

Supplementary data

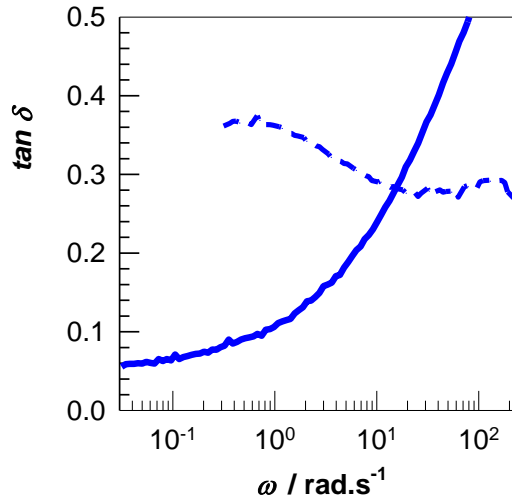


Fig. S1. $\tan \delta$ of hybrid-15/2 hydrogel (solid line) plotted against the frequency ω . The dashed curve represents calculated $\tan \delta$ from G' and G'' of the precursor hydrogels. $\gamma_0 = 0.01$.

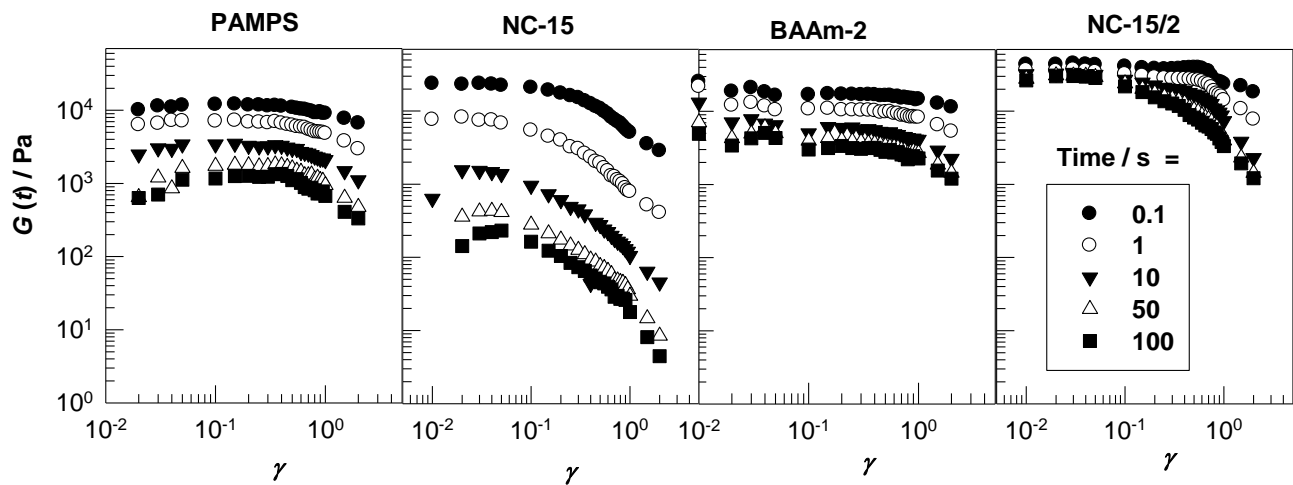


Fig. S2. Relaxation modulus $G(t)$ of PAMPS, NC-15, BAAM-2, and NC-15/2 hydrogels shows as a function of strain γ at times scales indicated.

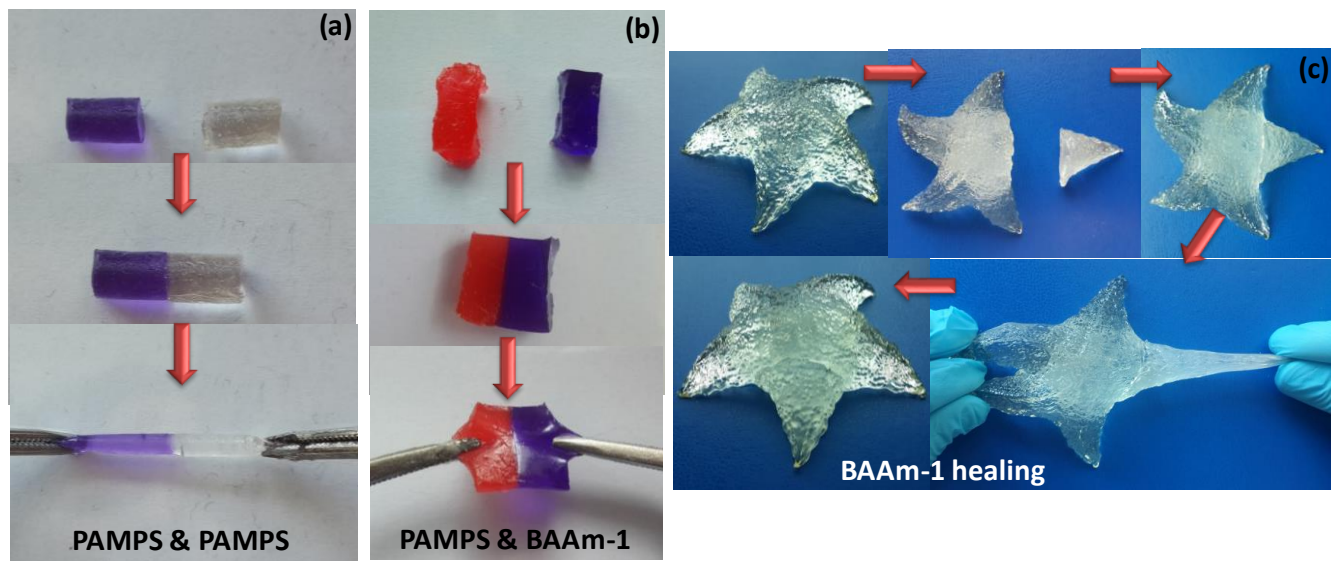


Fig. S3. Photographs of hydrogel samples demonstrating their self-healing abilities. After pressing the fractured surfaces of PAMPS – PAMPS (a), PAMPS - BAAM-1 (b), and BAAM-1 – BAAM-1 hydrogel specimens (c) together over night at room temperature, they merge into a single piece. The samples were colored with a dye for clarity.