Supporting Information

## Dual crosslinking polymer networks: Correlation between polymer topologies and self-healing efficiency

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**Figure S1.** Time-conversion plots for the boronic ester formation between 4-vinylphenylboronic acid (VPA and 40 mM) with (a) ethanol (Et, 80, 160, and 320 mM), (b) 2-propanol (2P, 80, 160, and 320 mM) and (c) 1,2-propanediol (PD, 40, 80, and 160 mM).



**Figure S2.** Swelling tests of different cured polymer networks in (a) toluene and (b) water as a function of time.



Figure S3. Log storage modulus (up) and Tan  $\delta$  (down) of cPGB films obtained from DMA.



Figure S4. Thermo gravimetric analysis of *bc*-cPGB and *hb*-cPGB.



Figure S5. The healing process of *lin*-cPGB.



Figure S6. Stress-relaxation test of (a) *bc*-cPGB and (b) *hb*-cPGB.



Figure S7. SEC curves of recycled poly(4-vinylphenylboronic ester).