

Supporting Information

Improved Mechanical and Photophysical Properties of Chitosan Incorporated Folic Acid gel Possessing the Characteristics of Dye and Metal Ion Absorption

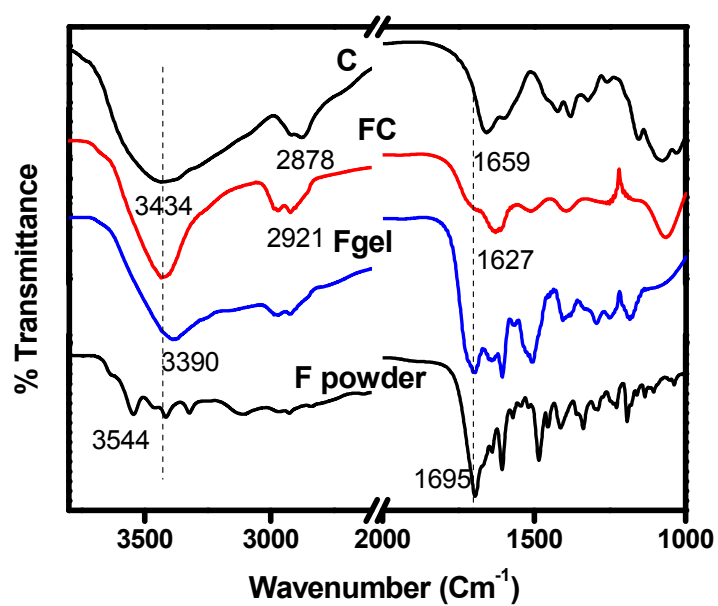
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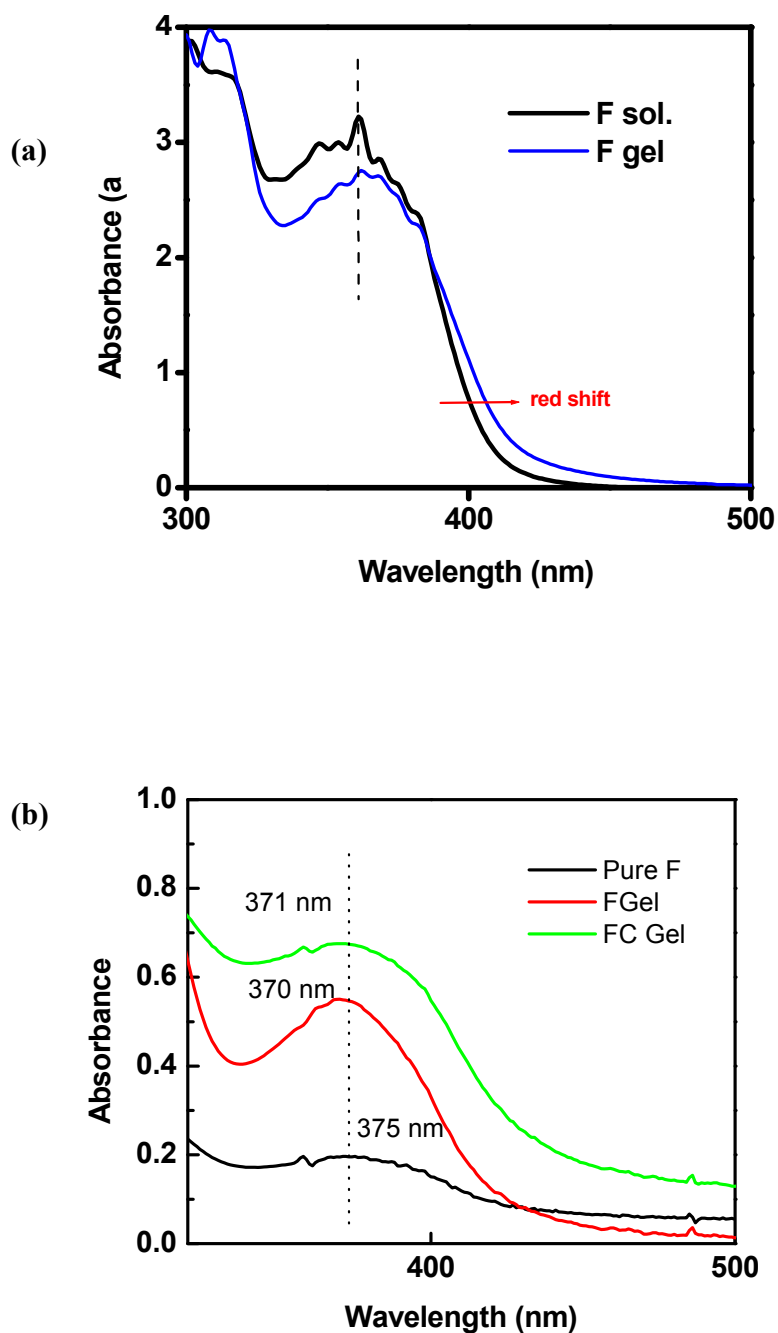
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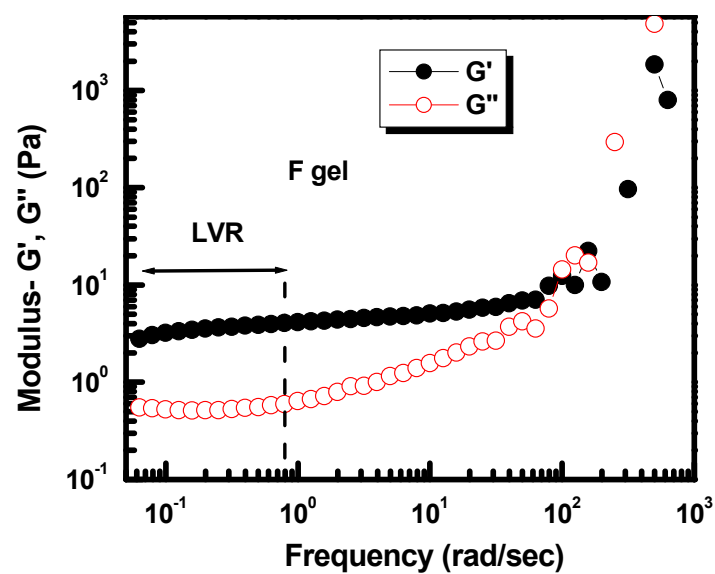
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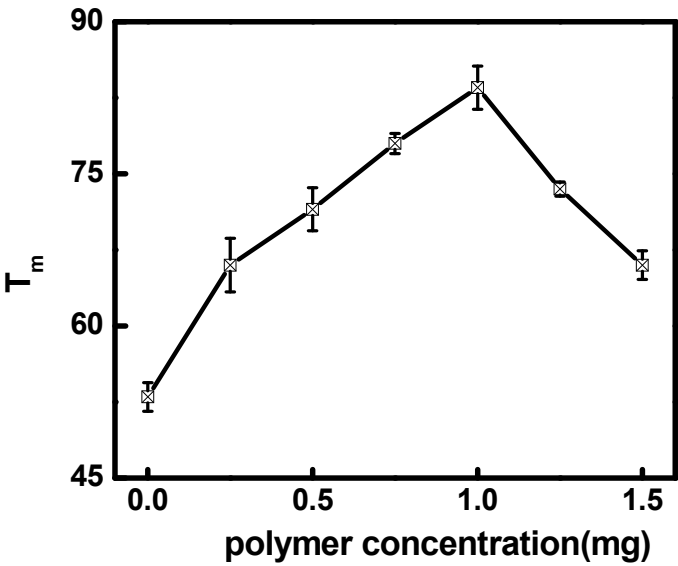
SI Figure 1. FT-IR spectra of pure folic acid powder, C powder and the xerogels (F gel and FC hybrid material).



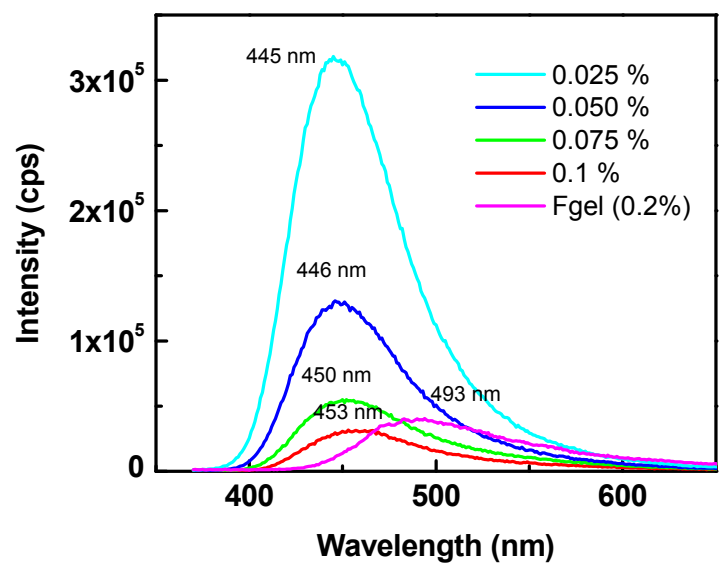
SI Figure 2a. The UV-vis spectra of the folic acid in solution (DMSO solvent) and in gel state (DMSO: H₂O – 50:50) **2b.** UV-vis spectra of pure F, the F and FC xerogels.



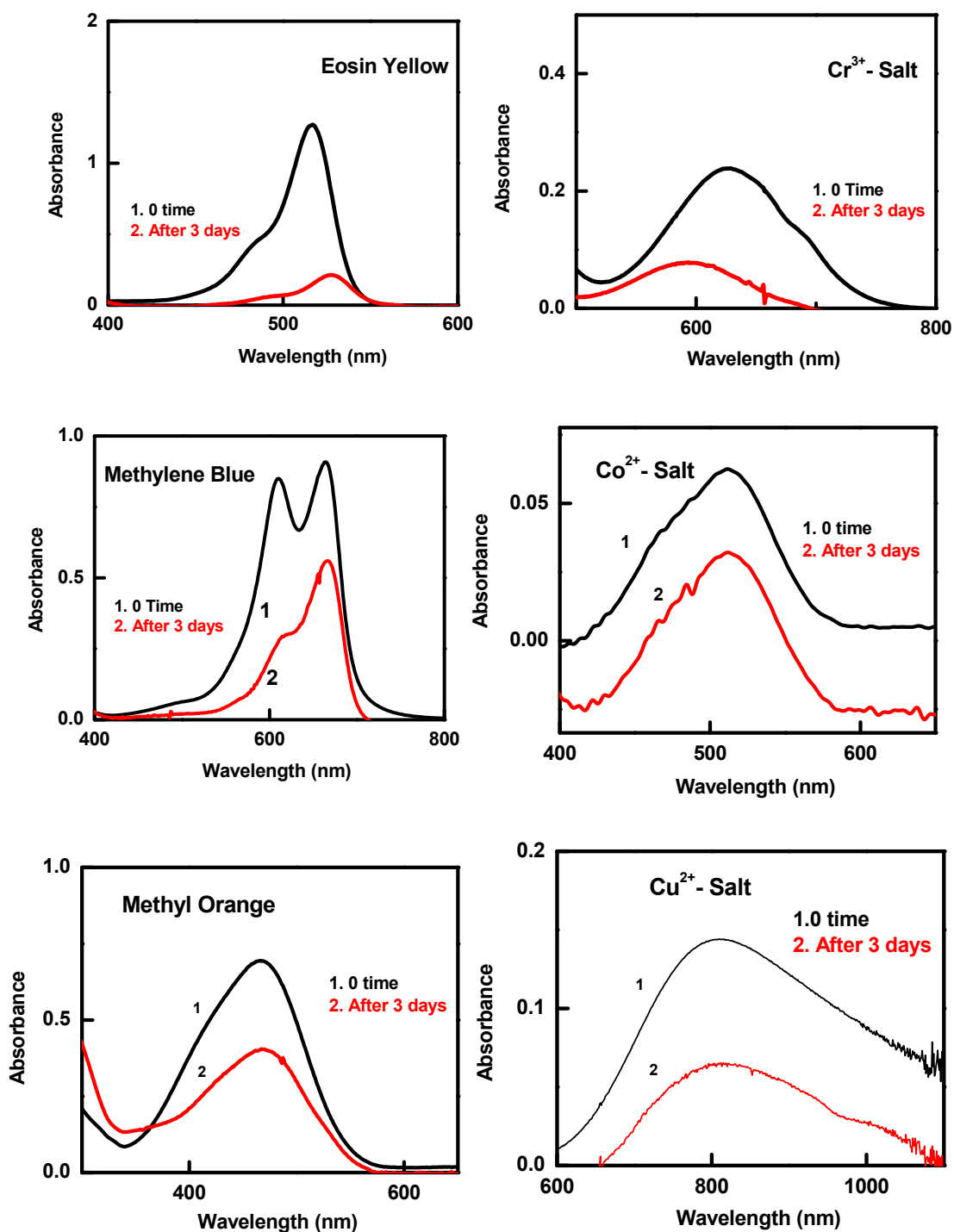
SI Figure 3. The frequency dependent oscillatory rheology of the F gel at constant strain of 0.05%.



SI Figure 4. Variation of gel melting temperature with the addition of polymer concentration.



SI Figure 5. Concentration dependent fluorescence spectra of **F** in 1:1 DMSO water mixture at 30 °C.



SI Figure 6. Comparison of UV-vis spectra of the dye/metal ion solutions at the initial state and after absorption in the FC hybrid gels for 3 days.