Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.


# Chiral Spin Crossover Nanoparticles and Gels with Switchable Circular Dichroism

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## SUPPLEMENTARY INFORMATION

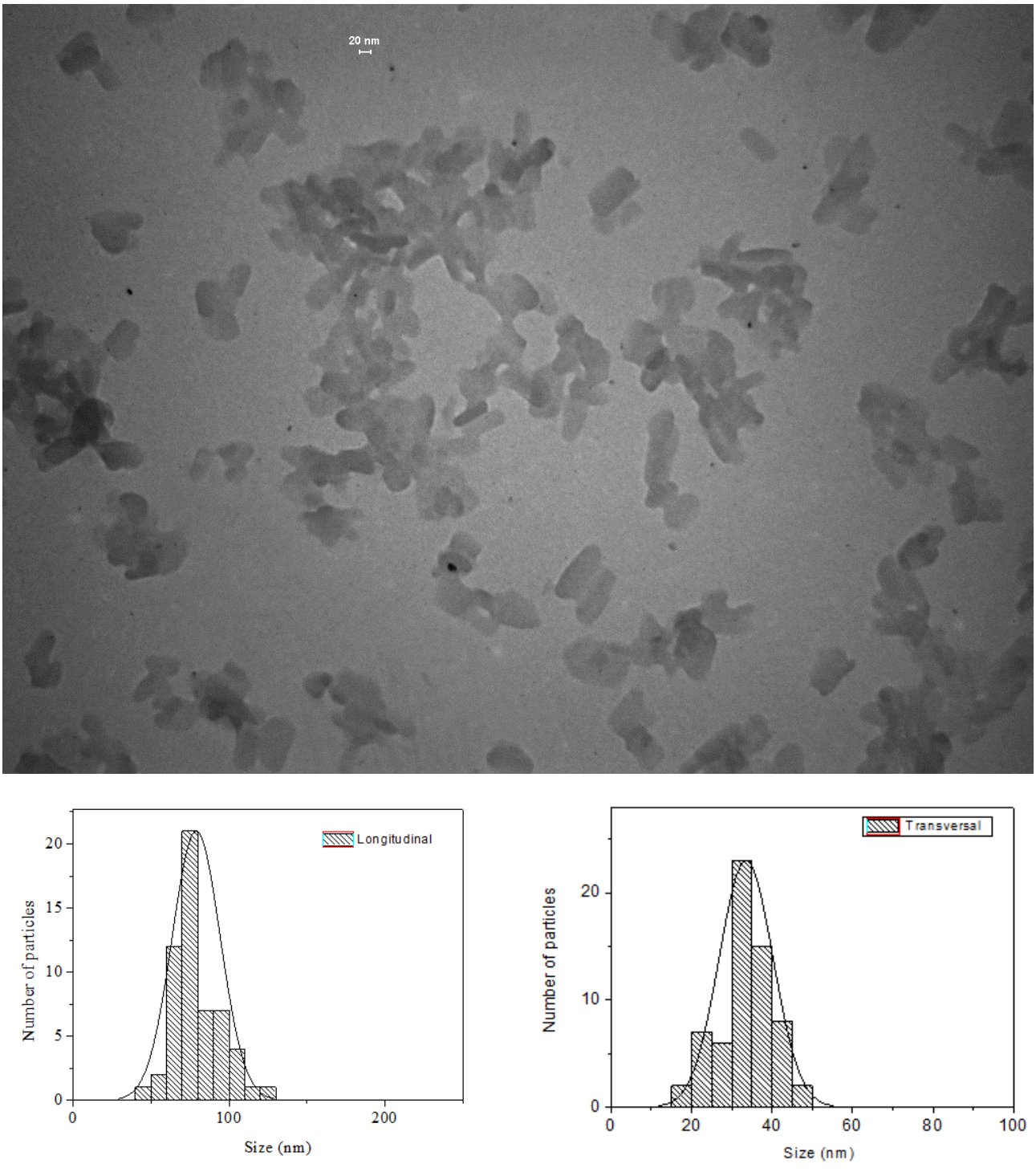



**Figure S1**. TEM image of the nanoparticles **1** (TEM image #1) and the corresponding size distributions: longitudinal size is (80 ± 17) nm, transversal size is (34 ± 8) nm.

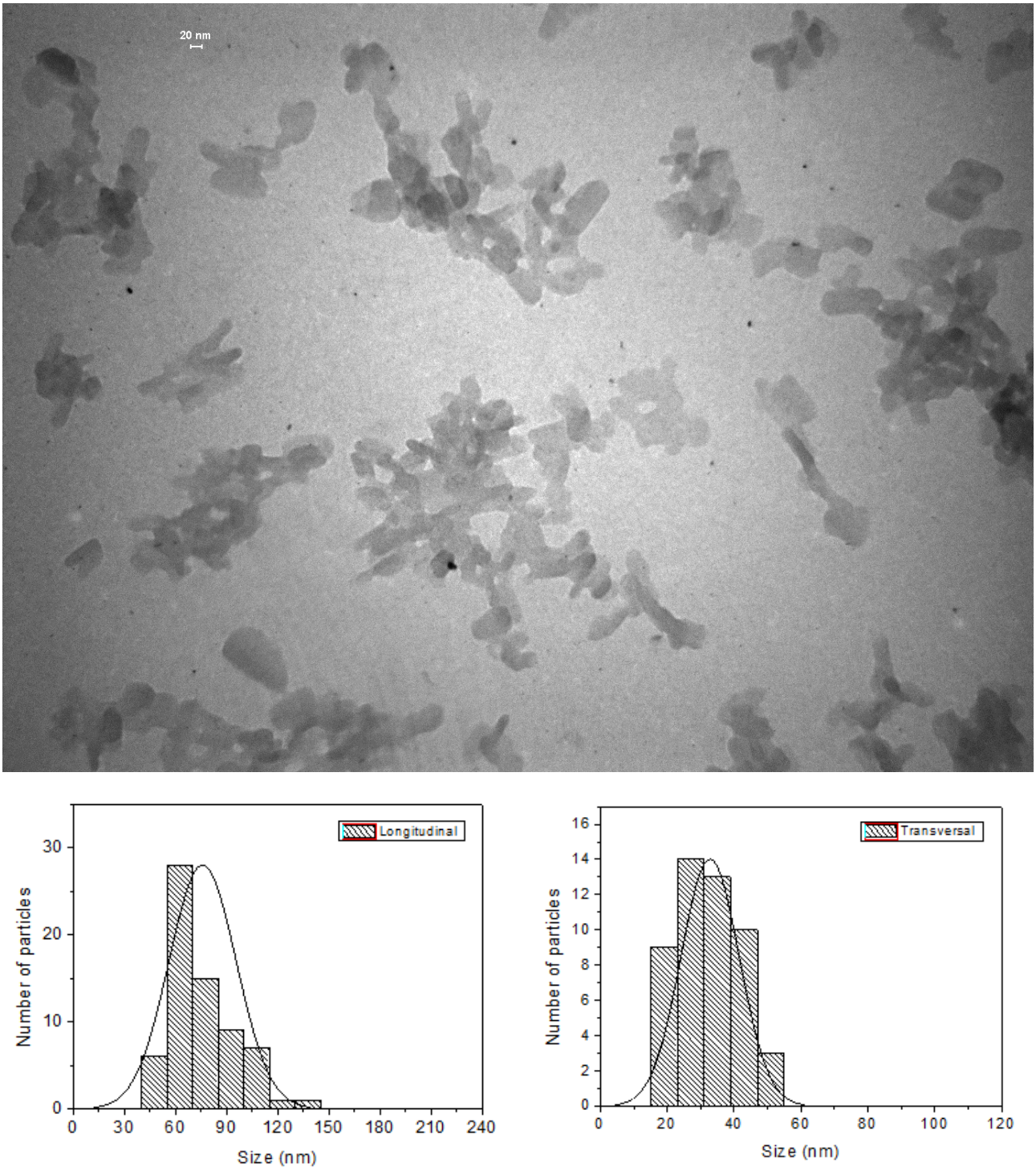



**Figure S2**. TEM image of the nanoparticles **1** (TEM image #2) and the corresponding size distributions: longitudinal size is (76 ± 23) nm, transversal size is (33 ± 10) nm.

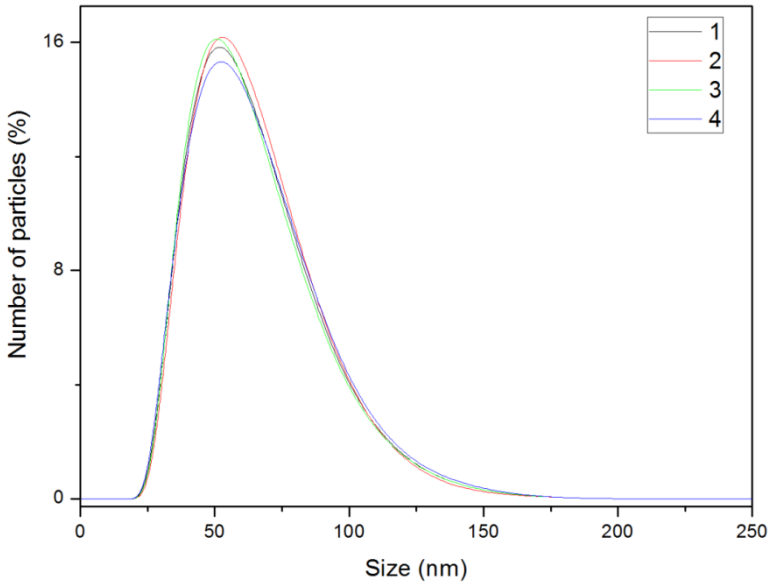
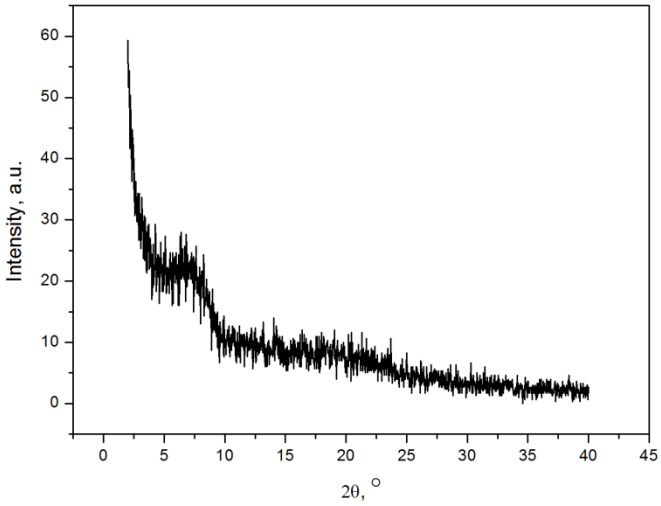



**Figure S3**. DLS measurements on the colloidal solution of nanoparticles prepared with 4 times smaller concentrations of precursors (compering to sample **1**). Size distribution is given in the percent of nanoparticles (distribution by number) in 4 different measurements (298 K). Size of nanoparticles detected with DLS is 58 ± 20 nm.



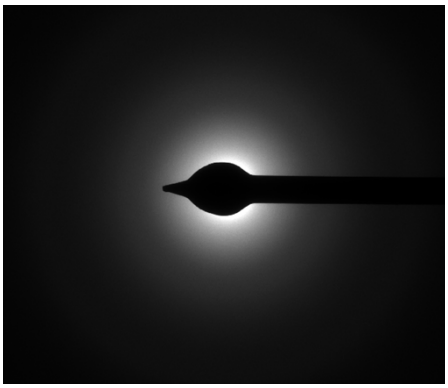



**Figure S4**. PXRD from powder (left) and electron diffraction from an individual nanoparticle (right) of **1**. Both measurements confirm an almost amorphous structure of nanoparticles.

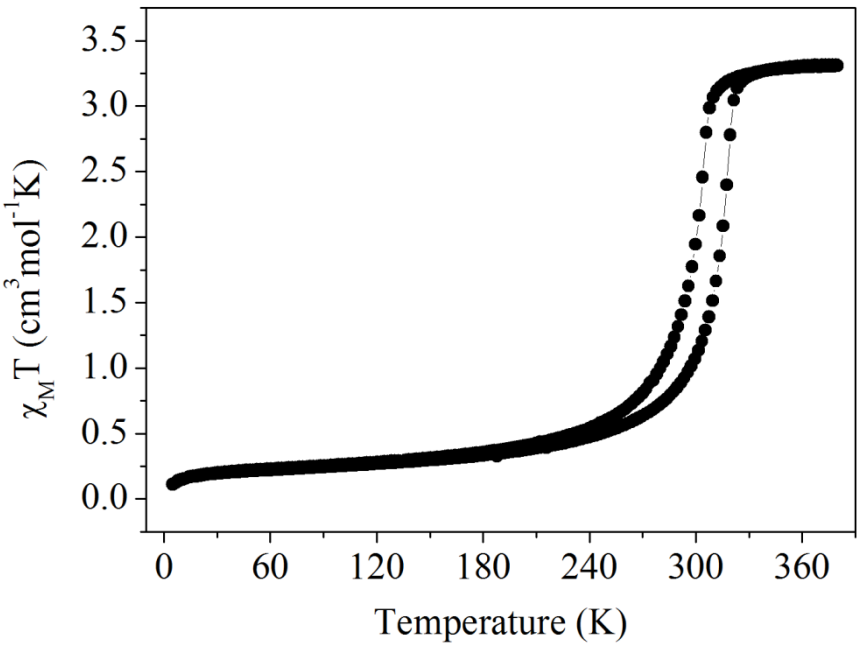



**Figure S5**. Reproducibility of magnetic properties of **1** (sample is obtained in a repeated synthesis). $\chi_M T$ vs. T dependence demonstrates a cooperative transition between diamagnetic and paramagnetic states of SCO nanoparticles.

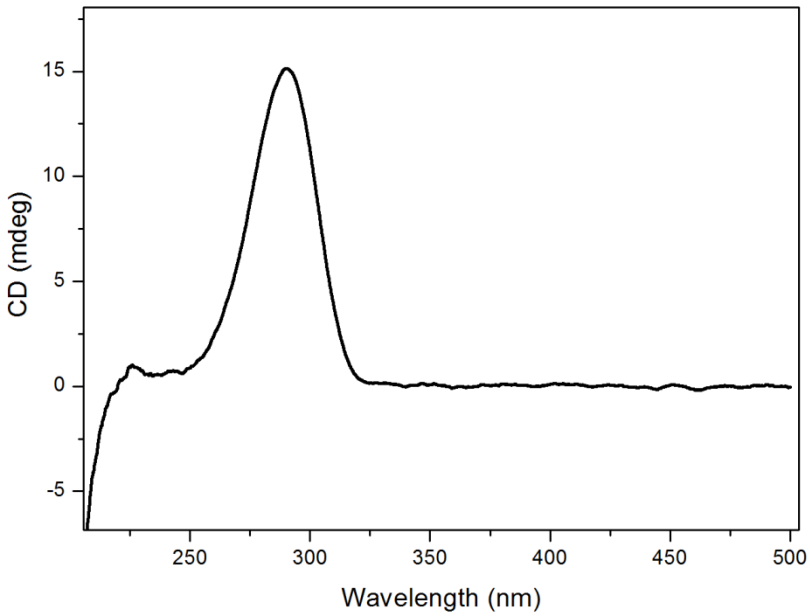



**Figure S6**. A CD spectrum of $[Fe(H_2O)_6](L\text{-}SCA)_2$ in aqueous solution (c = 0.1 mmol/L). A CD band at 290 nm (positive) is detected.

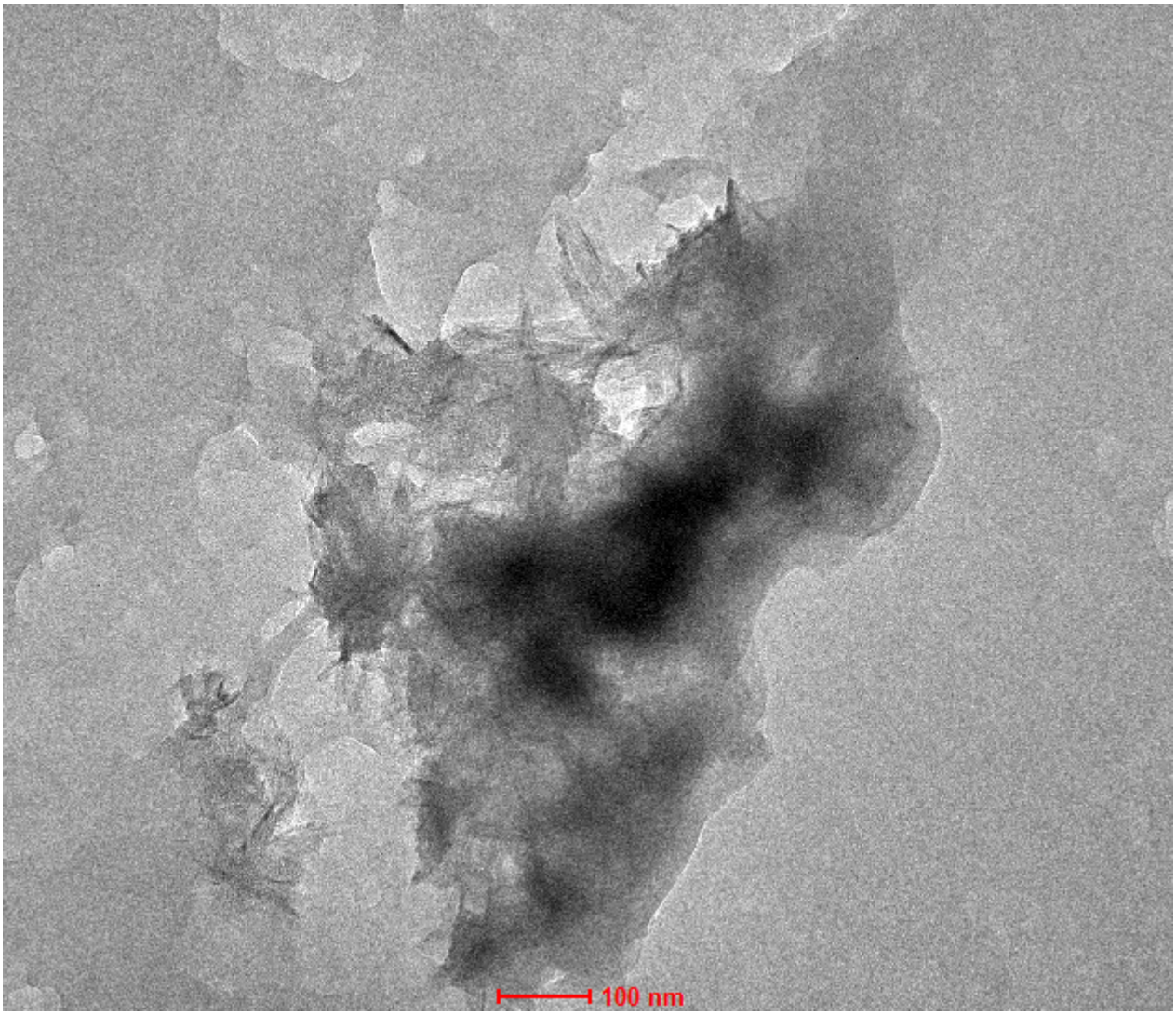



**Figure S7**. TEM image of the gel **2**.

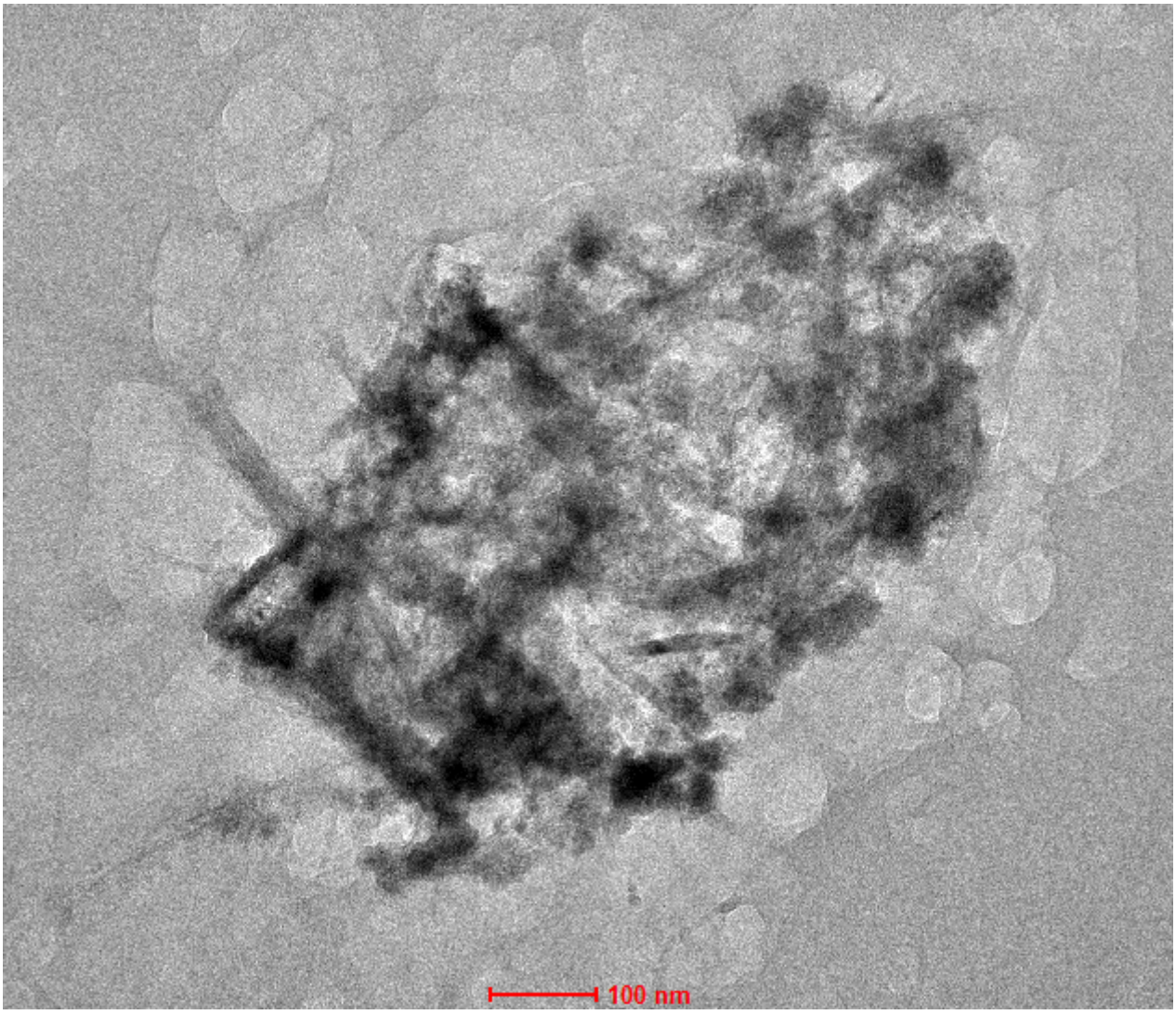



**Figure S8**. TEM image of the gel **2**.