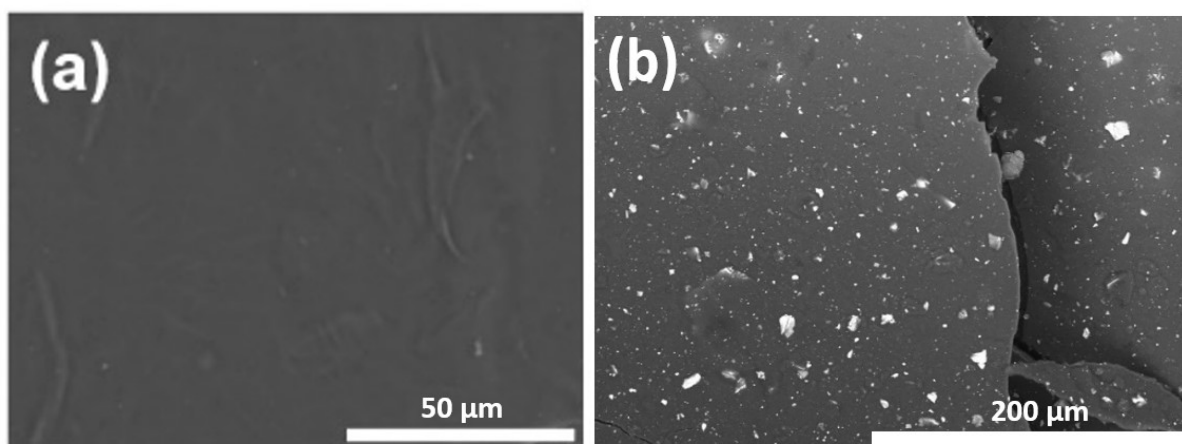


Nanoceria-Nanocellulose Hybrid Materials for Delayed Release of Antibiotic and Anti-Inflammatory Medicines

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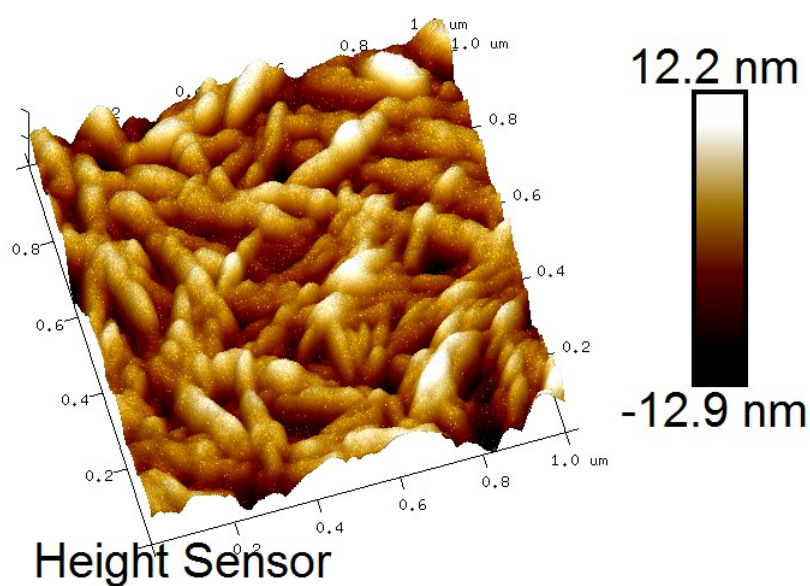
Department of Molecular Sciences, Biocentrum, Swedish University of Agricultural Sciences, Almas Allé 5, SE-756 51 Uppsala, Sweden.

1. SEM micrographs

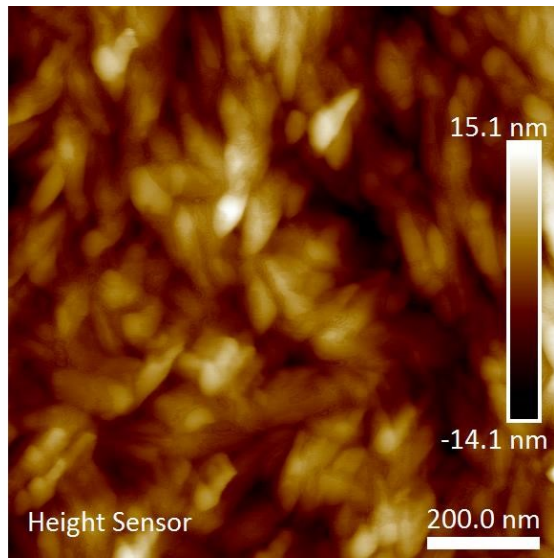


Supplementary Figure S1. SEM micrographs of (a) CNC/PEG and CNC/PEG_CeO₂ with 50 w% ceria.

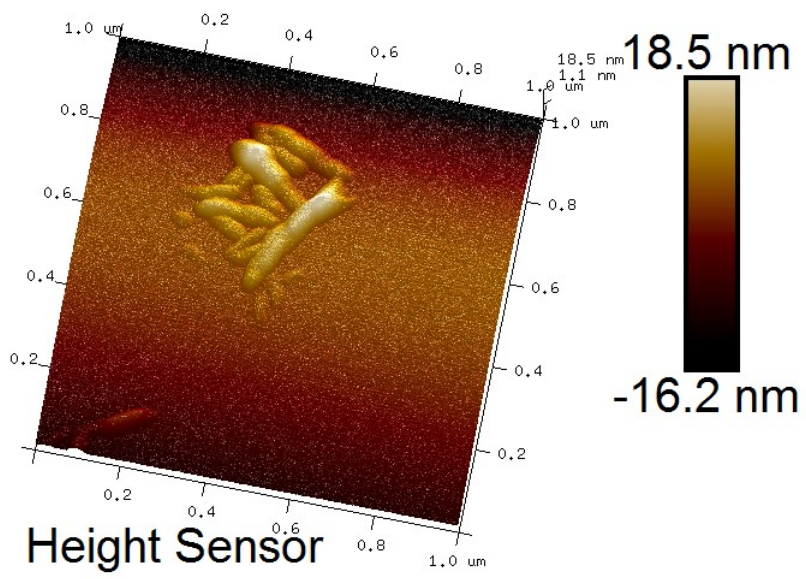
2. AFM micrographs



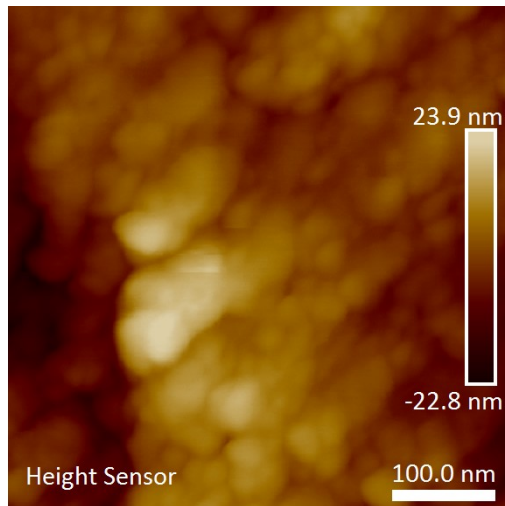
Supplementary Figure S2. 3D AFM micrograph of CNC.



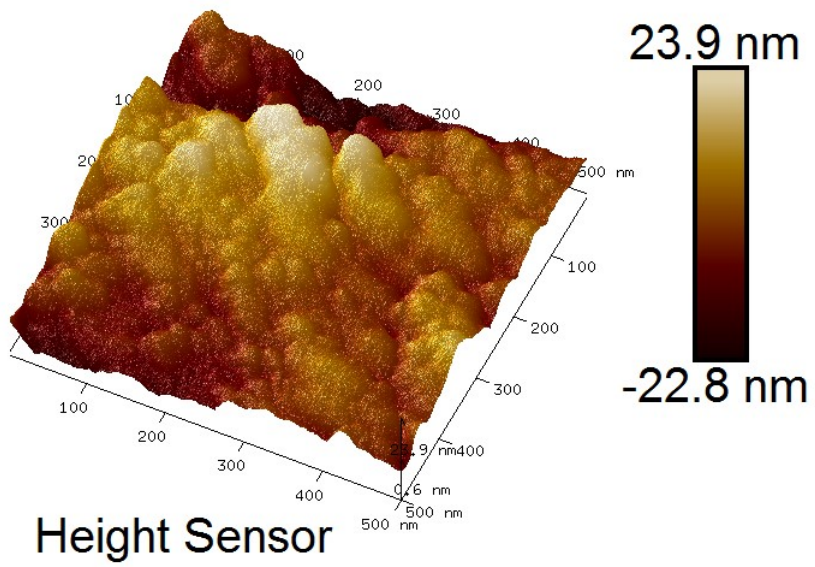
Supplementary Figure S3. AFM micrograph of CNC.



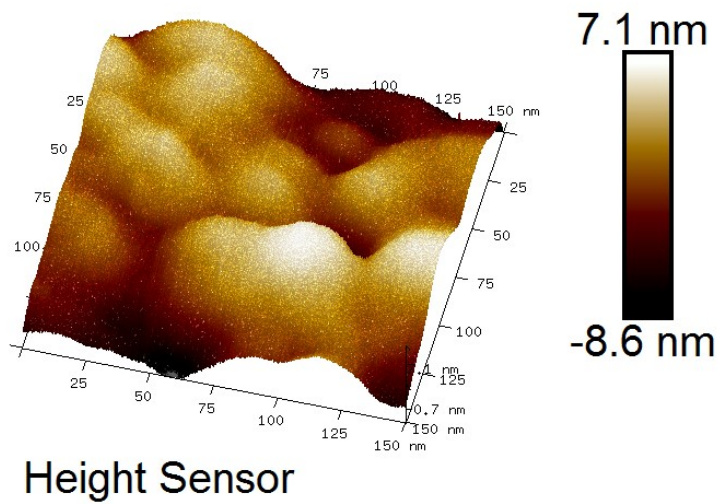
Supplementary Figure S4. AFM micrograph of CNC fibers.



Supplementary Figure S5. AFM micrograph of low-temperature ceria (CeO₂_80).

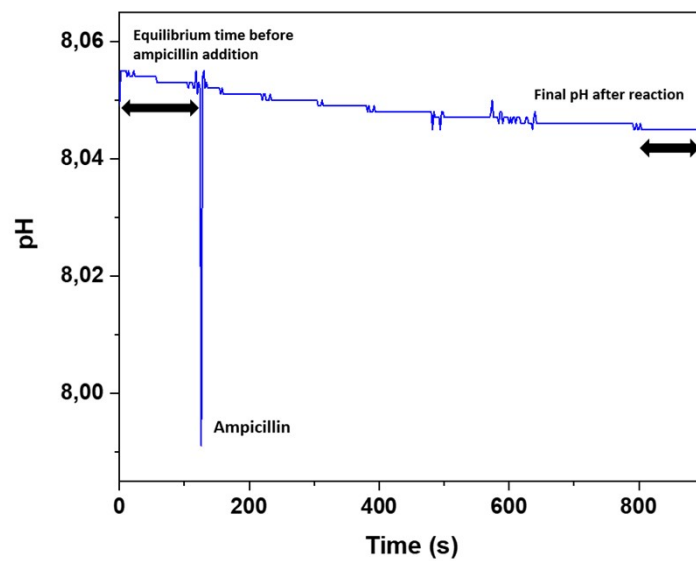


Supplementary Figure S6. 3D AFM micrograph of low-temperature ceria (CeO₂_80).



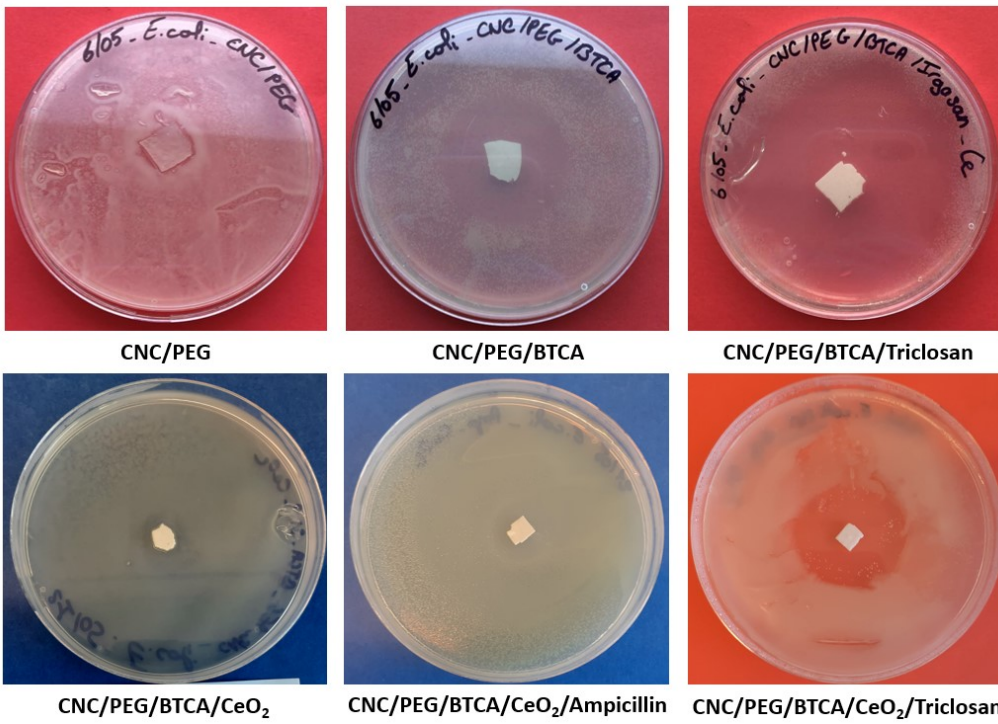
Supplementary Figure S7. 3D AFM micrograph of low-temperature ceria (CeO_2 , 80), showing individual particles.

3. pH effect of Ampicillin



Supplementary Figure S8. pH-change after addition of ampicillin to the CNC reaction mixture in the final synthesis step of CNC/PEG/BTCA/ CeO_2 .

4. Optical photos



Supplementary Figure S9. The *E. coli* cultivations after growing 16 hours with the different hybrid materials.