Electronic Supplementary Material (ESI) for Polymer Chemistry

Supporting Information for

Poly(*N*-isopropylacrylamide)-poly(ferrocenylsilane) dual-responsive hydrogels: Synthesis, characterization and antimicrobial applications †

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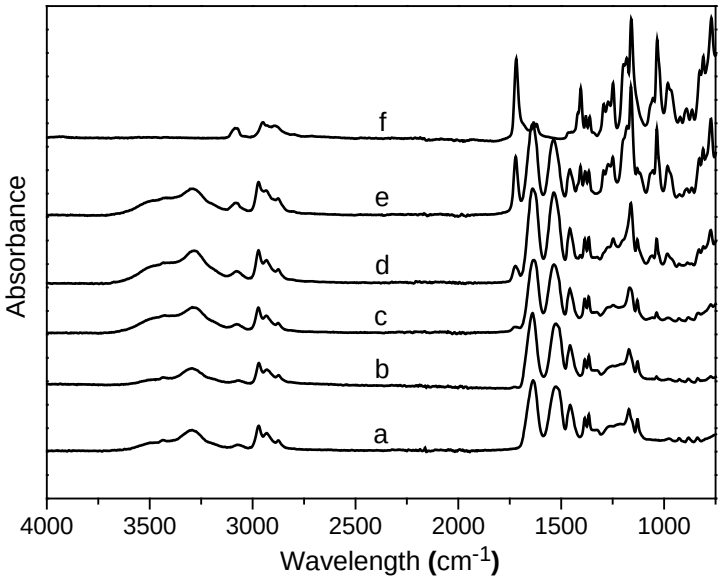

Fig. S1 FTIR spectra of (a) PFS **2**, (b) PNIPAM-2% PFS hydrogel 3 s, (c) PNIPAM-2% PFS hydrogel 60 s, (d) PNIPAM-2% PFS hydrogel 180 s, (e) PNIPAM-2% PFS hydrogel 30 min and (f) PNIPAM hydrogel.

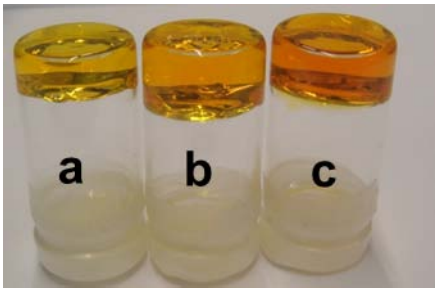

Fig. S2 Photographs of the formed gels: (a) PNIPAM-1% PFS, (b) PNIPAM-2% PFS and (c) PNIPAM-5% PFS.

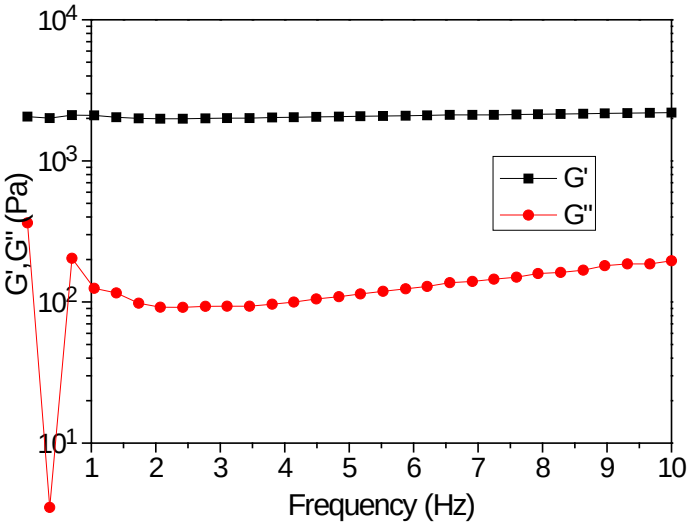

Fig. S3 Frequency dependence of storage moduli (G') and loss moduli (G'') for the obtained PNIPAM-2% PFS hydrogel.

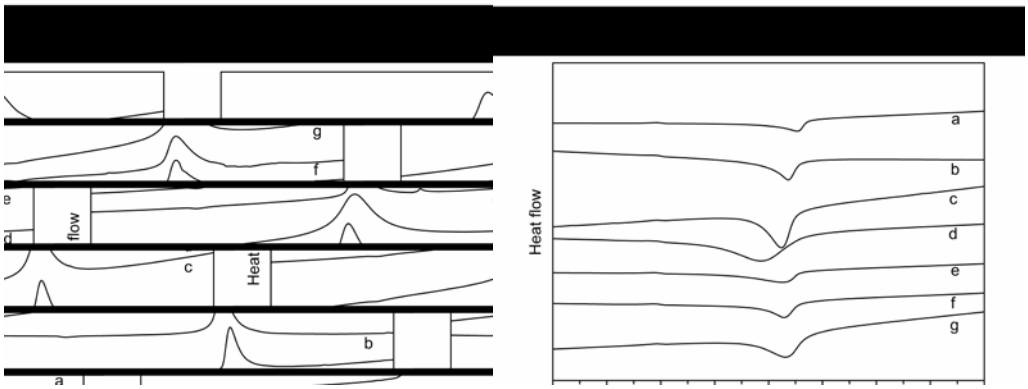

Fig. S4 DSC measurements of the various hydrogels: (a) PNIPAM, (b) PNIPAM-1% PFS-, (c) PNIPAM-2% PFS, (d) PNIPAM-5% PFS, (e) PNIPAM-1% PFS after oxidation, (f) PNIPAM-2% PFS after oxidation and (g) PNIPAM-5% PFS after oxidation.

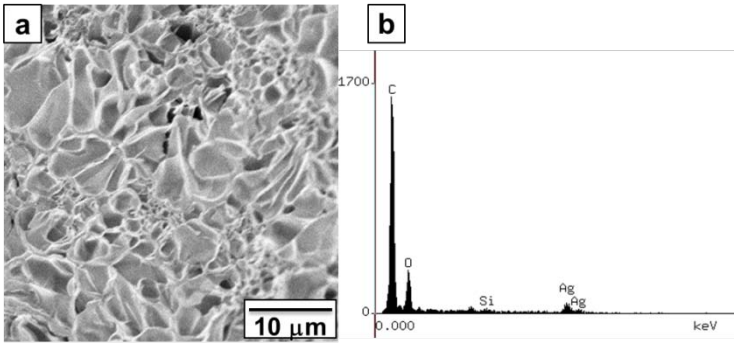

Fig. S5 SEM image and EDS spectrum of a 2% PFS-PNIPAM/silver composite hydrogel.

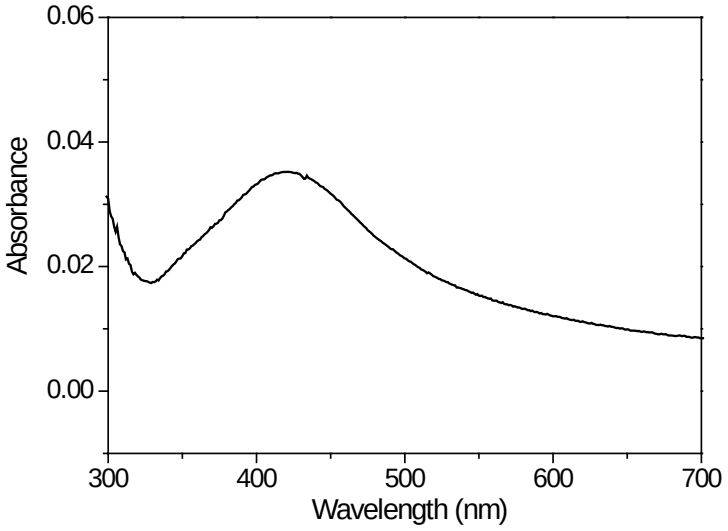

Fig. S6 UV-VIS absorption spectra of silver nanoparticles synthesized inside the hydrogel.

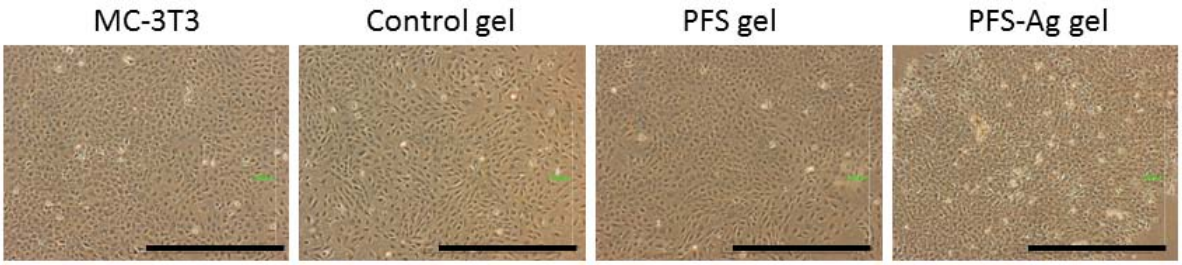

Fig. S7 Optical microscopy images of MC-3T3 growing in contact with gels after 3 days. Scale bar = 1 mm.