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Supplementary Material

Aging resistance of biocomposites crosslinked with combination of silica and quercetin

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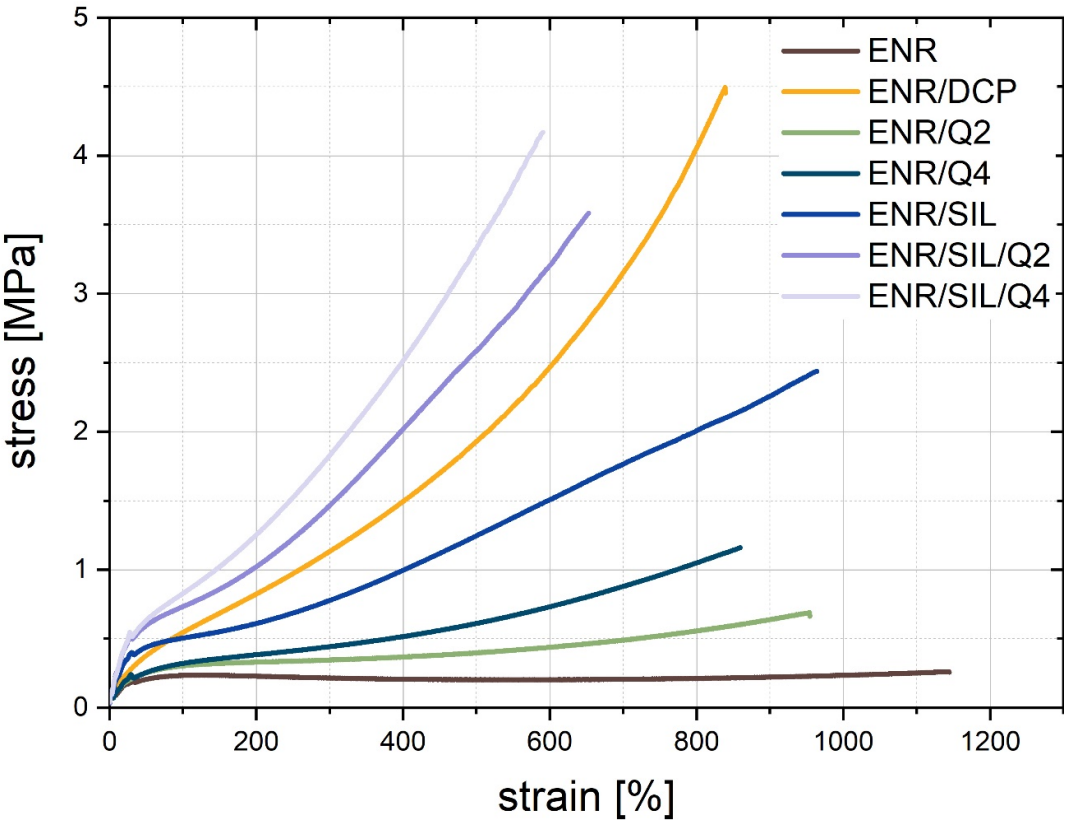


Figure S1. The strain-stress curves of tested ENR-based composites.

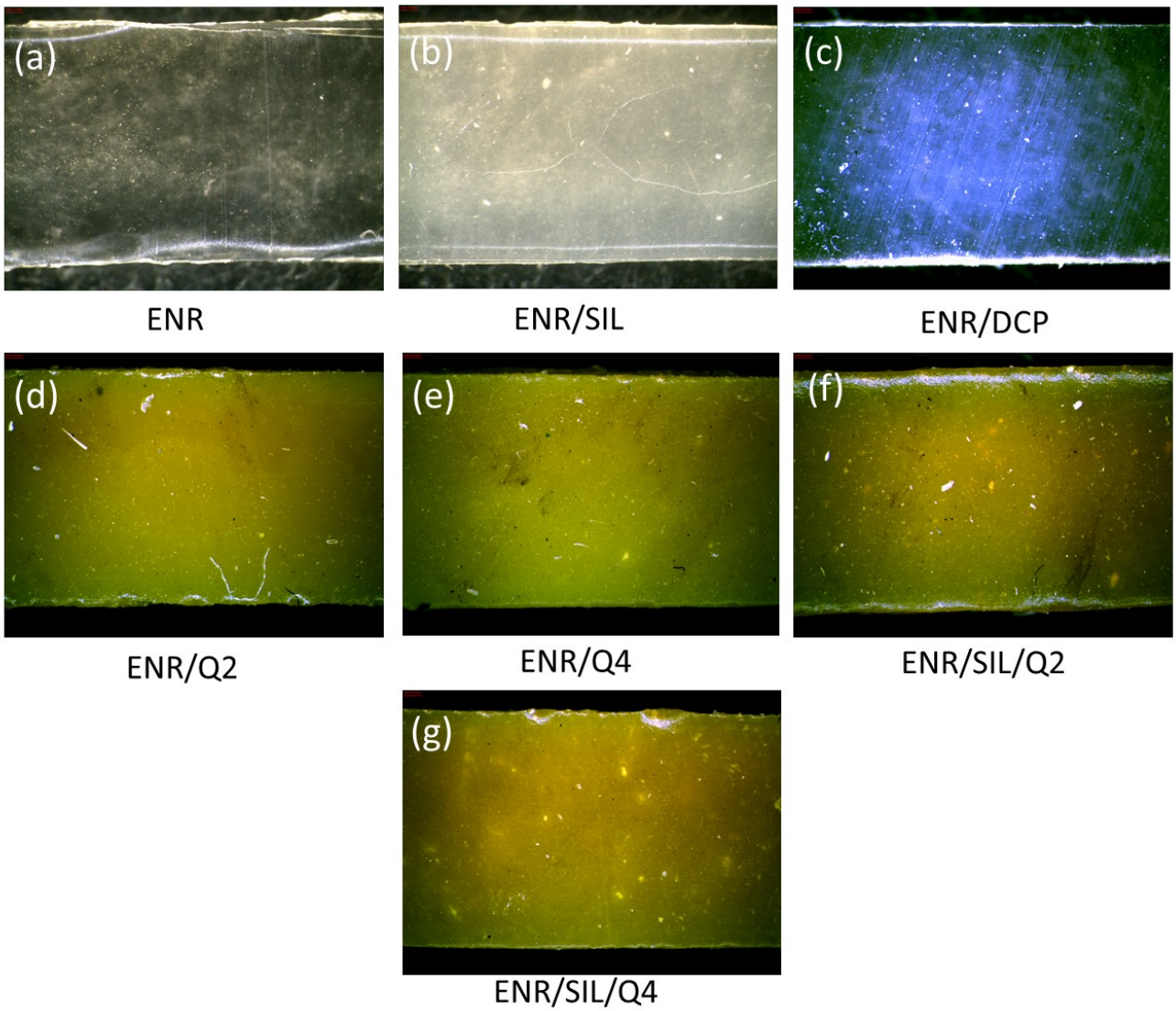
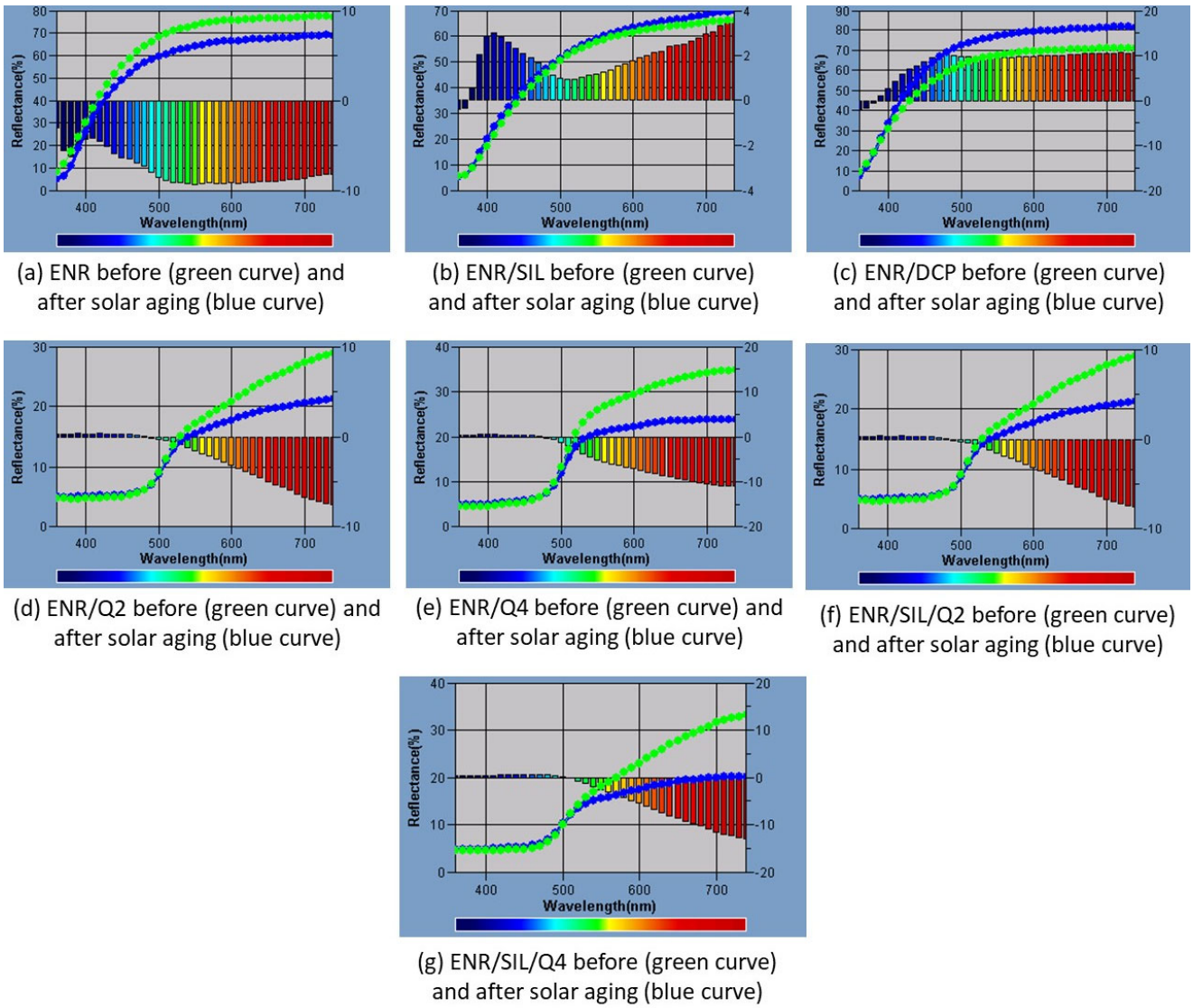


Figure S2. Microscope images of ENR-based composites: (a) pure uncurred ENR, (b) ENR cured with 15 phr of silica, (c) ENR cured with dicumyl peroxide (DCP), (d) ENR cured with 2 phr of quercetin, (e) ENR cured with 4 phr of quercetin, (f) ENR cured with 2 phr of quercetin and 15 phr of silica, (g) ENR cured with 4 phr of quercetin and 15 phr of silica.



(a) ENR before (green curve) and after solar aging (blue curve)

(b) ENR/SIL before (green curve) and after solar aging (blue curve)

(c) ENR/DCP before (green curve) and after solar aging (blue curve)

(d) ENR/Q2 before (green curve) and after solar aging (blue curve)

(e) ENR/Q4 before (green curve) and after solar aging (blue curve)

(f) ENR/SIL/Q2 before (green curve) and after solar aging (blue curve)

(g) ENR/SIL/Q4 before (green curve) and after solar aging (blue curve)

Figure S3. UV-VIS spectra of ENR-based composites before (green curve) and after solar aging (blue curve): (a) pure uncurred ENR, (b) ENR cured with 15 phr of silica, (c) ENR cured with dicumyl peroxide (DCP), (d) ENR cured with 2 phr of quercetin, (e) ENR cured with 4 phr of quercetin, (f) ENR cured with 2 phr of quercetin and 15 phr of silica, (g) ENR cured with 4 phr of quercetin and 15 phr of silica.