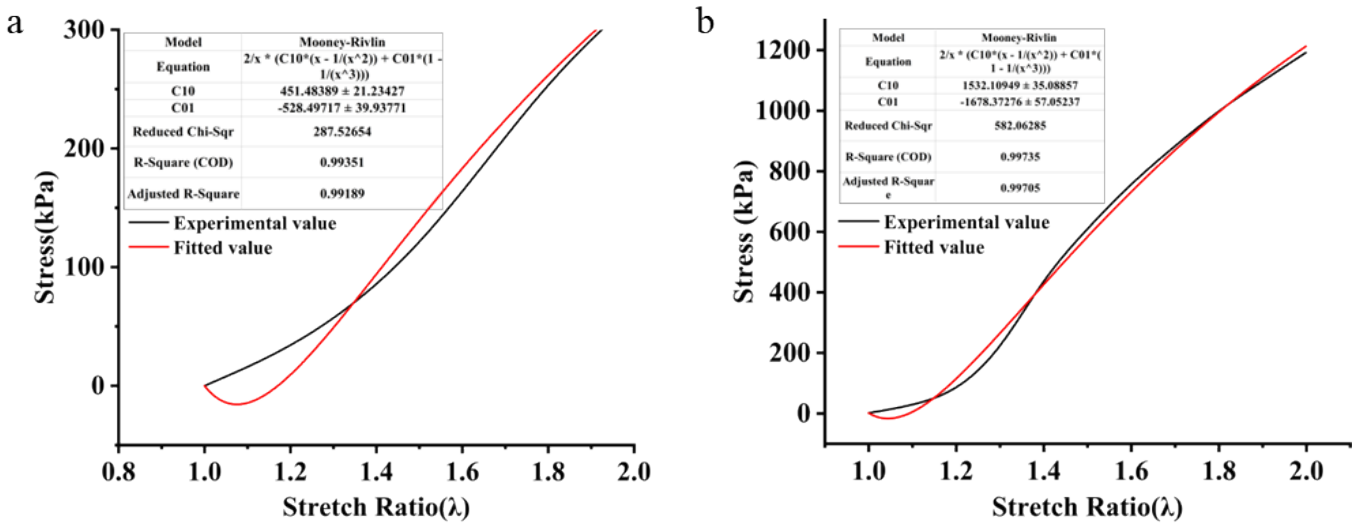

Figure S5. The Mooney-Rivlin model's fitting results for the uniaxial tensile mechanical behavior of superelastic materials: **(a)** 10% (w/v) hydrogel and **(b)** PCL material