

## Supplementary Materials

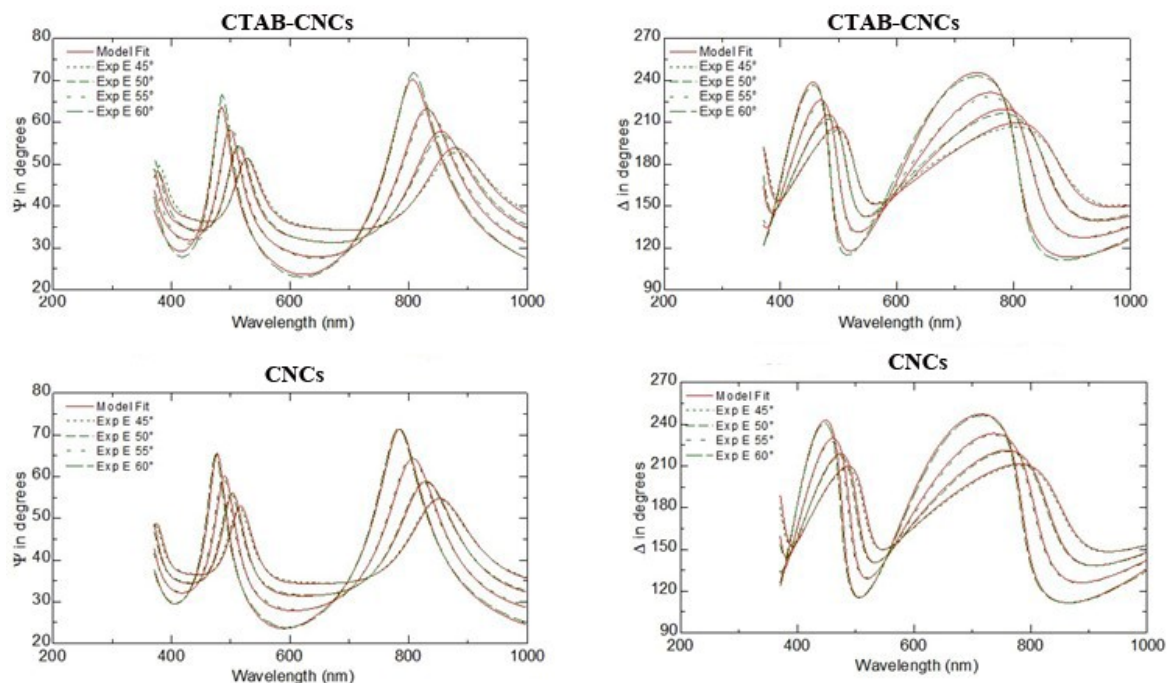
### **Interactions between Cetyltrimethylammonium Bromide Modified Cellulose Nanocrystals and Surfaces: An Ellipsometric Study**

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## Ellipsometric measurements



**Figure S1.** Cauchy fit approximation of the experimentally obtained  $\psi$  and  $\Delta$  data at different incident angle over the full range of wavelengths.

CTAB adsorption on oxidized silicon surfaces was used to verify our ellipsometry measurements by comparing results from the literature. Bi et al. conducted an ellipsometry study to measure the thickness of the surfactant (CTAB) layer of different concentrations over the oxidized silicon surfaces.[1] In our study, two different concentrations of CTAB were utilized and the thickness of the layer was measured using a Cauchy layer approximation. **Table S1** shows the adsorption behavior of CTAB over the oxidized silicon wafer. The data exhibits that current ellipsometry study showed reasonable accuracy and can be applied for further study to understand the adsorption behavior of different compounds.

**Table S1.** Comparison of CTAB adsorption behavior on oxidized silicon surfaces.

Sample	CTAB layer thickness (nm)	
	Present study	Bi et. al.[1]
CTAB (0.5 mM)	3.1	2.5
CTAB (1 mM)	4.7	5

## References

[1] Z. Bi, W. Liao, L. Qi, Wettability alteration by CTAB adsorption at surfaces of SiO<sub>2</sub> film or silica gel powder and mimic oil recovery, *Applied surface science*, 221 (2004) 25-31.