Supplementary Information

Multiscale anisotropy of cellulose nanocrystals self-organized into disc -shaped particles

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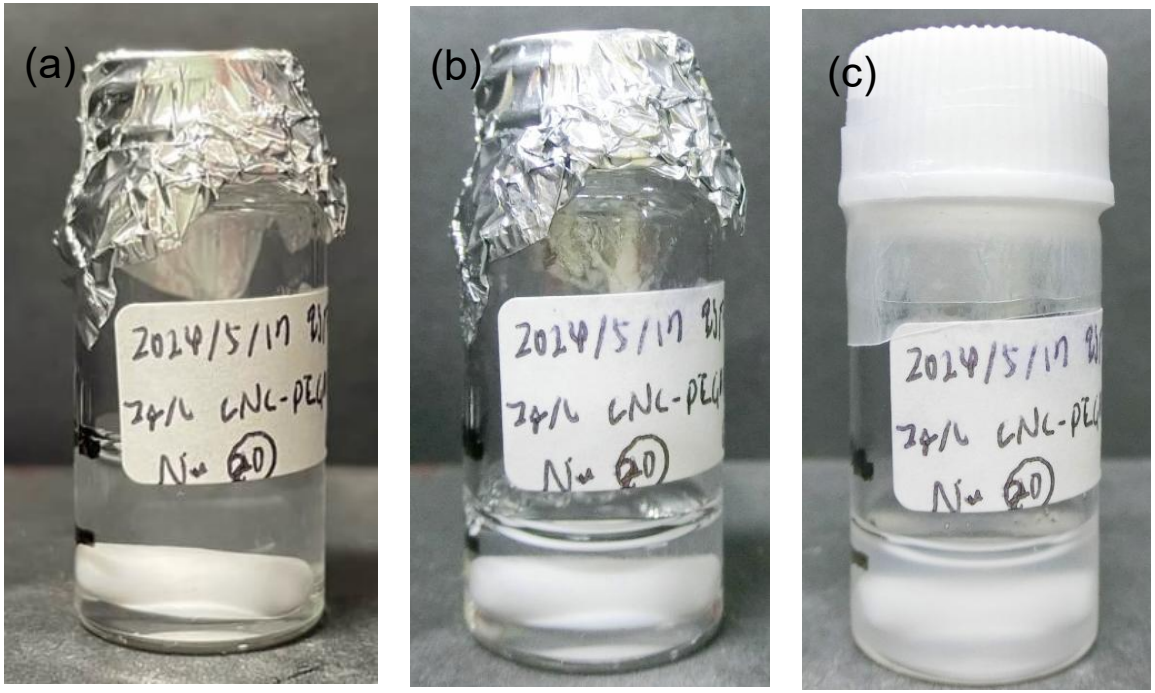
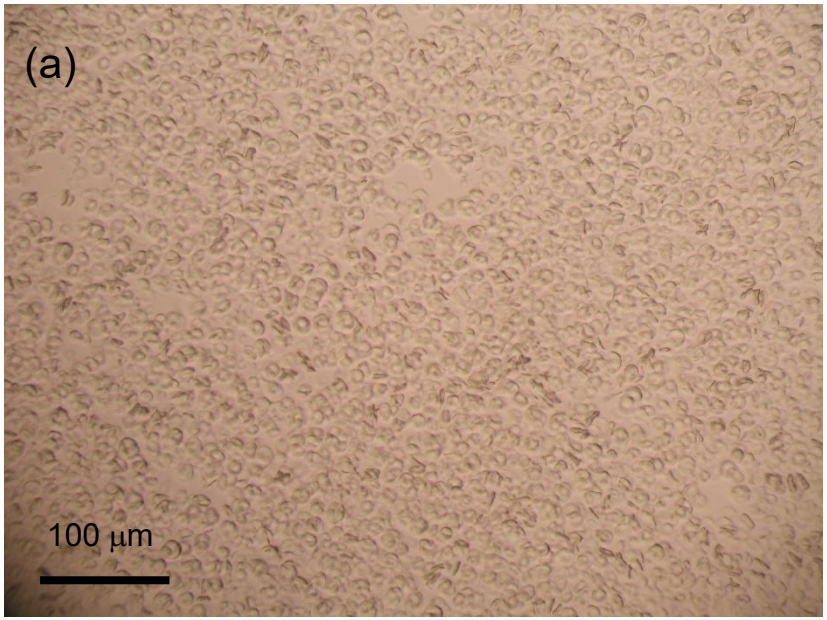
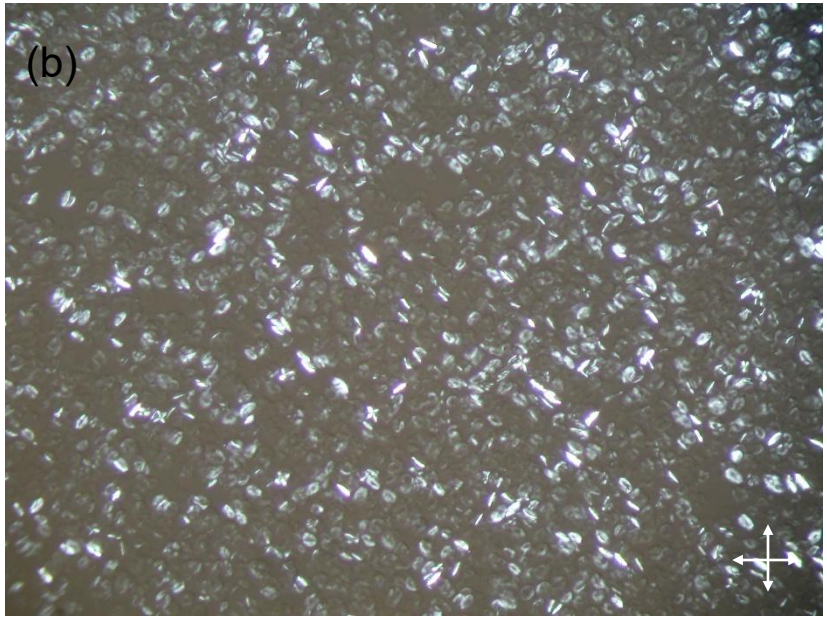


Figure S1 Representative appearance change through sample preparation process. (a)CNC and PEGDA2k dispersed in H_2O/EG solvent. (b) After evaporation of H_2O by heating. (c) Sample dispersion cooled down to ca. 4 ℃.





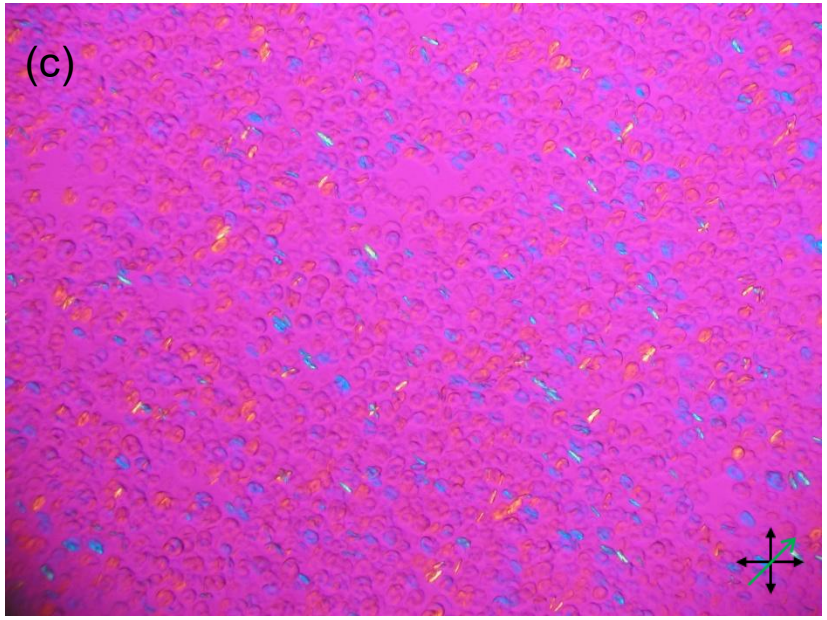
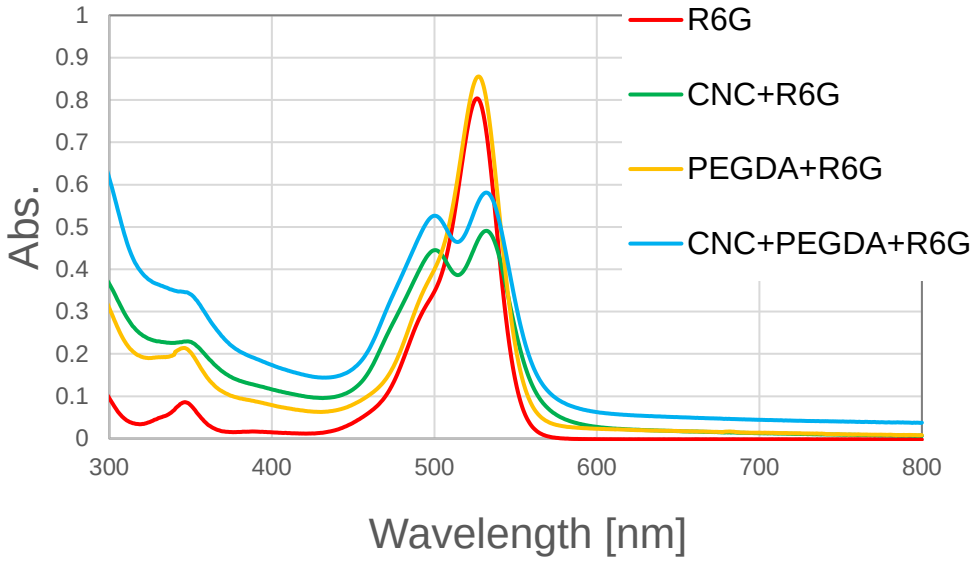


Figure S2 Optical microscopic images of CNC-PEGDA2k particles at wet state with lower magnification (a) BF image, (b) polarized image (c) polarized image with 1st order retardation plate (λ=530 nm). Direction of polarizer and analyser is shown by arrows.



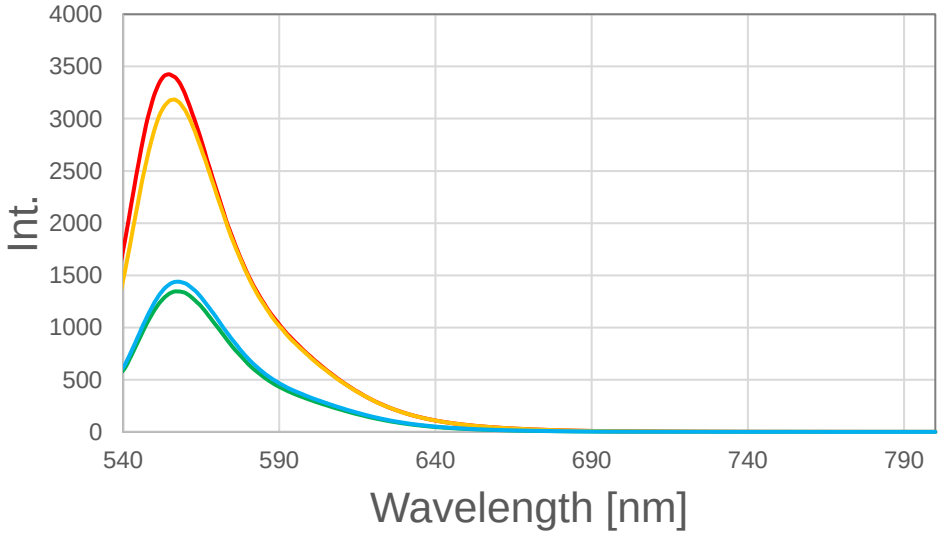


Figure S3 (a) UV-vis spectra and (b) fluorescent spectra of various combinations of samples in water containing 1.23×10^{-5} mol/L Rhodamine 6G (R6G).

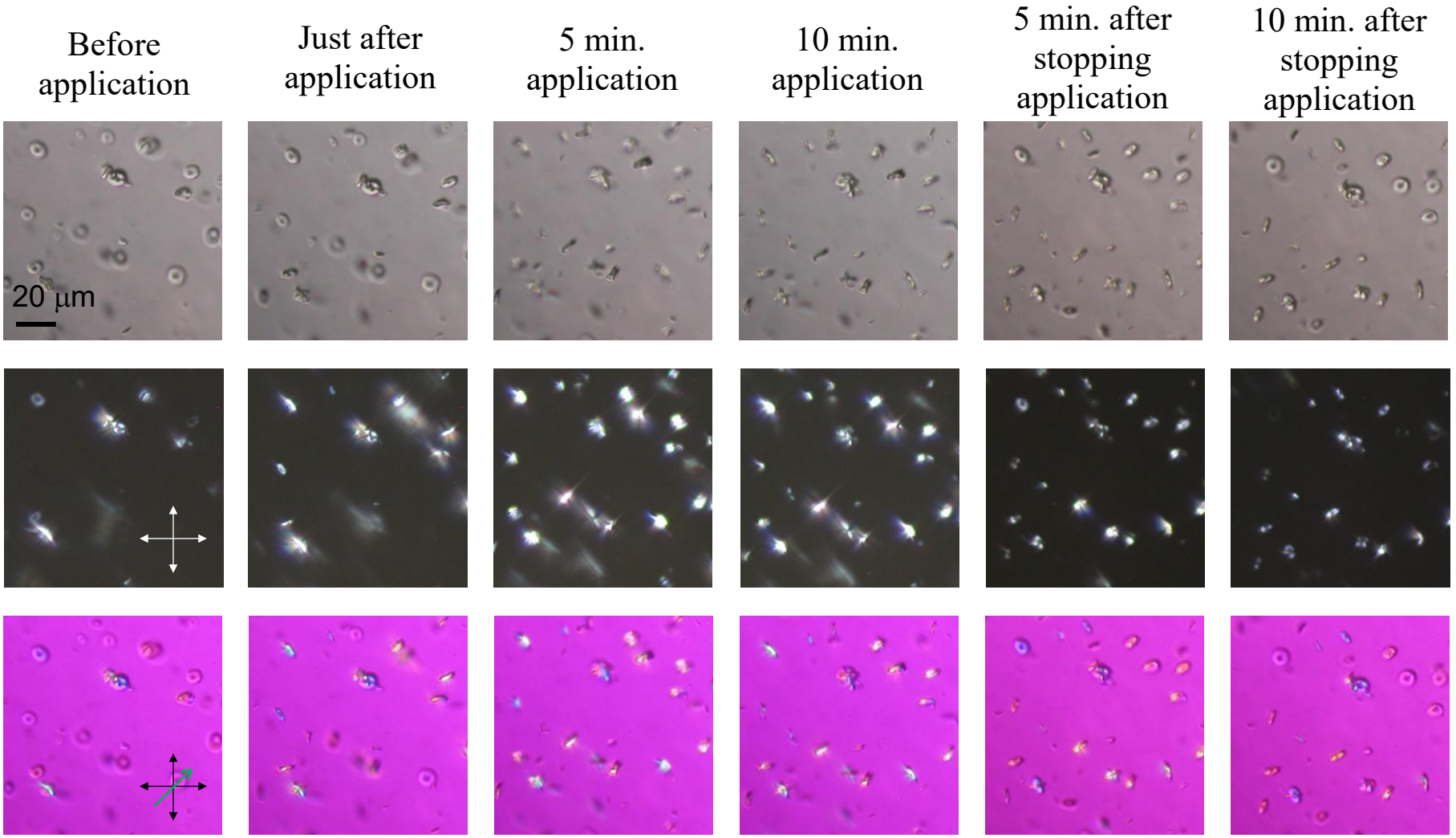


Figure S4 Time course of CNC-PEGDA2k by AC application visualized by optical microscope. BF (upper row), POM (middle row), and POM with 1st-order retardation plate (lower row) images are shown.