Electronic Supplementary Information for:

Argentophilic hydrogels: elucidating the structure of neutral versus acidic systems

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Supplementary Schemes and Figures

Scheme S1 Reversible collapse of the hydrogels Ag(1–3) upon the addition of a 2-fold excess silver (left) and a 2-fold excess of thiol (right).
**Fig.S1** SEC traces of $[\text{Ag}_2(1)]^+$ (a) and $[\text{Ag}_2(3)]^+$ (b).

**TEM analysis**

TEM specimens were prepared by adding a drop of hydrogel (sol) onto a carbon-coated copper grid. Images were recorded on a JEOL JEM-2100F UHR apparatus operated at 200 kV. Attempts of analyzing acidic hydrogels Ag(4-5) did not give satisfactory results, as there was not any distinguishable microstructure observed.
FT-IR Spectra

Fourier Transformed Infra-Red Spectroscopy (FT-IR) spectra were taken from a Nicolet Avatar 360 apparatus. Hydrogels were freeze-dried and analysed in the solid state. All samples were measured in KBr disks. The spectrum for compound Ag(1) was published elsewhere.\textsuperscript{1}

Ag(2)

![FT-IR Spectrum of Ag(2)]

Ag(3)

![FT-IR Spectrum of Ag(3)]
References