Supporting Information

Universal functionalization of Kevlar® with copolymers containing sulfonyl nitrenes

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Table S1. Full set of tensile data for control Kevlar, polymethacrylic acid-co-styrene sulfonyl azide cured onto Kevlar (PMAA-co-SSA), poly-4-vinyl-N-benzyl-N-methylbutan-1-amine-co-styrene sulfonyl azide (PVBA-co-SSA) cured onto Kevlar, and Kevlar thermally cured with PVBA-co-SSA and precipitated onto with TiO_2.

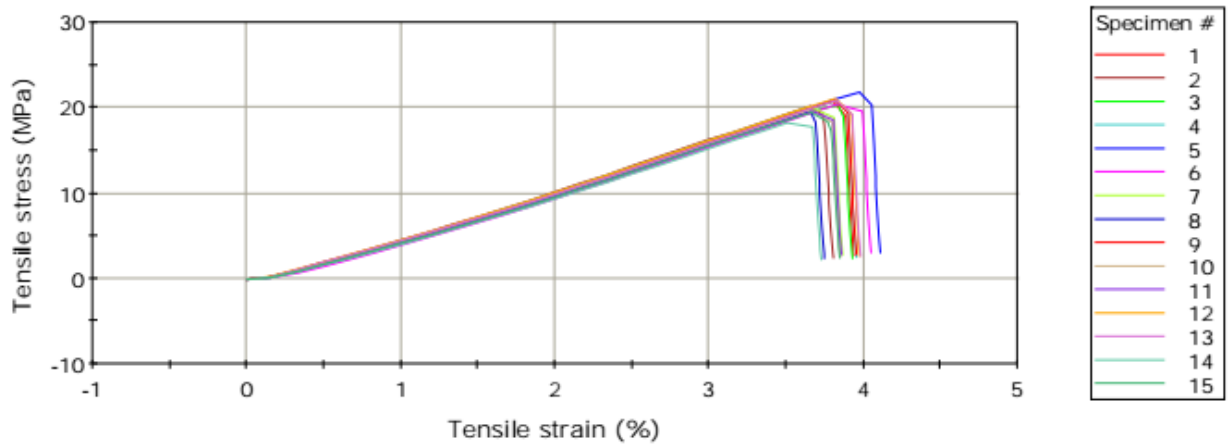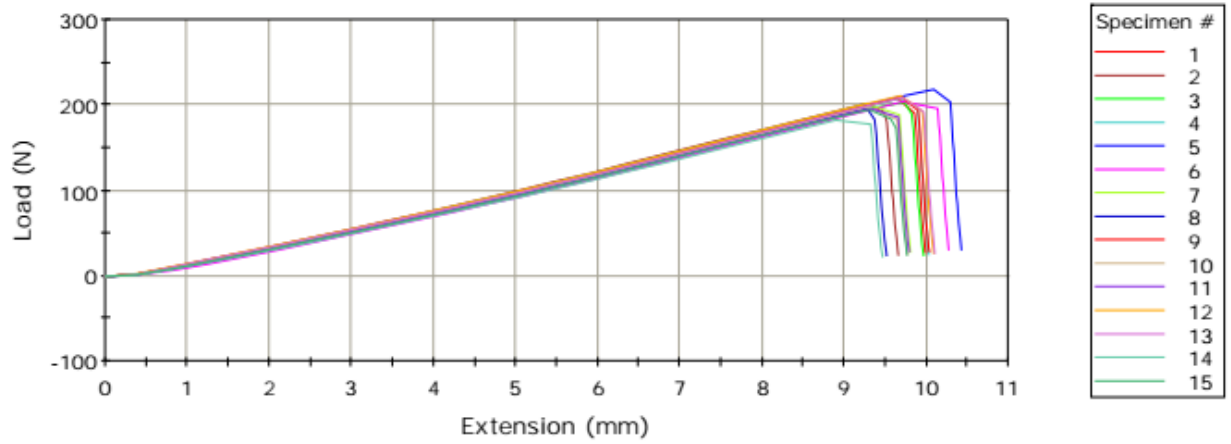|	Max load (lbf)	Extension at max load (in)	Tenacity at max load (gf/den)	Tensile stress at max load (MPa)	Tensile strain at max load (%)	Young's Modulus (gf/den)	Energy at break (J)	Energy at tensile strength (J)
Control	45.32 +/- (1.94)	0.37 +/- (0.01)	24.18 +/- (1.04)	20.16 +/- (0.865)	3.65 +/- (1.12)	726.99 +/- (7.43)	0.92 +/- (0.05)	0.9 +/- (0.07)
Thermal Control	43.35 +/- (1.70)	0.36 +/- (1.02)	23.13 +/- (0.91)	19.28 +/- (0.76)	3.56 +/- (0.15)	743.618 +/- (6.99)	0.84 +/- (0.06)	0.82 +/- (0.06)
PMAA-co-SSA	39.16 +/- (1.75)	0.34 +/- (0.01)	20.9 +/- (0.92)	17.42 +/- (0.77)	3.40 +/- (0.17)	727.00 +/- (8.14)	0.69 +/- (0.07)	0.67 +/- (0.06)
PVBA-co-SSA	42.56 +/- (1.76)	0.35 +/- (0.02)	22.71 +/- (0.09)	18.93 +/- (0.78)	3.52 +/- (0.18)	744.82 +/- (10.38)	0.81 +/- (0.06)	0.78 +/- (0.07)
PVBA-co-SSA w/ TiO2	42.70 +/- (1.00)	0.35 +/- (0.01)	22.79 +/- (0.54)	19.00 +/- (0.45)	3.49 +/- (0.11)	780.77 +/- (11.45)	0.78 +/- (0.04)	0.76 +/- (0.04)

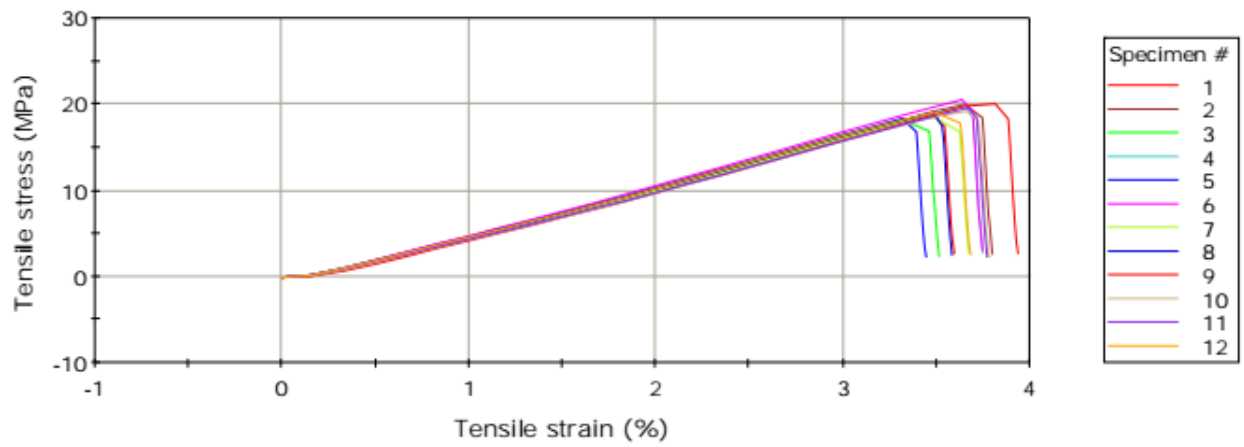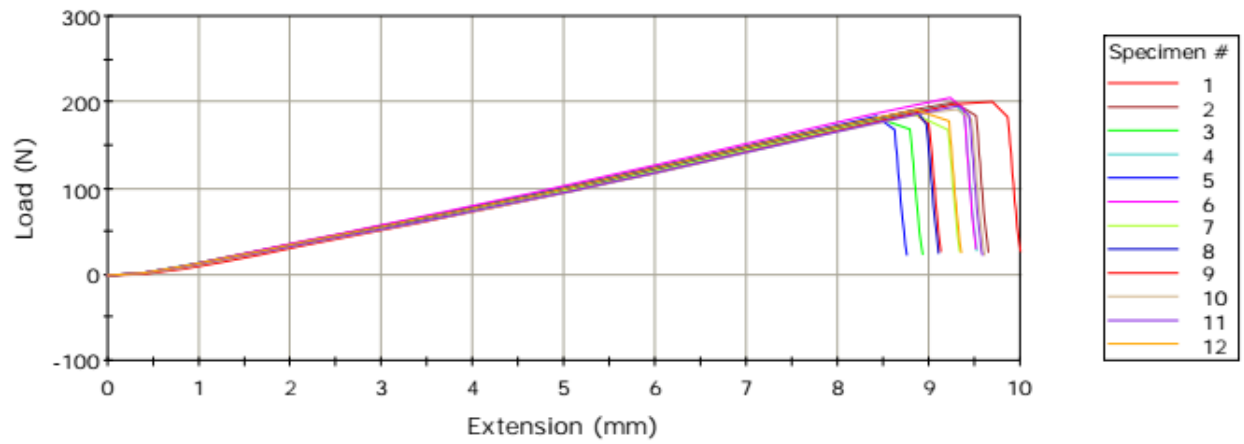*Figure S1 Instron data for load versus extension and stress versus strain for control Kevlar.*

Figure S2. Instron data for load versus extension and stress versus strain for Kevlar heated to 180°C.
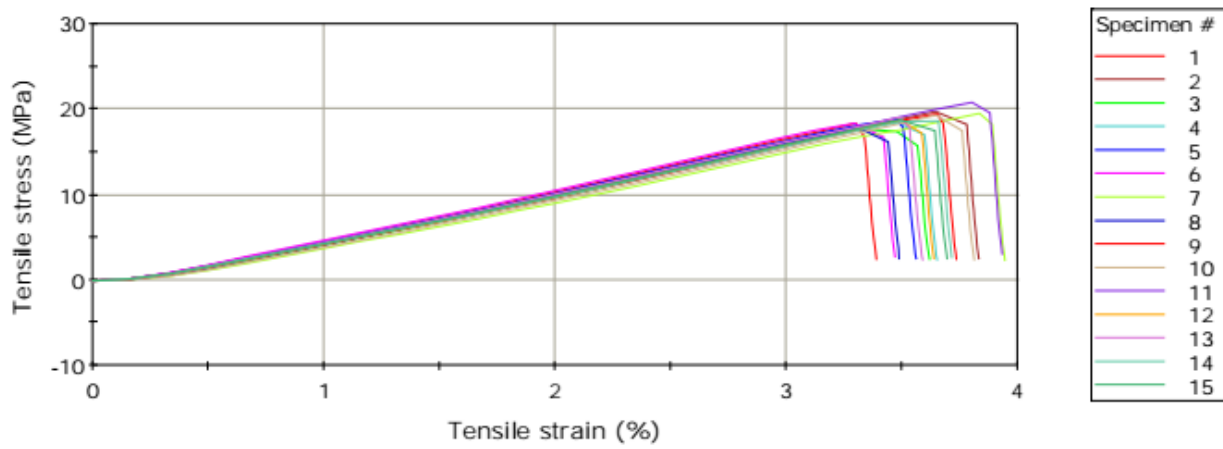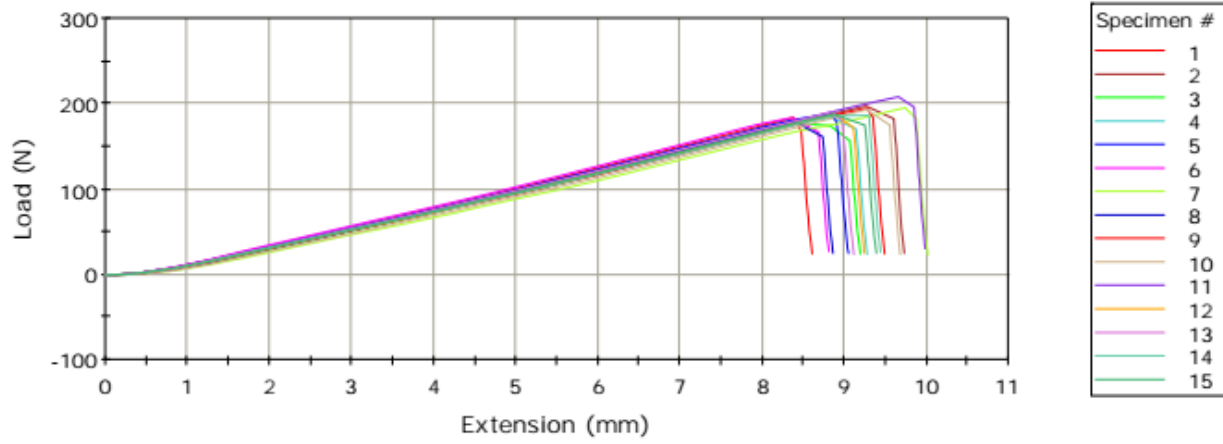
Figure S3 Instron data for load versus extension and stress versus strain of Kevlar thermally cured with PVBA-co-SSA.
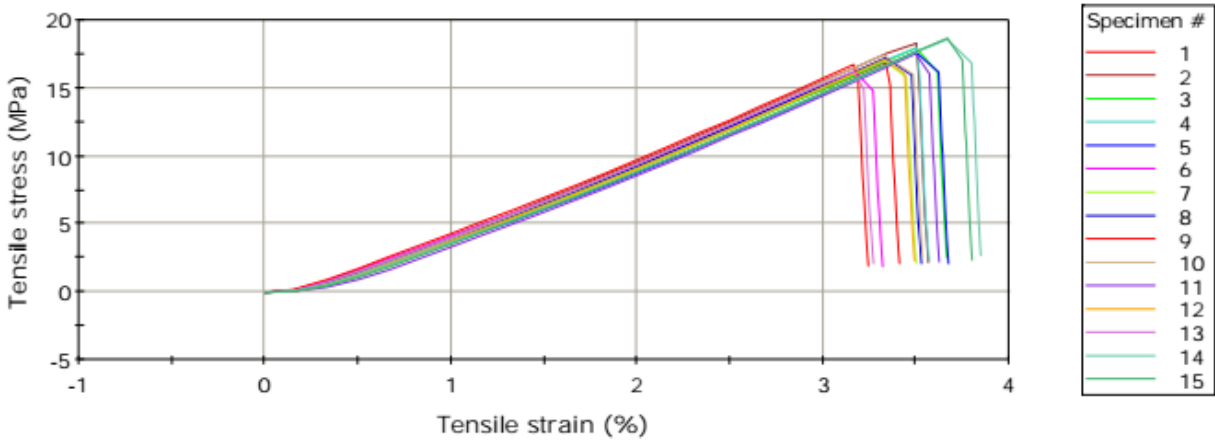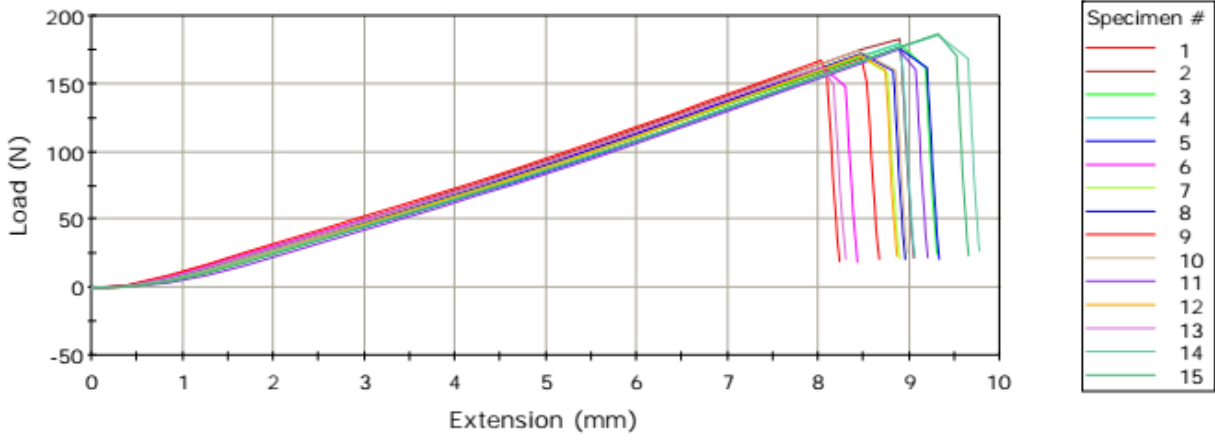
Figure S4 Instron data for load versus extension and stress versus strain for Kevlar thermally cured with PMMA-co-SSA.
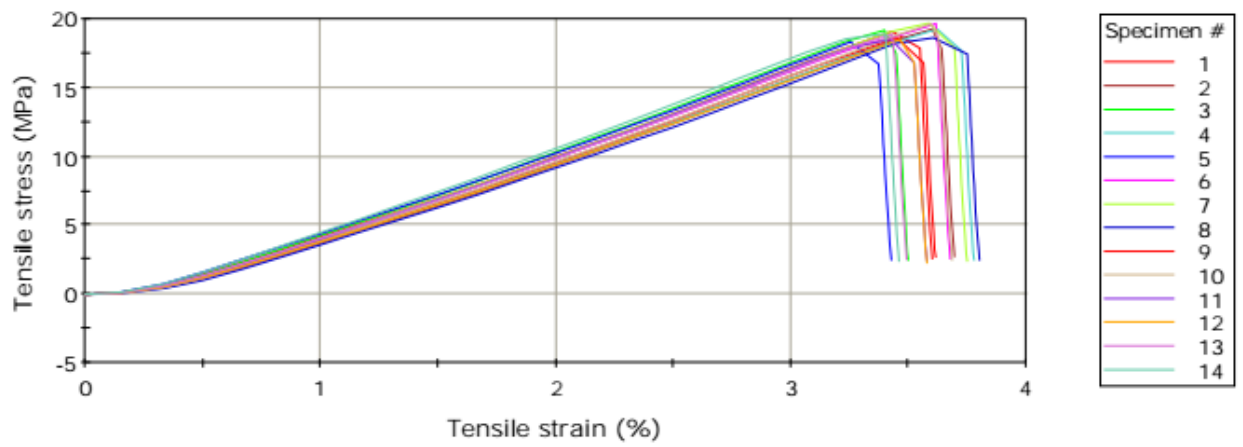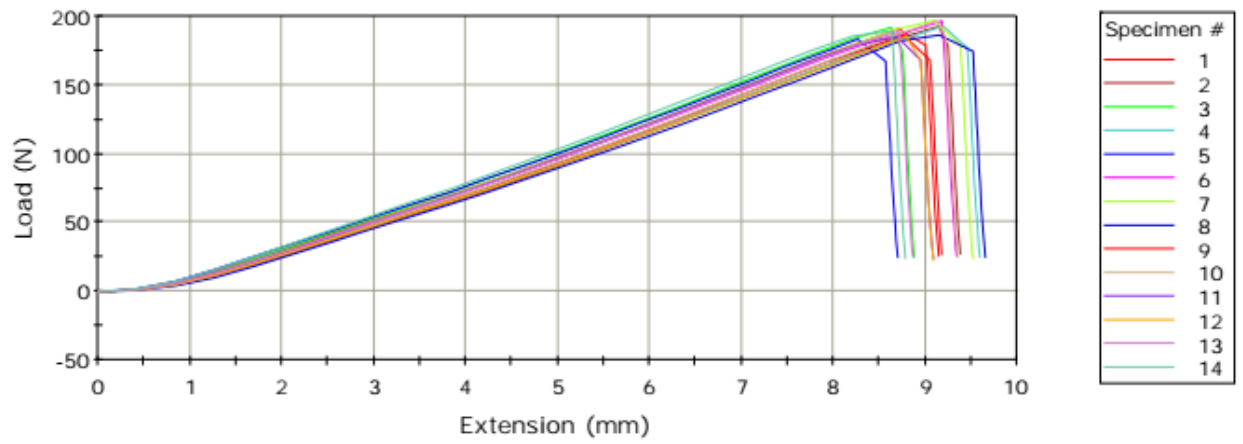
Figure S5 Instron data for load versus extension and stress versus strain of Kevlar thermally cured with PVBA-co-SSA and precipitated onto with TiO$_2$.
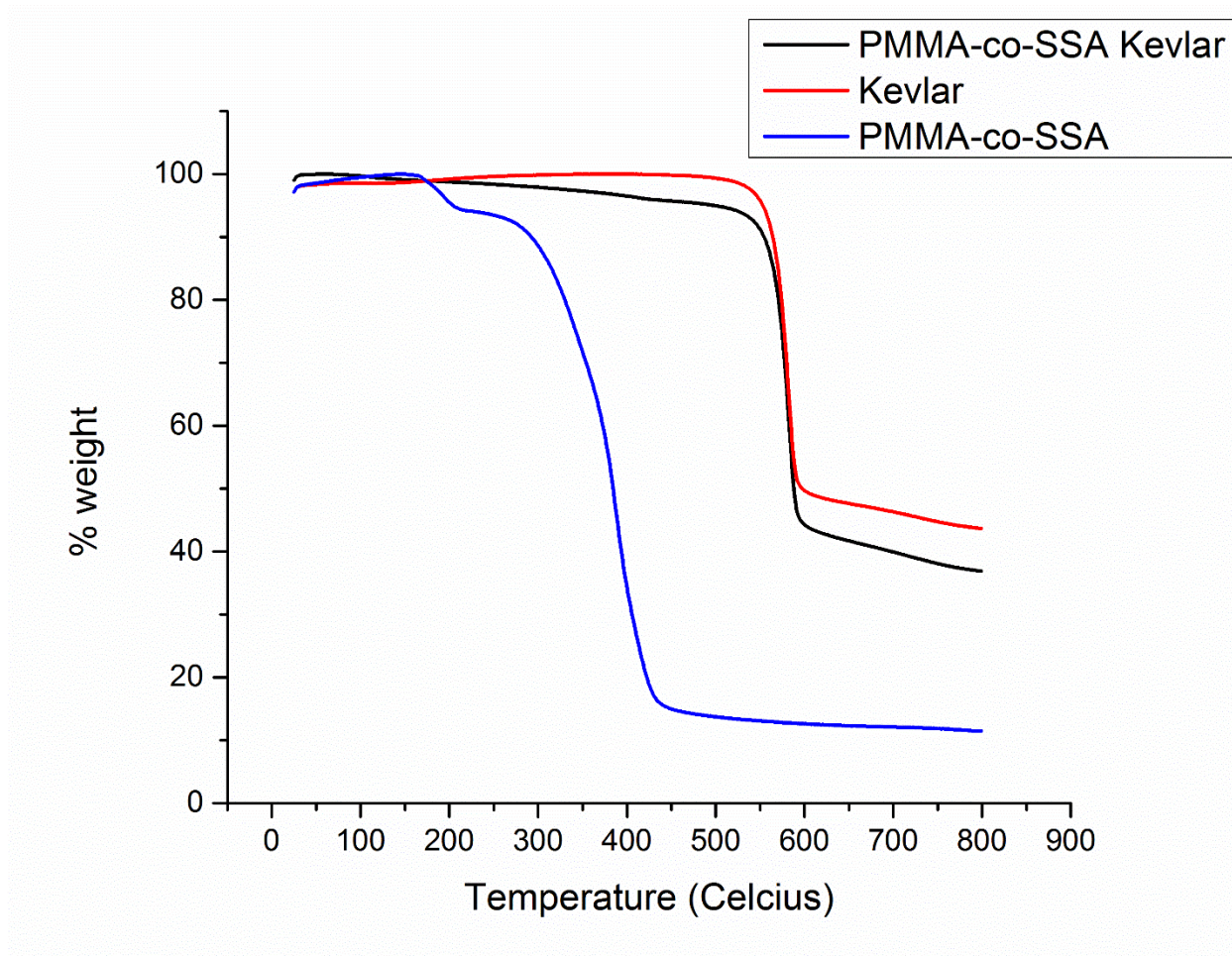
Figure S6 Thermal gravimetric analysis data of Kevlar coated in PMMA-co-SSA (black), virgin Kevlar (red), and PMMA-co-SSA (blue).