

Supporting Information

Zinc induced coacervate bioadhesive and its transition to self-healing hydrogel

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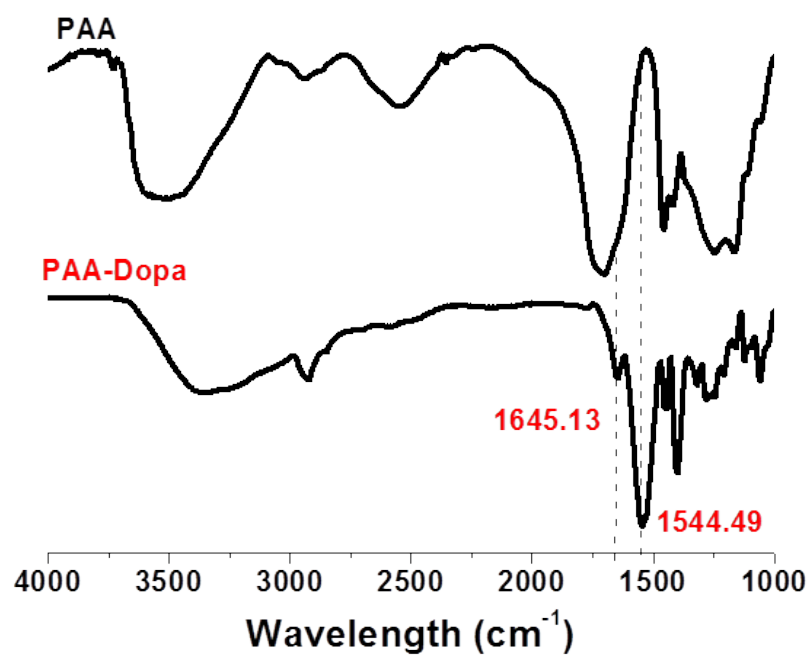


Figure S1. FT-IR spectra of PAA and PAA-Dopa.

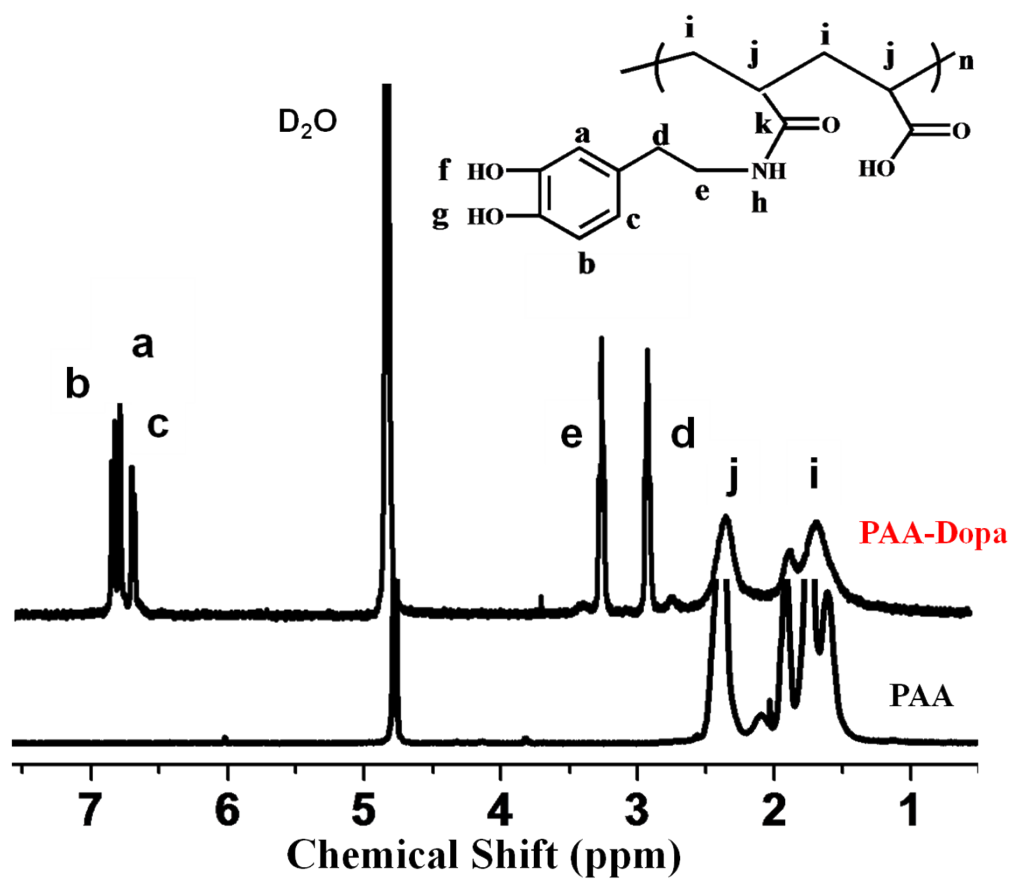


Figure S2. ^1H -NMR spectra of PAA and PAA-Dopa.

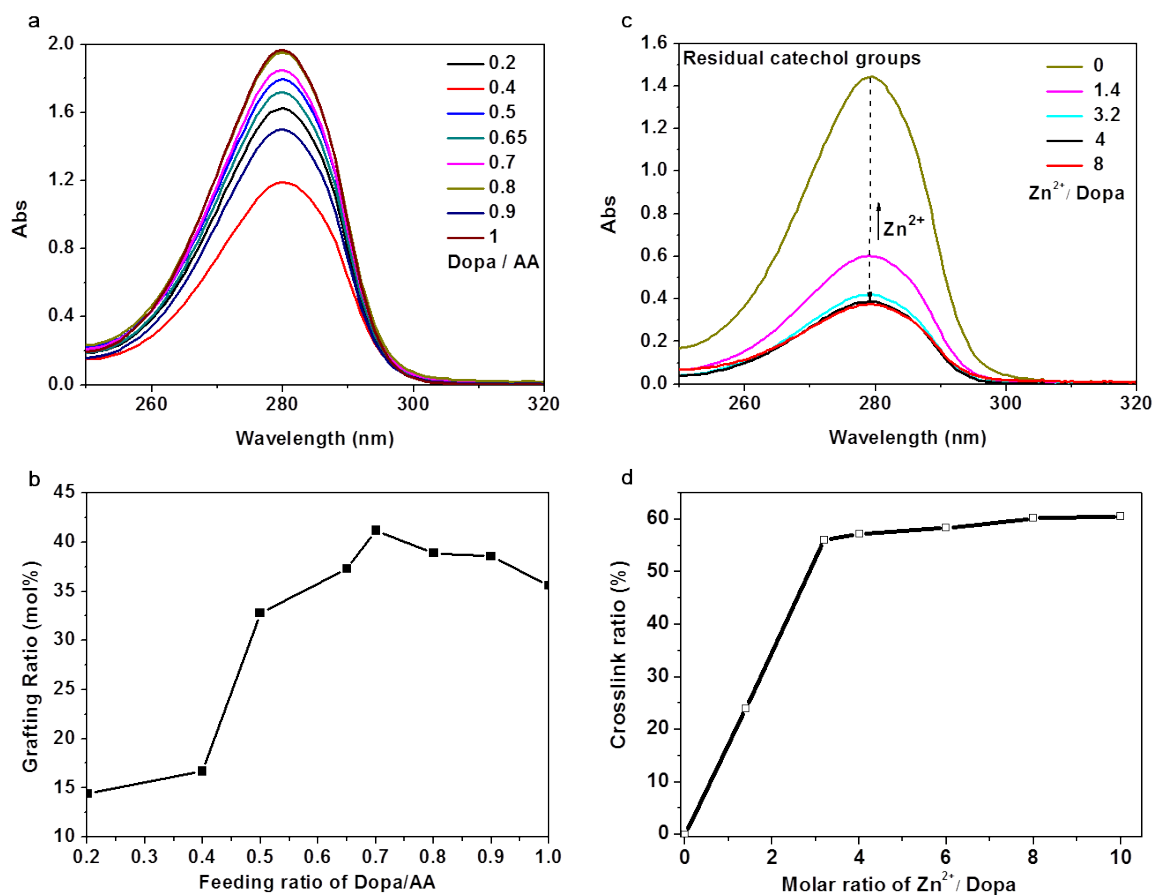


Figure S3. UV-vis detection of Dopa content (pH = 4, 100 mg/mL PAA-Dopa). (a, b) Grafting ratio ranges with different feeding ratio of Dopa/AA. (c, d) Cross-linking degree with increasing ratio of Zn²⁺/Dopa.

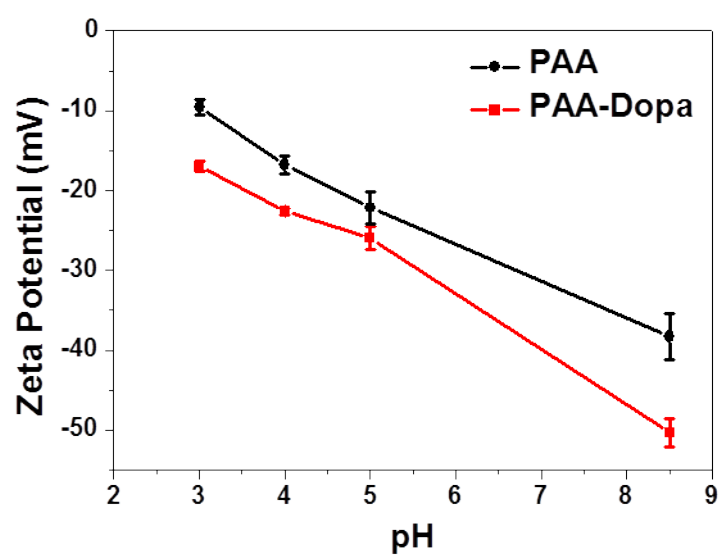


Figure S4. Zeta potential of PAA and PAA-Dopa at different pHs.

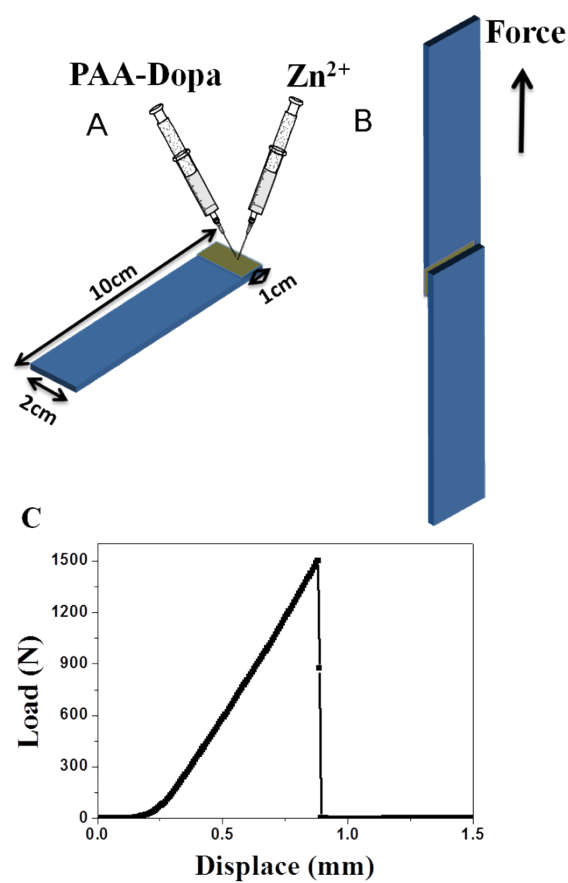


Figure S5. (A) The injectable sample preparation of PAA-Dopa/Zn coacervates at pH 4. (B) The schematic diagram of two bonded plates preparing to be pulled apart. (C) The original data from lap-shear test where the maximum adhesive force indicates the failure force of adhesion.

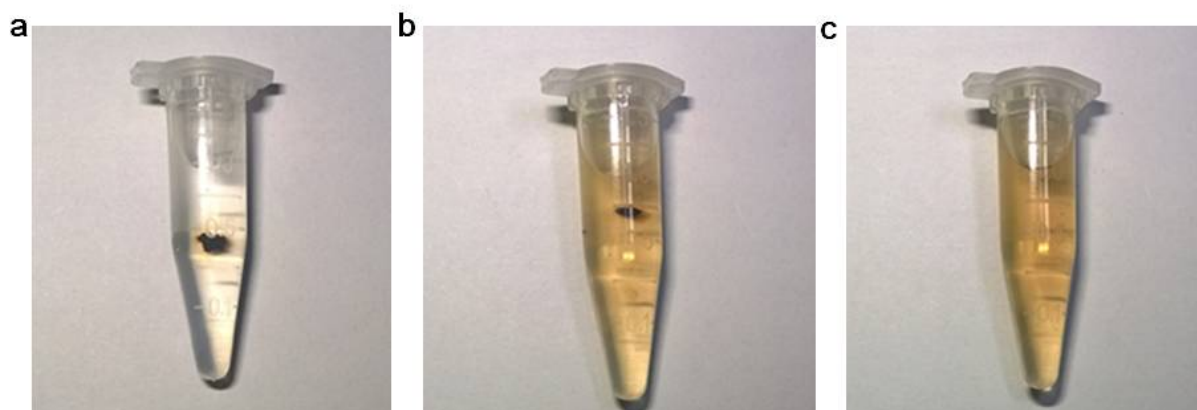


Figure S6. EDTA treatment of zinc cross-linked PAA-Dopa hydrogel. From left to right, the dissolving process.

Video. At fixed Dopa grafting ratio (30%), PAA-Dopa solution was added to Zn liquid and immediately form crosslinked “coacervate” like viscous fluid (video, Supporting information).