

Supporting information

Synthesis and SERS Application of Gold and Iron Oxide Functionalized Bacterial Cellulose Nanocrystals (Au@Fe₃O₄@BCNCs)

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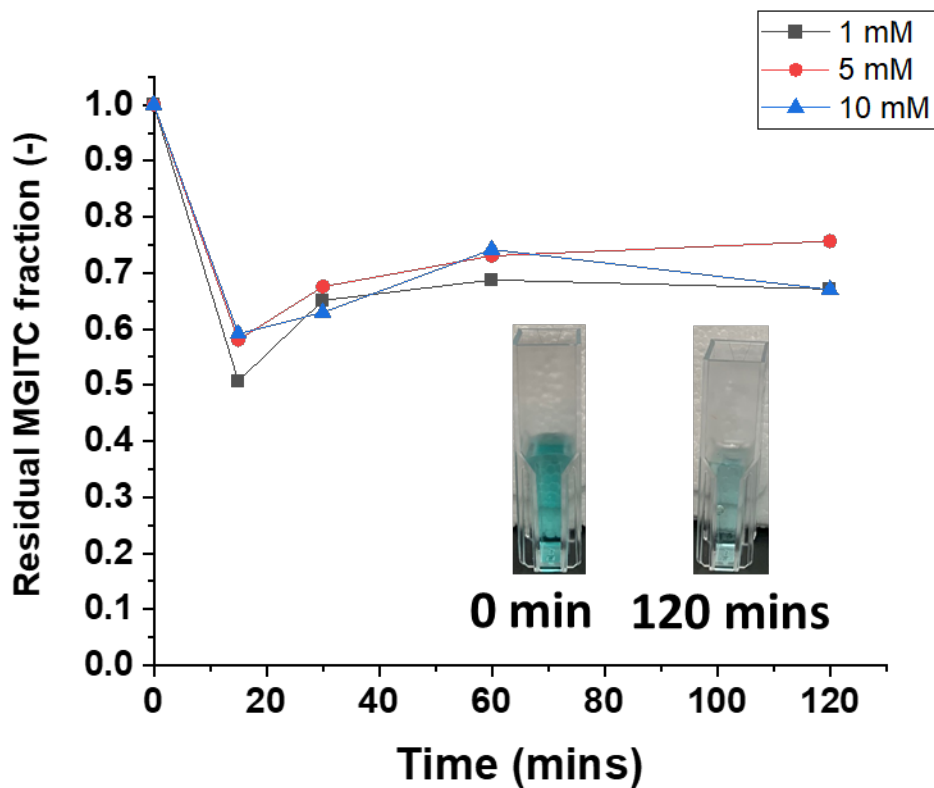


Figure S1. Residual MGITC fraction in solution with contact time between the nanocomposites and MGITC. The concentration of MGITC were measured by using the UV-Vis spectrophotometer. Inset shows the images of MGITC solution after 0 and 120 mins of contact time

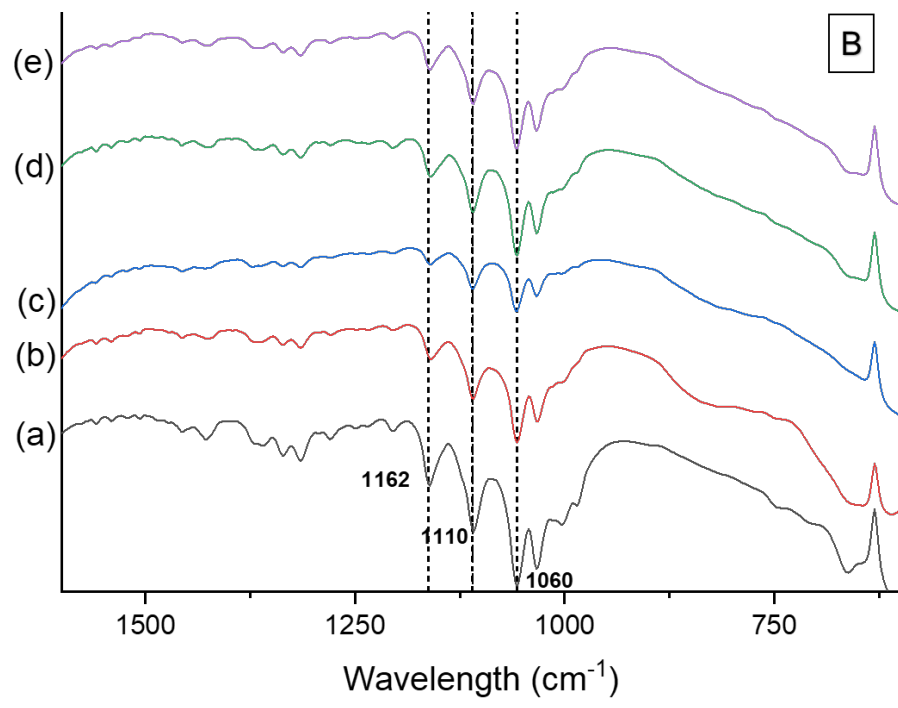
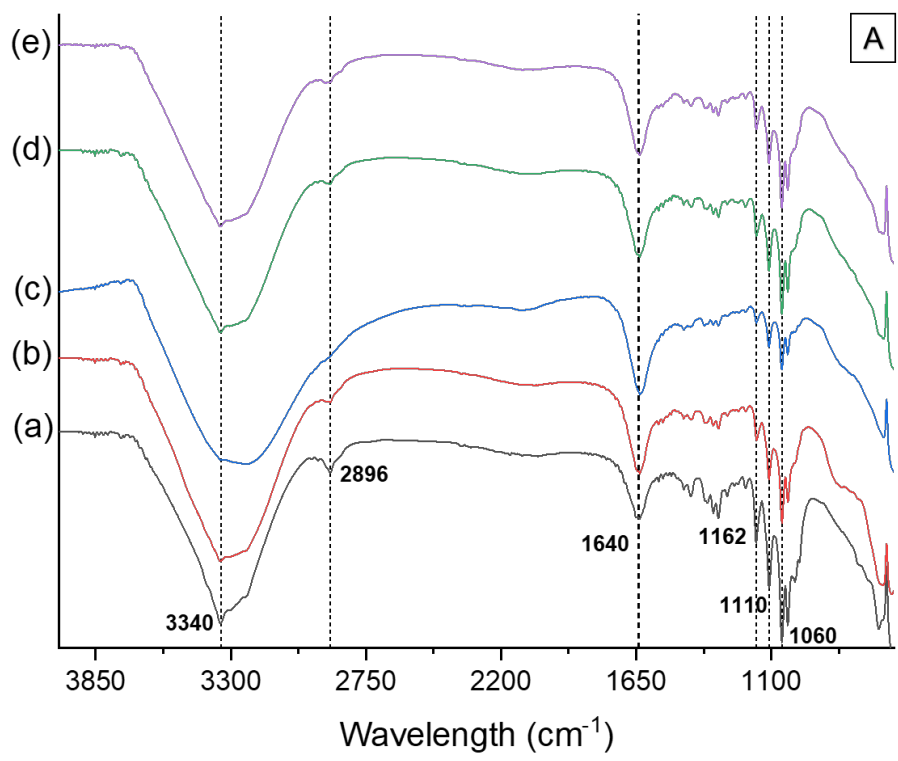


Figure S2. (A) FT-IR spectra of (a) BCNC, (b) BCNC@Fe precursor, (c) Fe₃O₄@BCNC, (d) 1 mM Au@Fe₃O₄@BCNC and (e) 10 mM Au@Fe₃O₄@BCNC **(B)** Enlarged spectra showing the peaks at 1162 cm⁻¹, 1110 cm⁻¹ and 1060 cm⁻¹.

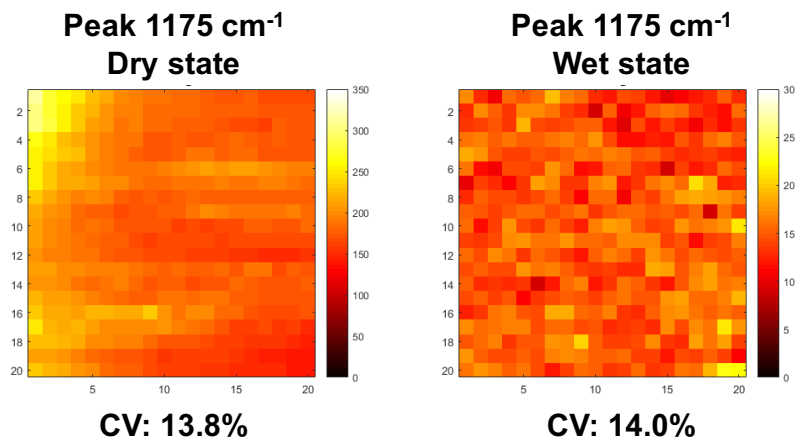


Figure S3. Spatial variability of 1175 cm⁻¹ under dry and wet states.

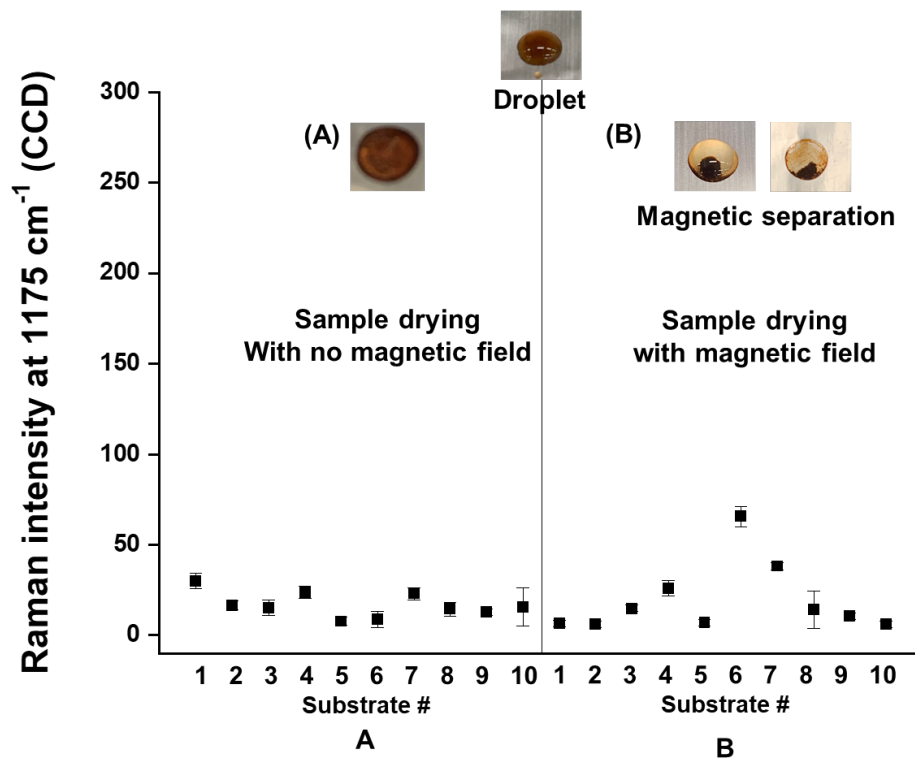


Figure S4. The Raman intensities at 1175 cm⁻¹ for the samples dried with and without a magnetic field using 10 different substrates for each. Insets show the optical images of dried samples with (A) and without (B) magnetic concentration