

Supplementary Information for

## **Multifunctional Glycerol/Citric Acid Crosslinked Polymer Hydrophilic Gel with Absorptive and Reducing Capacities**

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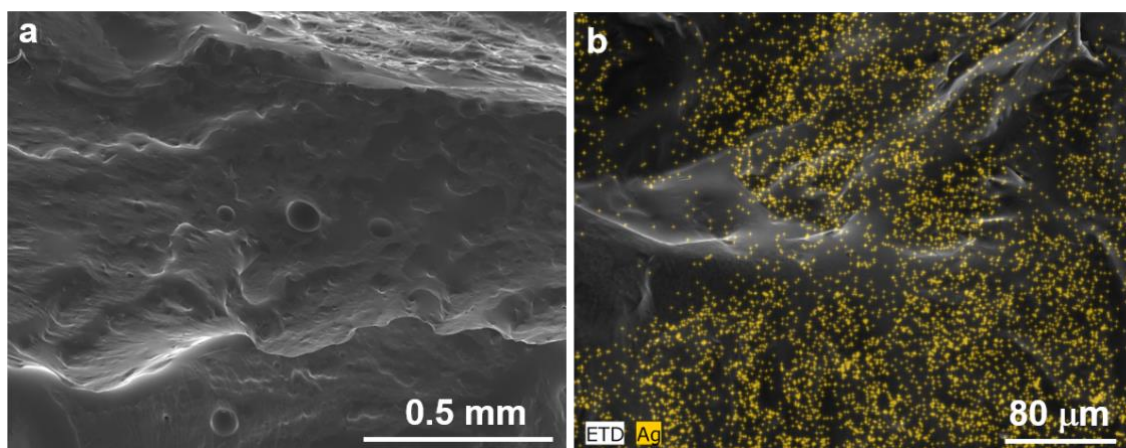
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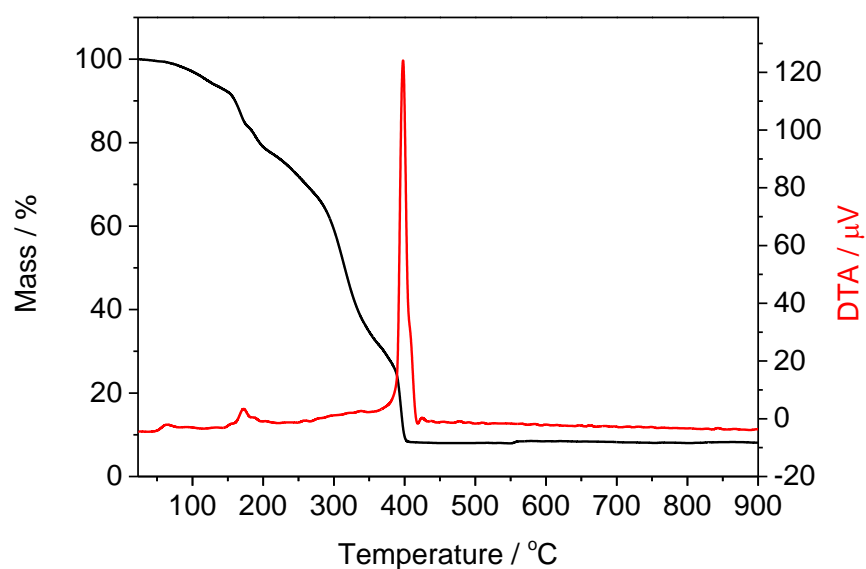
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The Scherrer equation (Equation S1) was used to calculate the crystallite size, considering that  $L$  is the average diameter of the particles, in nanometers,  $K$  is a constant which depends on the shape of the particles (for spherical particles,  $K = 0.94$ ),  $\lambda$  is the wavelength of the  $K\alpha$  radiation (0.154 nm for Cu),  $\beta$  is the full width at half maximum of the most intense diffraction peak, in radian, and  $\theta$  is the incidence angle according to the plane.

$$L = \frac{K\lambda}{\beta \cos\theta} \quad \text{Equation S1}$$



**Figure S1.** SEM images obtained for the gel after adsorption/reduction of  $\text{Ag}^+$  (in  $\text{AgNO}_3$   $0.1 \text{ mol L}^{-1}$ ) with SE (a) and (b) EDS for chemical mapping of Ag.



**Figure S2.** TG and DTA curves obtained in dynamic air atmosphere obtained for the gel after adsorption/reduction of  $\text{Ag}^{\text{I}}$  (in  $\text{AgNO}_3$   $0.1 \text{ mol L}^{-1}$ ).