

Supporting Information

Tung Oil Wood Finishes with Improved Weathering, Durability, and Scratch Performance by Addition of Cellulose Nanocrystals

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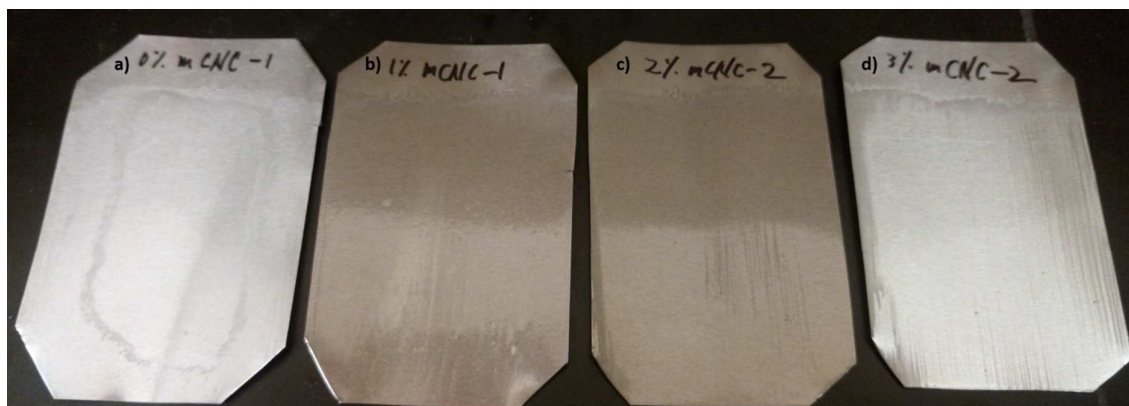


Figure S1. Image of TO coated shim steels containing hCNC of a) 0%, b) 1%, c) 2%, and d) 3%.

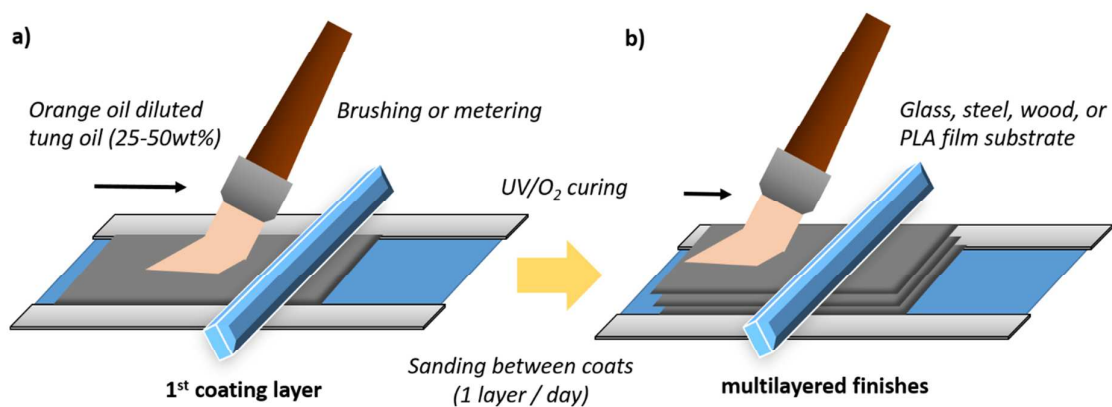


Figure S2. Schematic image of (a) one layer and (b) multilayer applied TO coating films on the substrate.

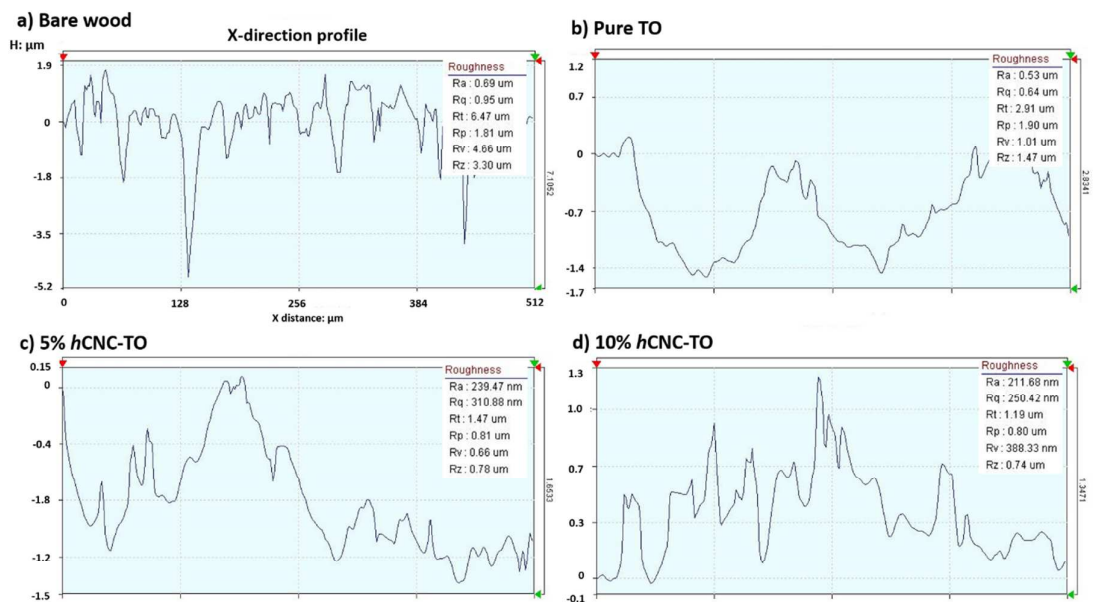


Figure S3. 1D X-direction's roughness images of a) bare, b) pure TO coated, c) 5wt% hCNC-TO coated, and d) 10wt% hCNC-TO coated wood specimen.

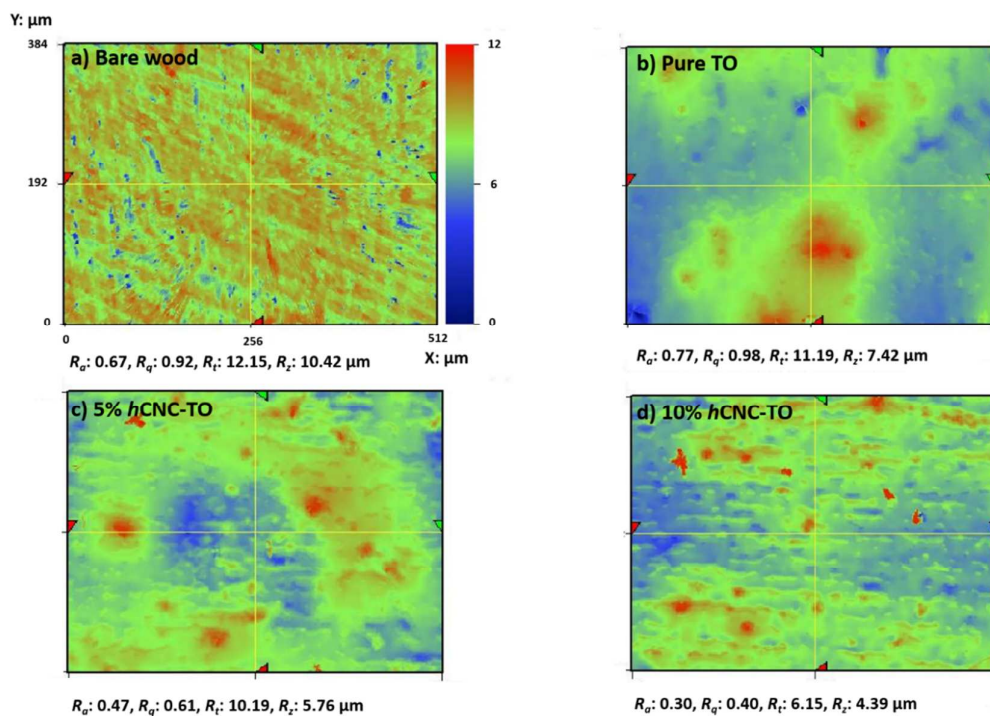


Figure S4. 2D roughness images of a) bare, b) pure TO coated, c) 5wt% hCNC-TO coated, and d) 10wt% hCNC-TO coated wood specimen.

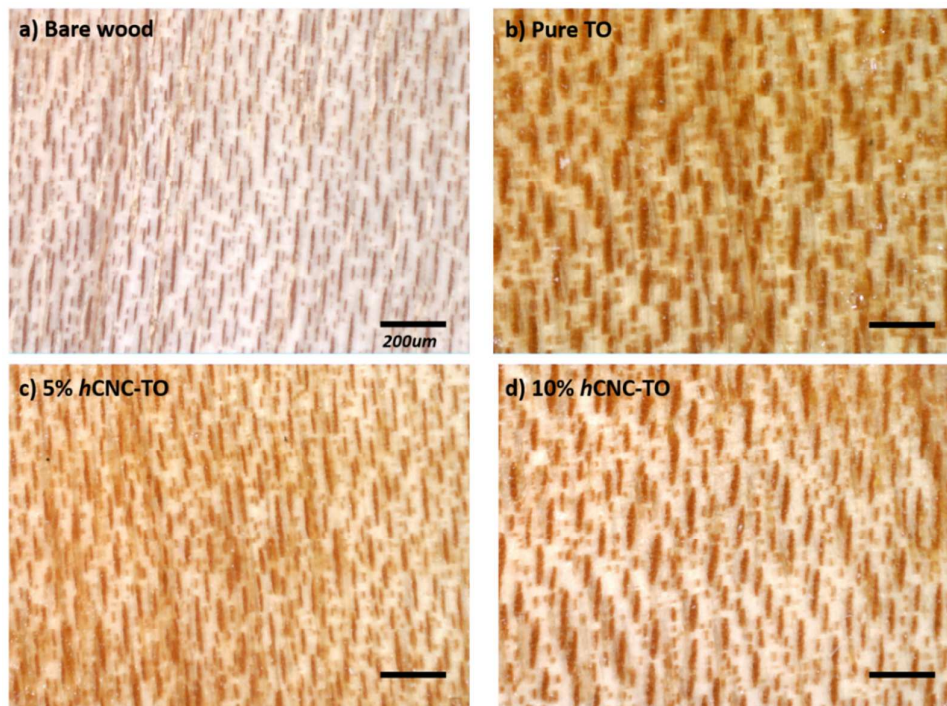


Figure S5. Closer examinations of TO coated (multi-layers applied to be about 100 μm thickness as seen in Figure S2-b) maple wood specimens with (a) bare wood, (b) 0 wt%, (c) 5 wt%, and (d) 10 wt% hCNC using a 2-inch-wide flat paint brush.

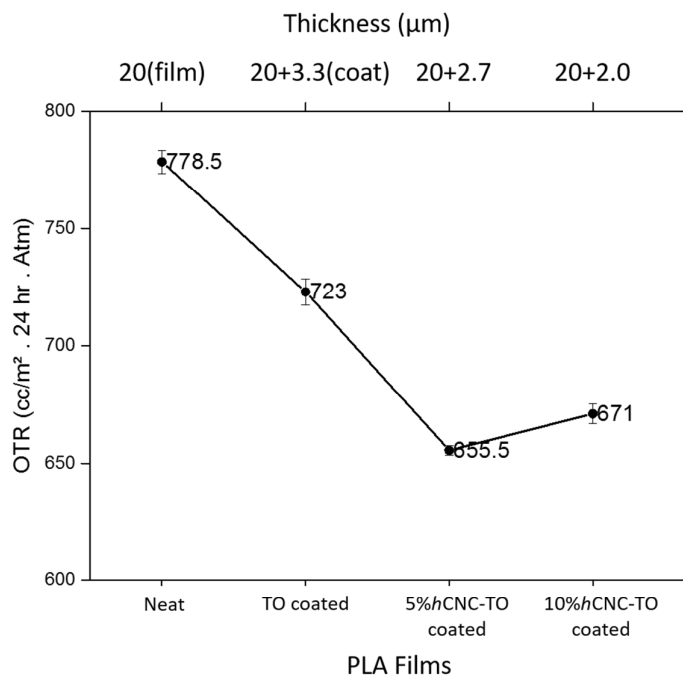


Figure S6. OTR (oxygen transmission rate) of neat PLA, pure TO, 5wt%hCNC-TO coat, and 10wt%hCNC-TO coat films.