

# Supplementary Figures

Viscoelasticity Response During Fibrillation of Amyloid  $\beta$   
Peptides on Quartz Crystal Microbalance Biosensor

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Supplementary Figure S1  
Extra Overtone experiments

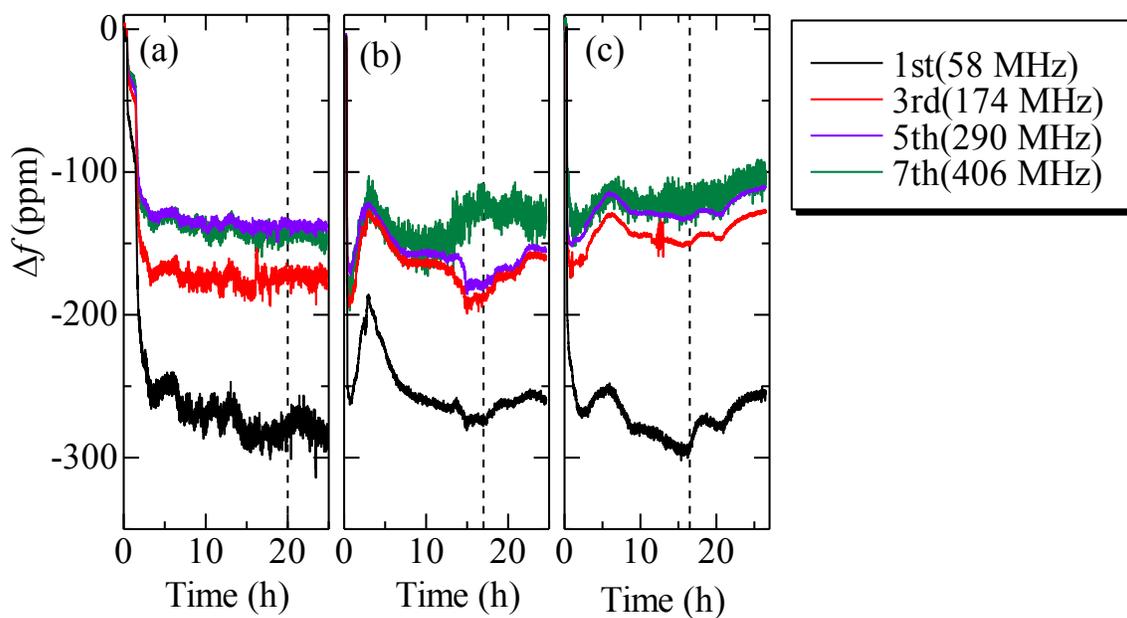


Figure S1 Three independent experiments are shown ((a), (b), and (c)), which show the significant decrease at the arrival of the monomer solution ( $< \sim 1$  h), recovery stage ( $< \sim 5$  h), and the ramp denoted by the broken lines. Although the amount of the frequency change and the time at the ramp vary, depending on the initial immobilization condition for the seeding materials on the chip, these trends are commonly observed.

## Supplementary Figure S2

Extra experiment with the unpackaged wireless QCM until the frequency ramp.

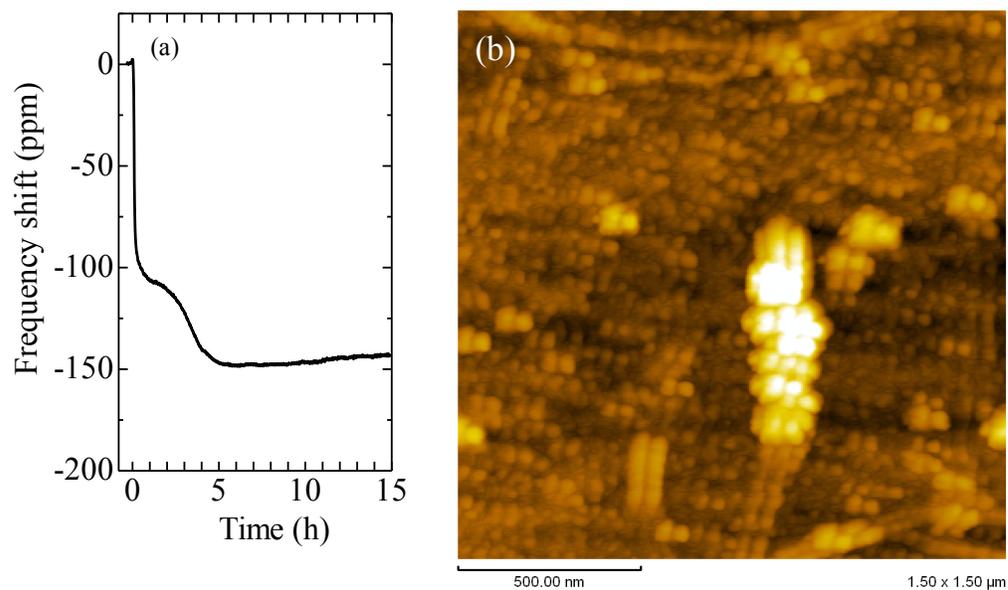


Figure S2 The fundamental resonance frequency change (a) and the AFM image at 15 h are shown. Because we interrupted the experiment before the ramp, the surface morphology shows amorphous structures, and we fail to find any fibrils.

### Supplementary Figure S3

Extra experiment with the unpackaged wireless QCM after the frequency ramp.

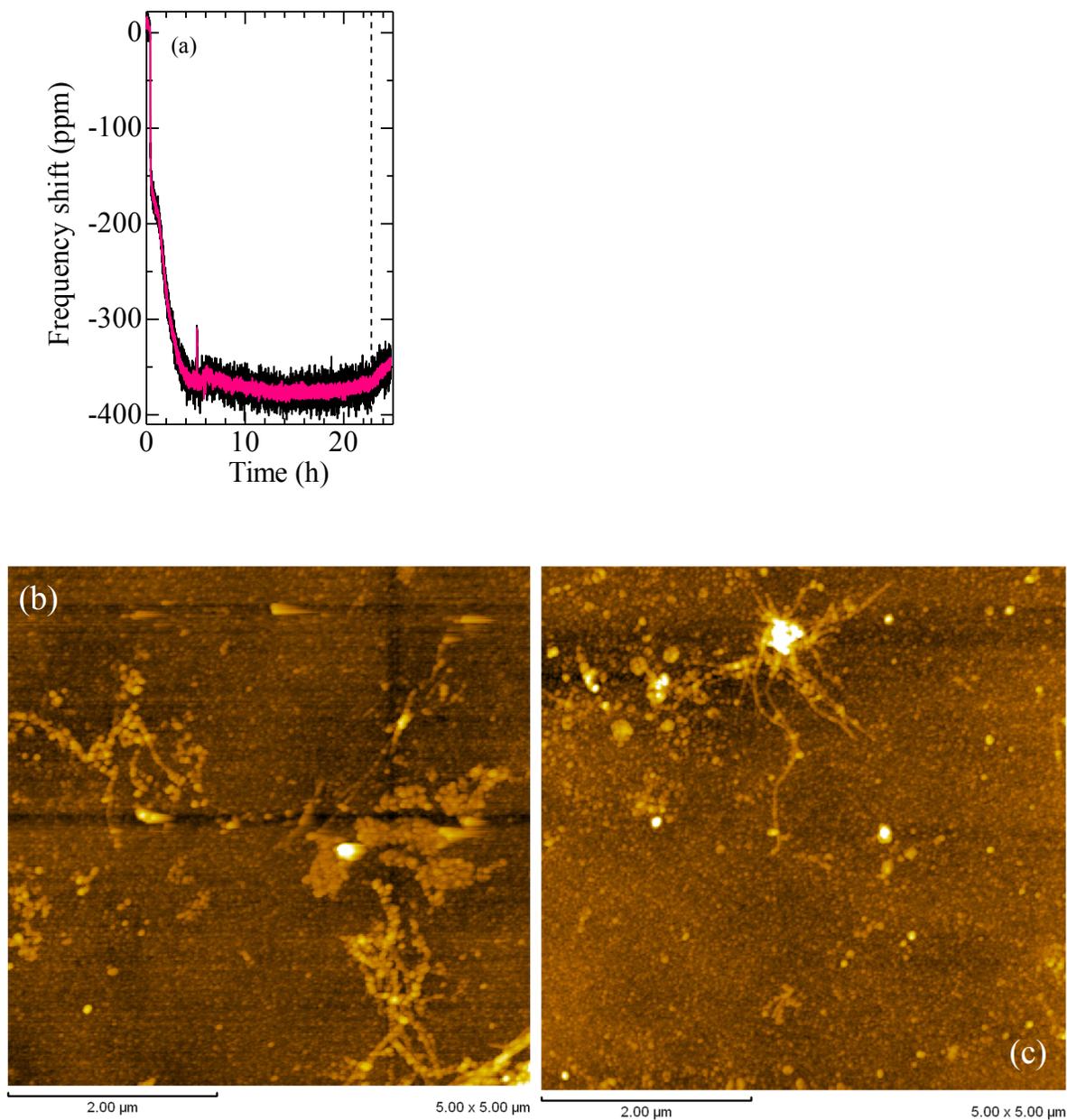


Figure S3 The fundamental resonance frequency change (a) and the AFM images after the ramp (indicated by the broken line) ((b) and (c)) are shown. We interrupted the experiment just after the ramp and find many fibrils.

## Supplementary Figure S4

AFM images on the surface after the ramp for the experiment Fig. 5(c) in the main body.

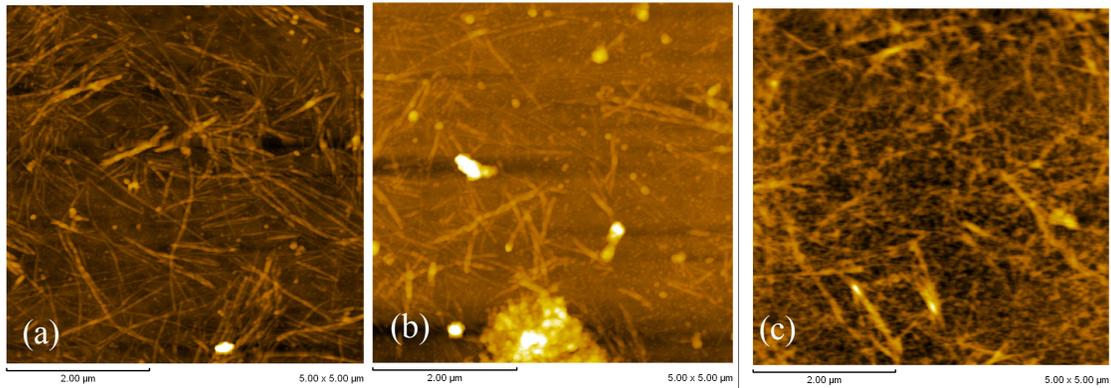


Figure S4 The AFM images on different region of the quartz chip. The fibrils are observed nearly on the whole area.