

Electronic Supporting Information

Enhanced Drug Release by Selective Cleavage of Crosslinks in a Double Crosslinked Hydrogel

Neha Tiwari,^a and Manohar V. Badiger^{a*}
Polymer Science and Engineering Division
CSIR-National Chemical Laboratory
Dr. Homi Bhabha Road, Pune-411008, India
e-mail: mv.badiger@ncl.res.in
Tel : +91-20-25902187; Fax:+91-20-2590-2612

1. SEM of PAA hydrogels

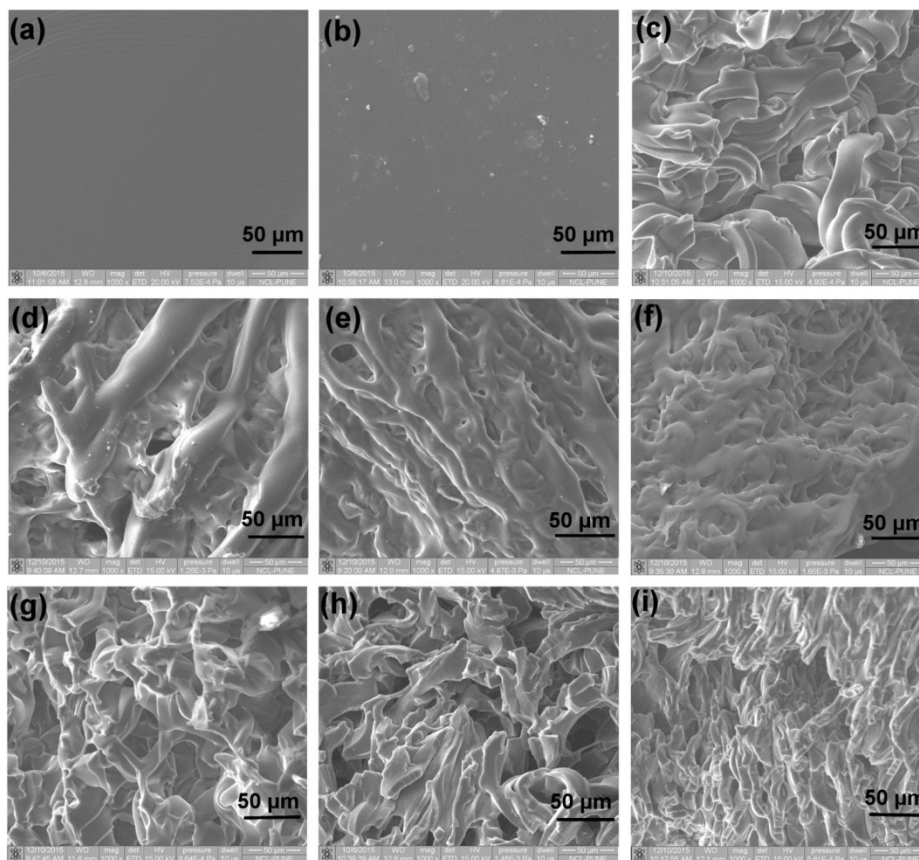


Fig. 1S. SEM micrographs of dried (in oven) and lyophilized PAA hydrogels with different cross linking ratios: (a)PAA-5jeff (dried in oven), (b) PAA-5cys+5jeff(dried in oven), (c)PAA-5cys+5jeff, (d)PAA-5cys, (e)PAA-7.5cys, (f)PAA-10cys, (g)PAA-5jeff, (h)PAA-7.5jeff, (i)PAA-10jeff

2. UV spectra of AgNPs embedded in hydrogel

The UV spectra here indicates well dispersed AgNPs in the gels due to the single peak present at 400nm. The absence of any peaks at 335nm and 560nm clearly indicates the absence of aggregation of AgNPs in the gels.

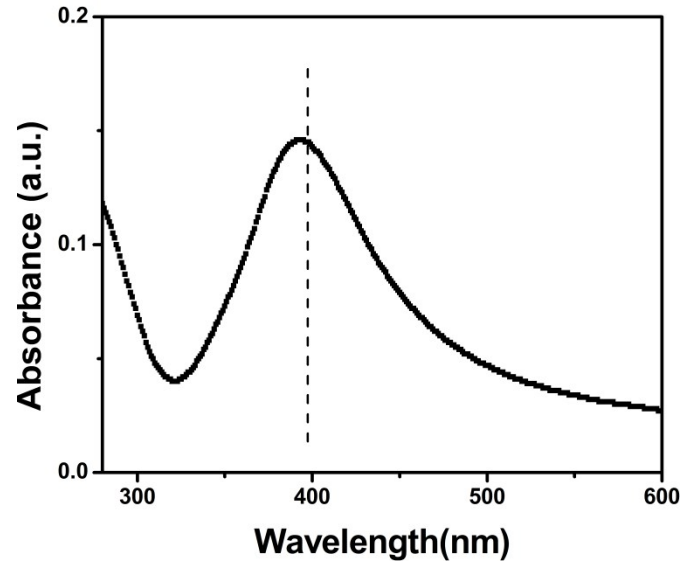


Fig.2S. UV spectra of AgNPs embedded in PAA-5cys+5jeff hydrogel

3. Fickian curve of PAA hydrogel

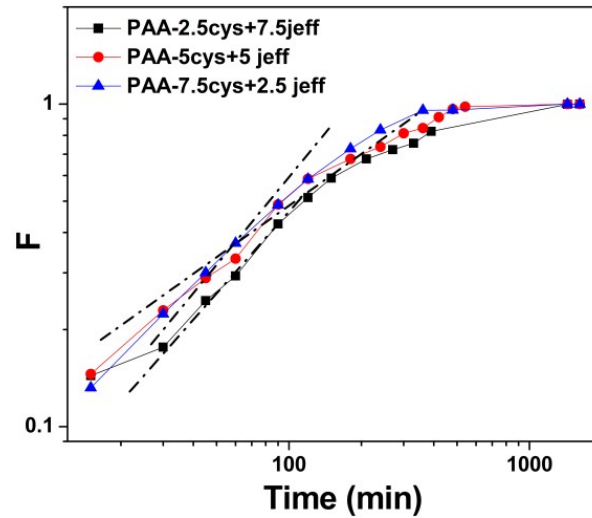


Fig.3S. Fickian curve with respect to time of dual cross linked PAA with different mol% of cystamine and jeffamine in water

4. SEM of PAA hydrogels embedded with AgNPs

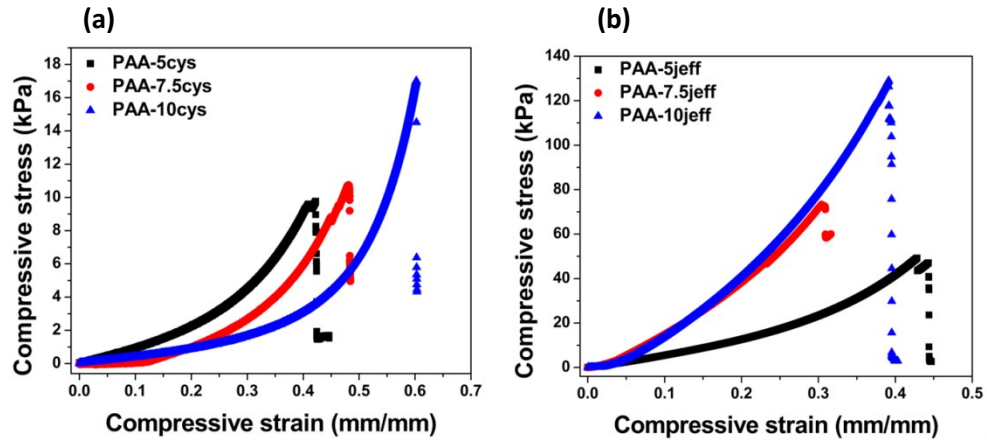


Fig. 4S. Compressive strength studies of mono crosslinked PAA hydrogels with (a) Cystamine and (b) jeffamine

5. SEM of PAA hydrogels embedded with AgNPs

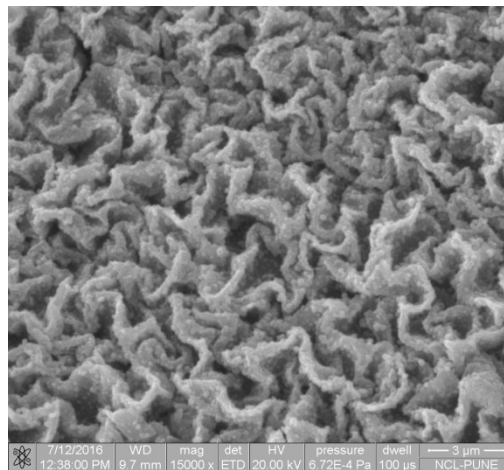


Fig. 5S. SEM micrographs of dried PAA-5cys+5jeff hydrogel incubated with AgNPs