## **Accepted Manuscript**

A Continuum-Based Structural Modeling Approach for Cellulose Nanocrystals (CNCs)

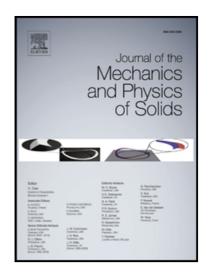
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#### ACCEPTED MANUSCRIPT

### Highlights

- We develop a continuum-based structural model for cellulose Nano crystals (CNCs)
- We evaluate the role of non-bonded interaction in the overall elastic behavior.
- Homogeneous representation of CNCs fail to capture the elastic behavior of CNCs.
- However, the proposed model is shown to accurately predict the elastic properties.



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