

## Supporting information

Figure S1: AFM topographical image of the 5 M wool samples subjected to direct sonication in 1.5% acetic acid medium

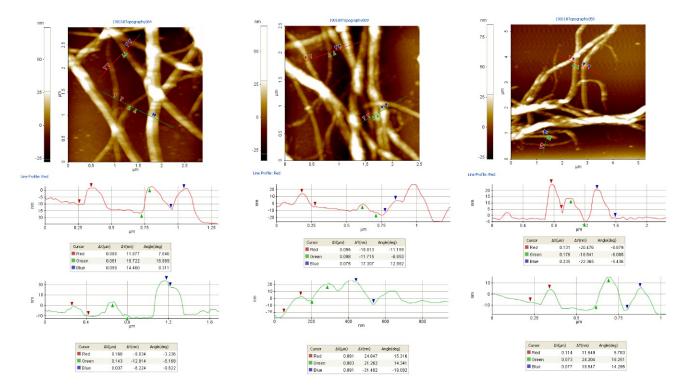


Figure S2: AFM topographical image of the protein nano fibers obtained by subjecting the 5 M wool to high speed blending in 1.5% acetic acid medium

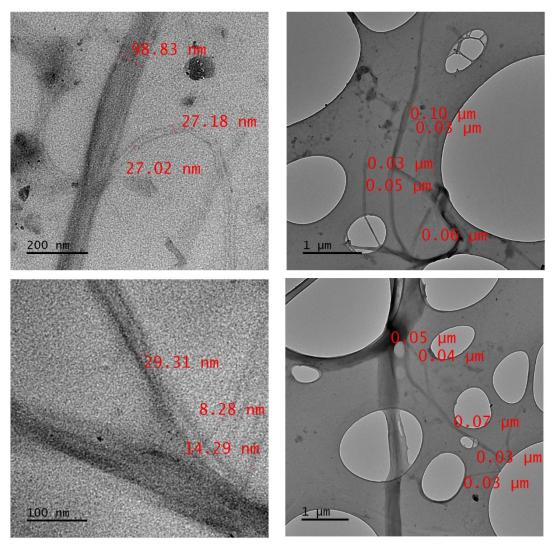


Figure S3: TEM images of the protein nano fibers obtained by subjecting the 5 M wool to high speed blending in 1.5% acetic acid medium

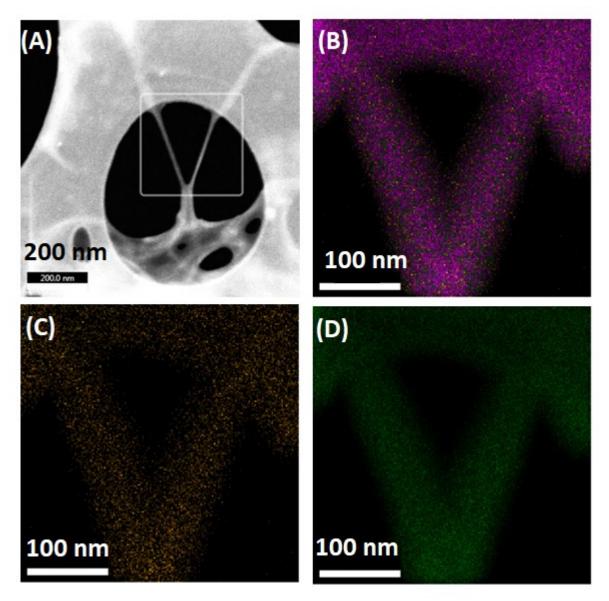


Figure S4: TEM EDX analysis of the protein nano fibers (A) Gray map (B) C map (C) N map (D) O map