

Supplementary Material

Electrospun graphene nanosheet-filled poly(trimethylene terephthalate) composite fibers: effects of the graphene nanosheet content on morphologies, electrical conductivity, crystallization behavior, and mechanical properties

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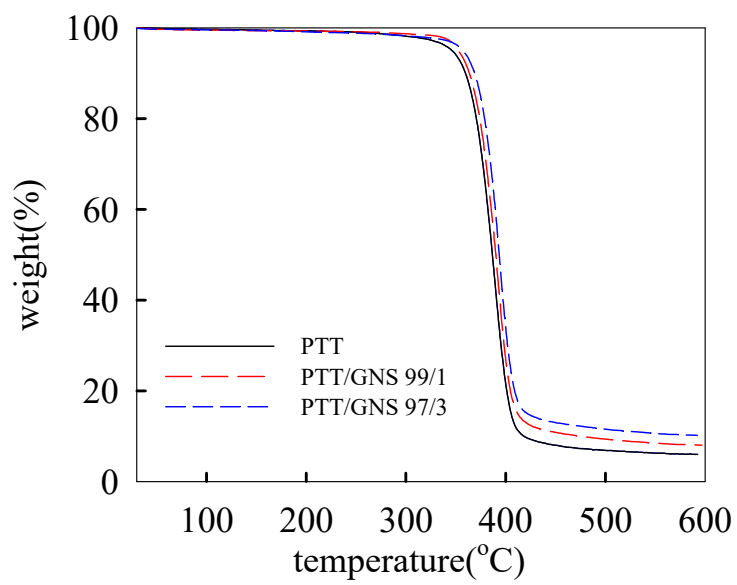
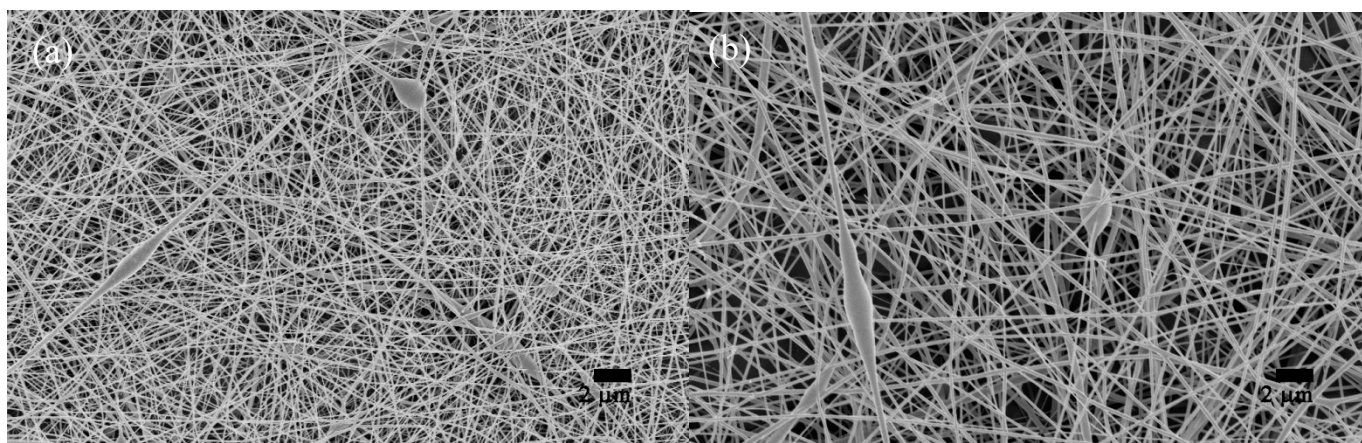


Figure S1. thermo-gravimetric analysis curves of the PTT/GNS CFMs.



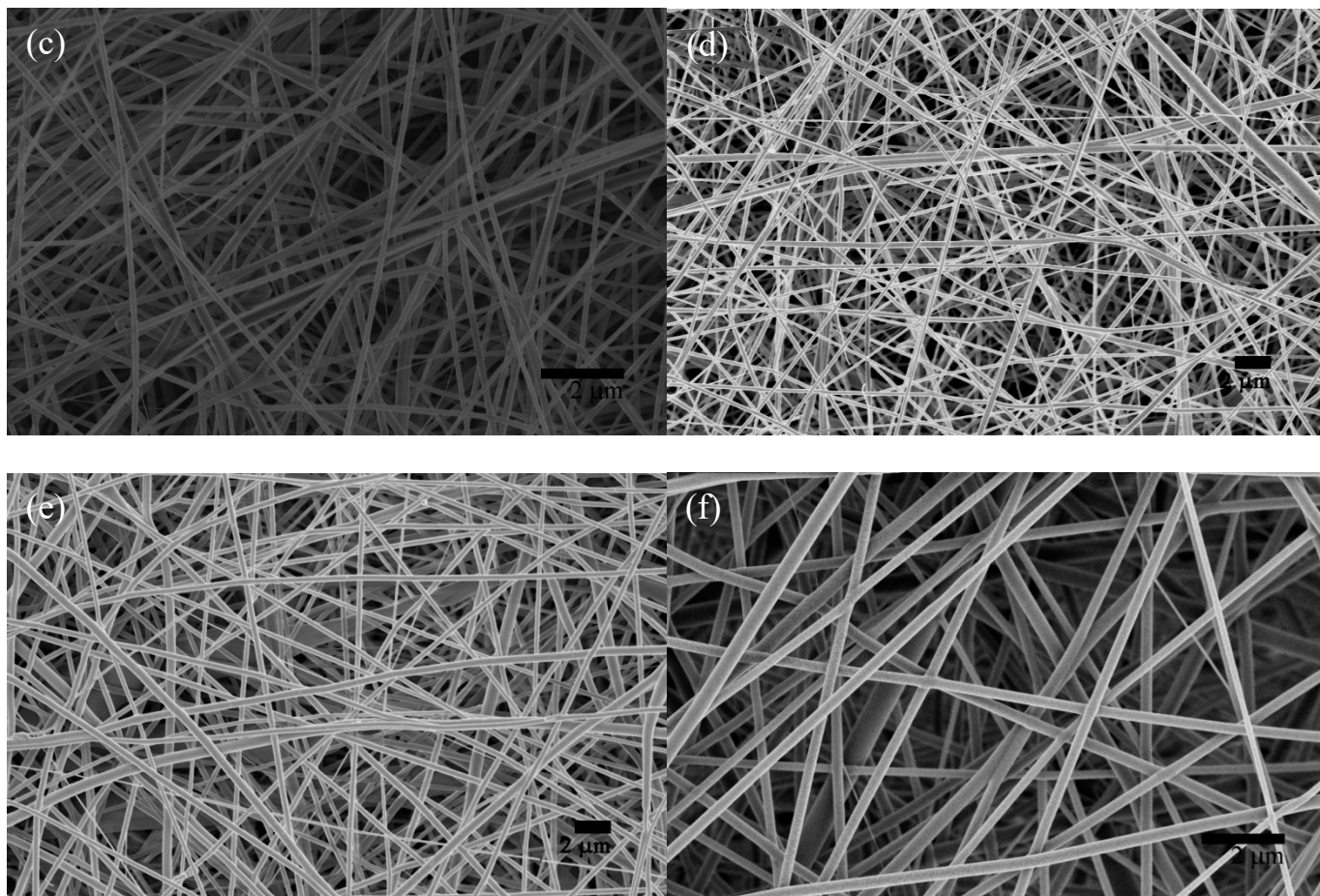


Figure S2. SEM images of electrospun fibers from (a) 7 wt% PTT/TFA solution, (b) 8 wt% PTT/TFA solution, (c) 9 wt% PTT/TFA solution, (d) 11 wt% PTT/TFA solution, (e) 12wt% PTT/TFA solution, and (f) 14 wt% PTT/TFA solution.

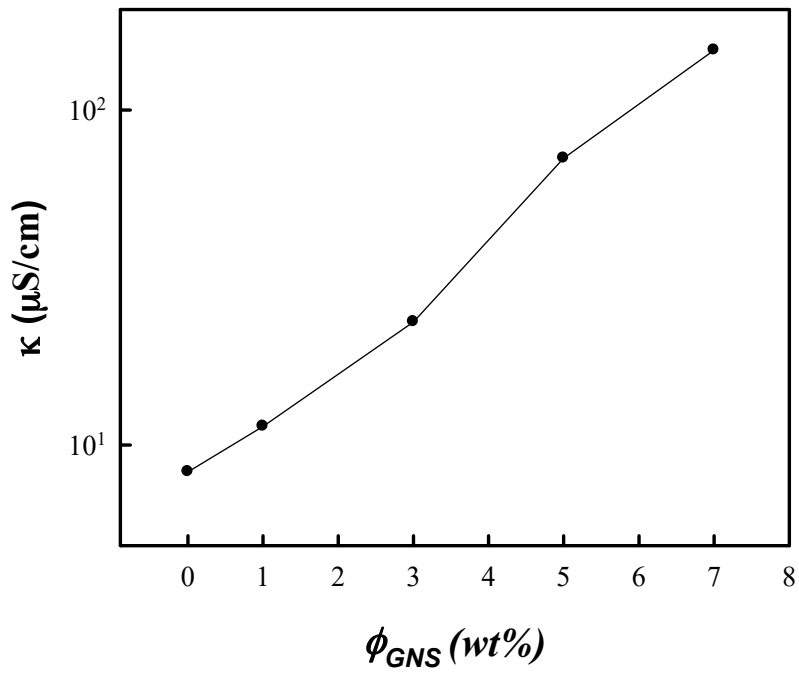


Figure S3. Effects of GNS concentration on PTT solution conductivity at 25 °C.

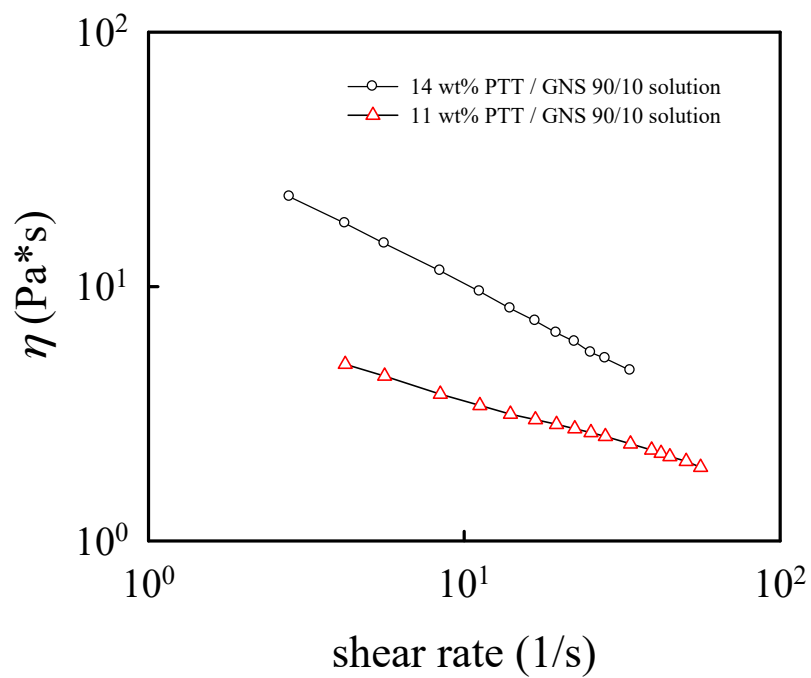


Figure S4. Effects of PTT/TFA concentration with 10 wt% GNS content on solution viscosity.

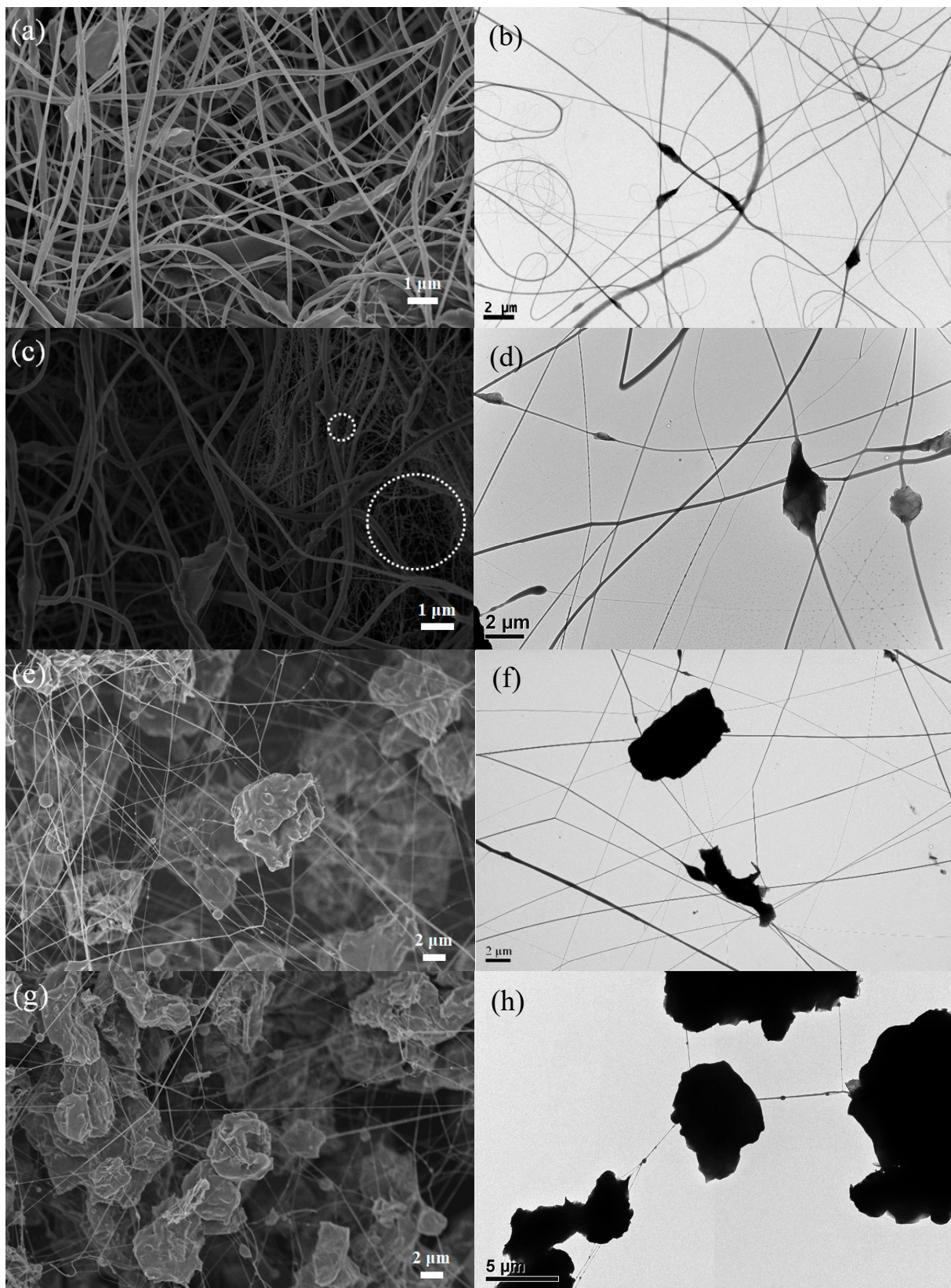


Figure S5. SEM and TEM images of electrospun PTT fibers filled with: (a), (b) 10 wt%, (c), (d) 12 wt%, (e), (f) 14 wt%, and (g), (h) 16 wt% GNS.

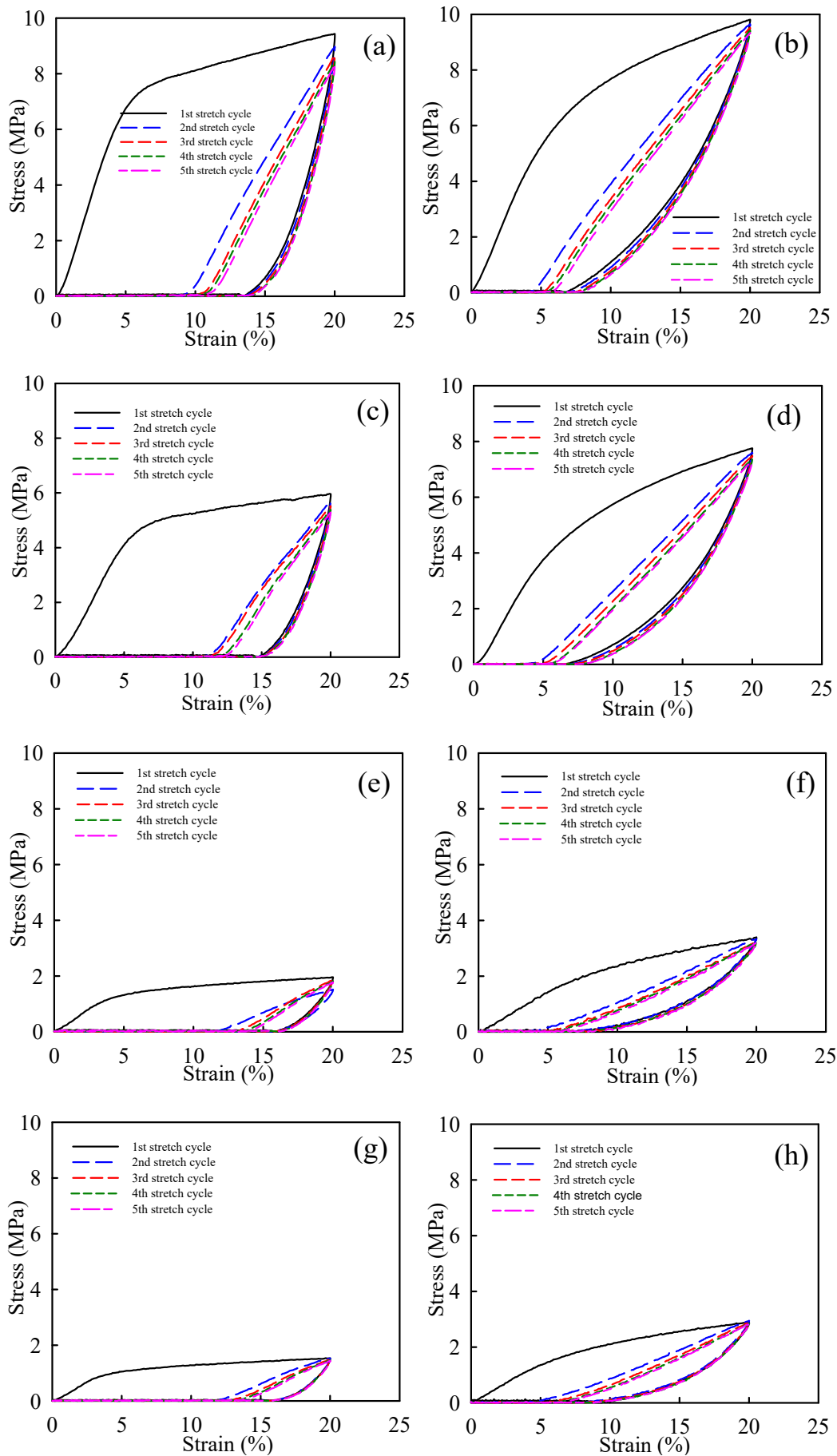


Figure S6. Elastic recovery of the (a) neat PTT CFMs, (b) neat PTT CFMs with annealing at 170 °C, (c) PTT/GNS 99/1 CFMs, (d) PTT/GNS 99/1 CFMs with annealing at 170 °C, (e) PTT/GNS 97/3 CFMs, (f) PTT/GNS 97/3 CFMs with annealing at 170 °C, (g) PTT/GNS 95/5 CFMs, and (h) PTT/GNS 95/5 CFMs with annealing at 170 °C during five cycles of loading–unloading with an elongation of 20%.