

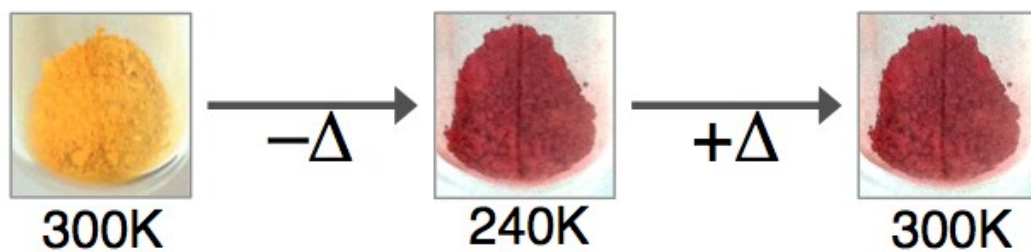
Supporting Information

Enhancement of Guest-Responsivity by Mesocrystallization of Porous Coordination Polymers

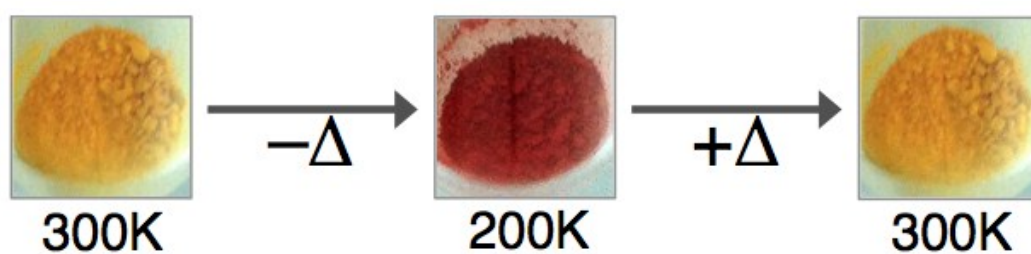
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1-bulk



1-mesoW5



1-mesoW3

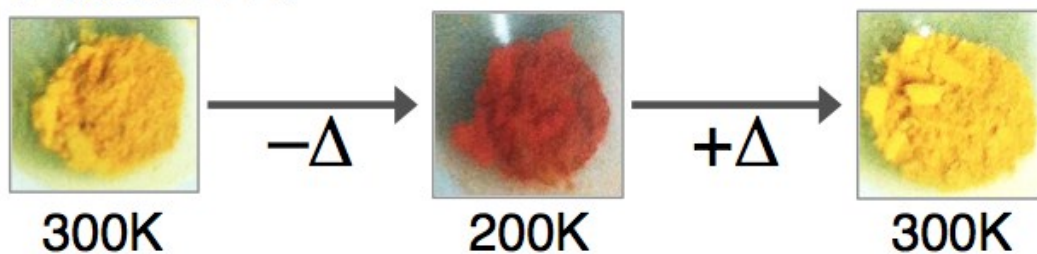
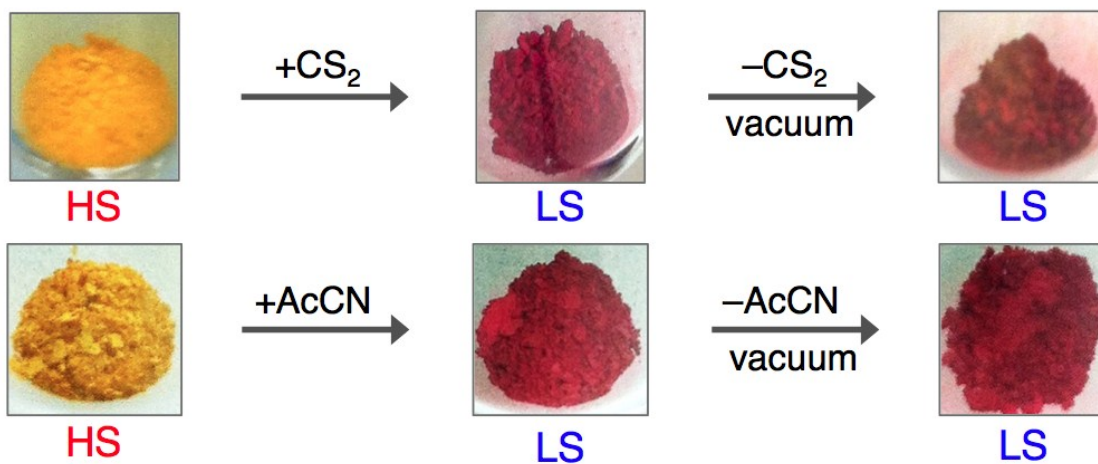
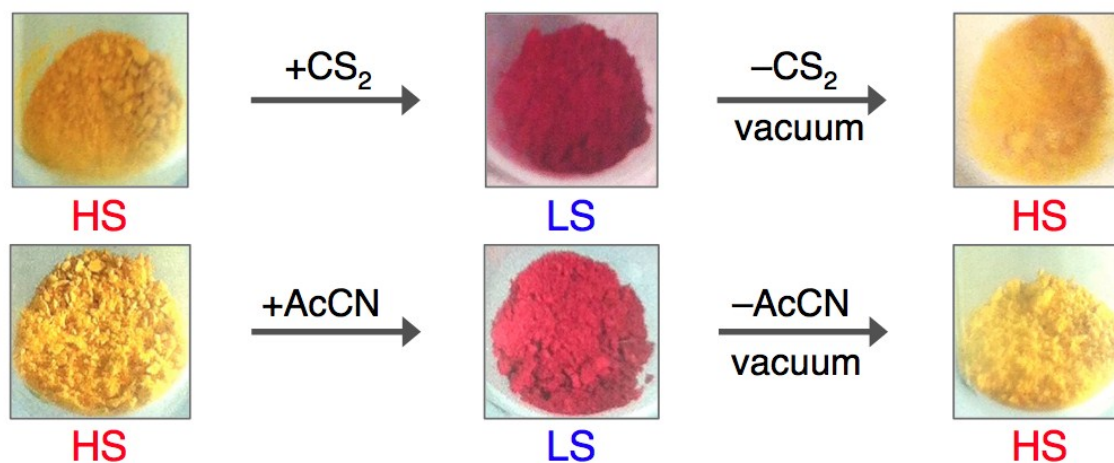


Figure S1 Thermal color changes of 1-bulk, 1-mesoW5 and 1-mesoW3.

1-bulk at 300 K



1-mesoW5 at 300 K



1-mesoW3 at 300 K

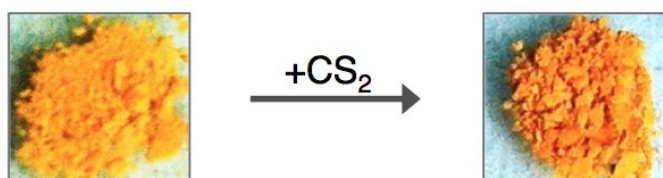


Figure S2 Responsivity of 1-bulk, 1-mesoW5 and 1-mesoW3 for CS₂ and AcCN.

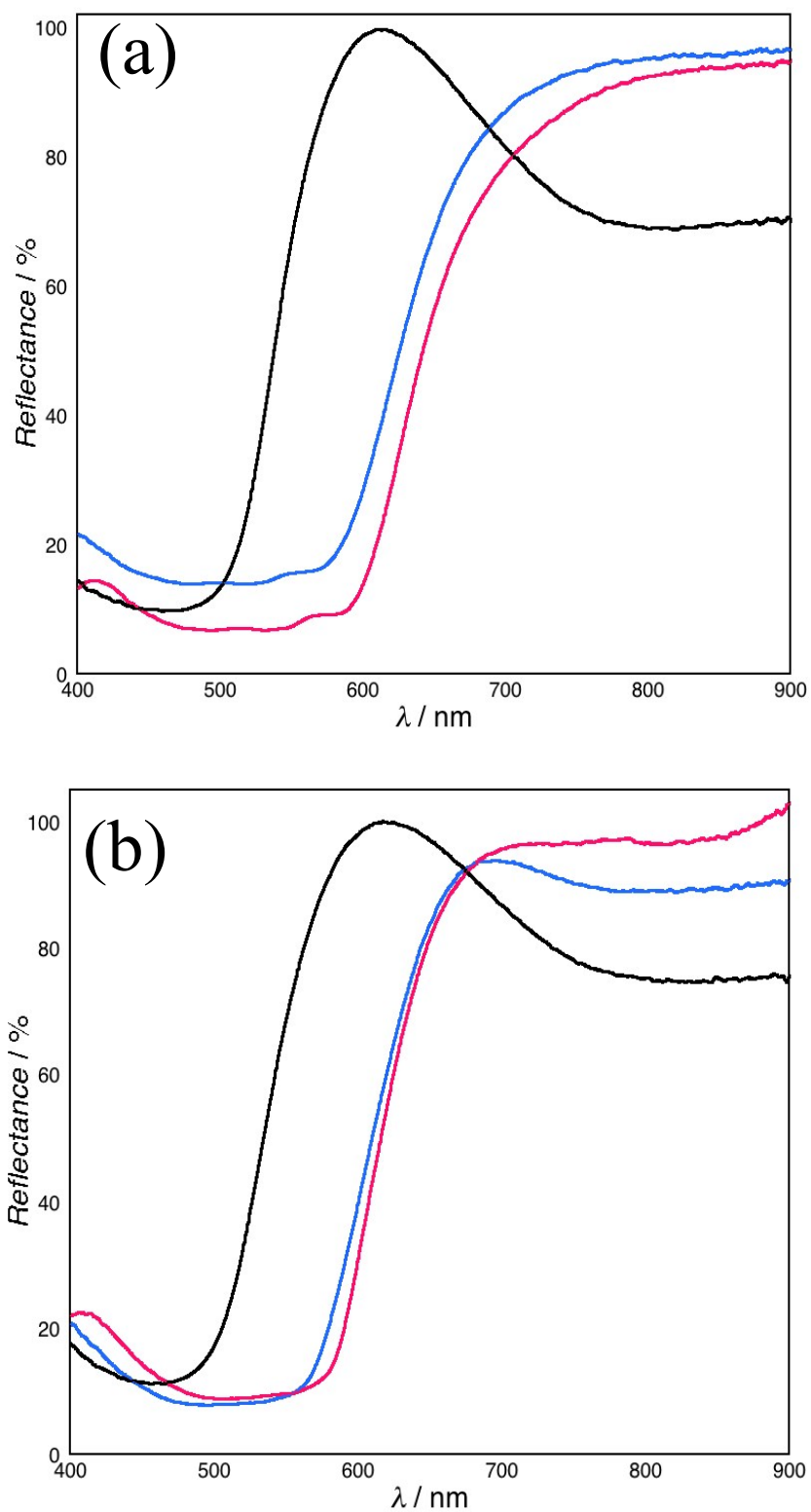


Figure S3 Reflection spectra in the solid state of **1**-bulk (a) and **1**-mesoW5 (b): CS₂ clathrate (red line), AcCN clathrate (blue line) and guest-free sample in the HS state (black line).

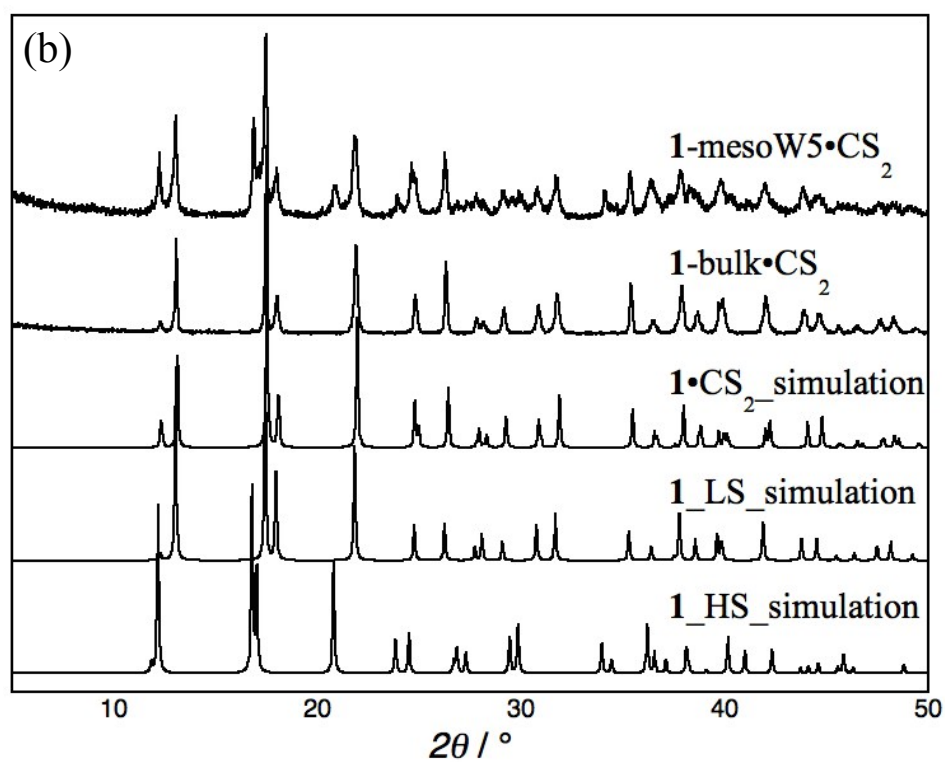
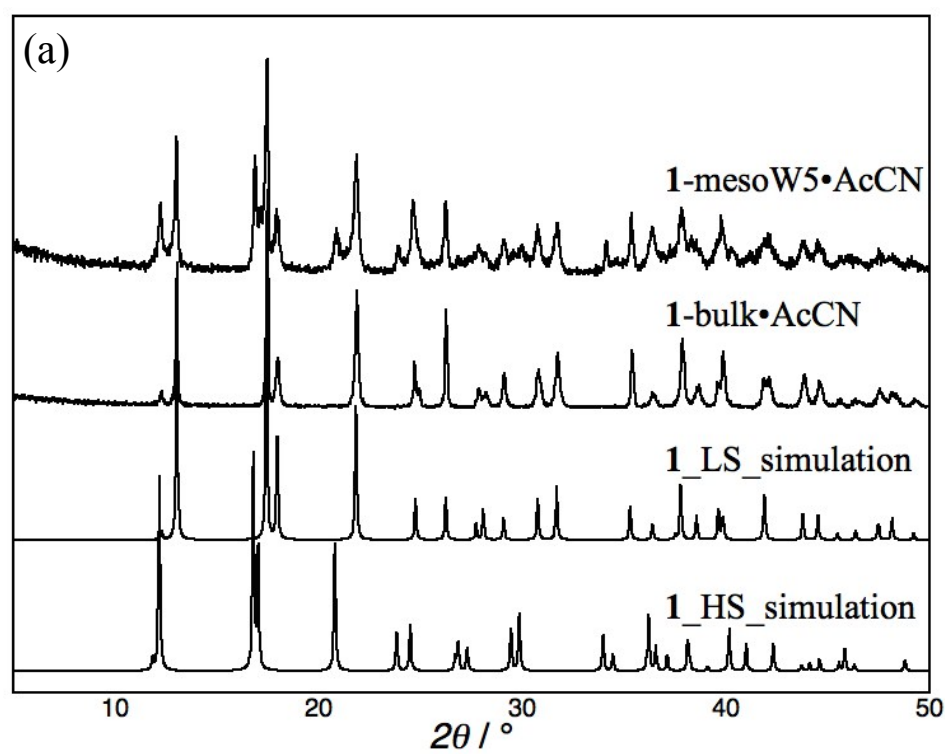


Figure S4 PXRD patterns of (a) CS₂ clathrate and (b) AcCN clathrate of 1-bulk, 1-mesoW5 and 1-mesoW3

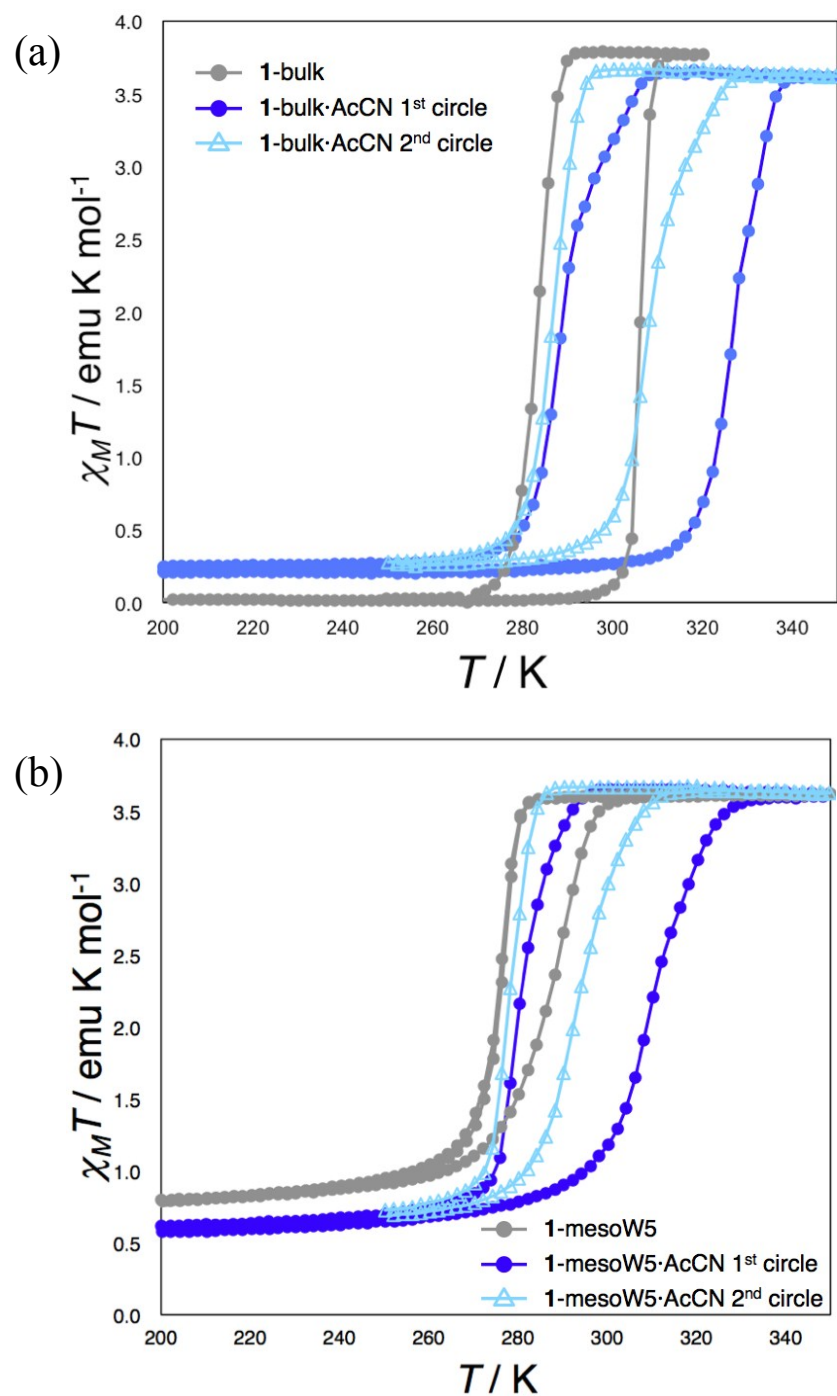


Figure S5 Magnetic behavior of **1-bulk** (a) and **1-mesoW5** (b) clathrated AcCN

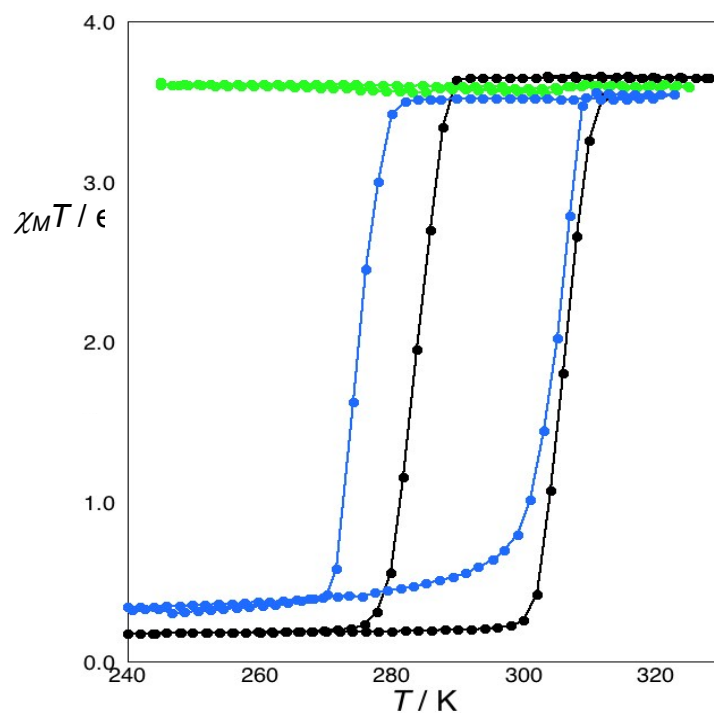


Figure S6 $\chi_M T$ versus T plots for these suspensions; 1-bulk (black), 1-bulk·2H₂O (blue), 1-bulk·4.8H₂O (green). 1-bulk·4.8H₂O prepared under high humidity condition ($P/P_0 > 0.9$) at 298 K showed no spin transition.

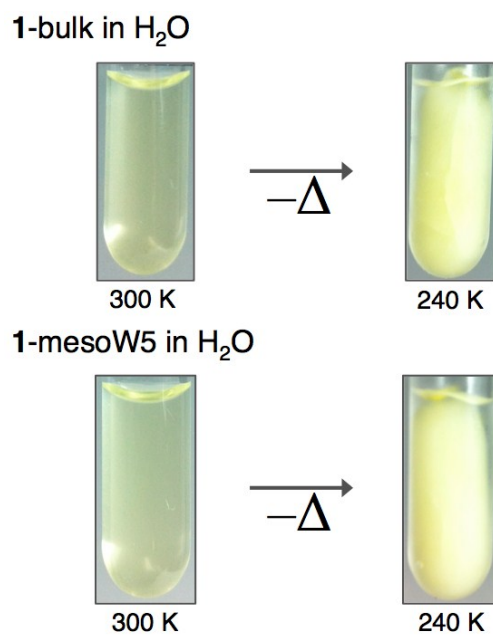
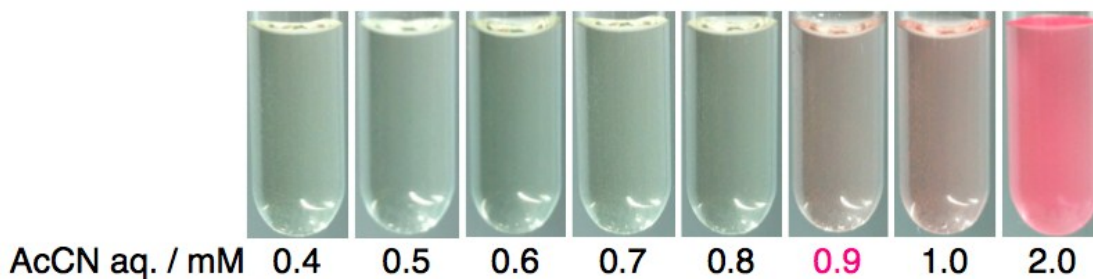


Figure S7 The photographs of 1-bulk and 1-mesoW5 aqueous suspensions at 300 K and 240 K

1-bulk in H₂O 1.0 mM + AcCN aq. (293K, 6h)



1-mesoW5 in H₂O 1.0 mM + AcCN aq. (293K, 6h)

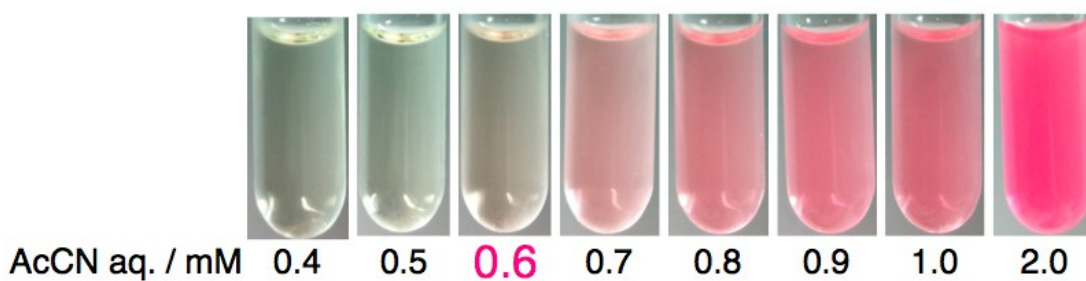


Figure S8 Photographs of **1-bulk** (top) and **1-mesoW5** (down) suspensions controlled varying AcCN concentration