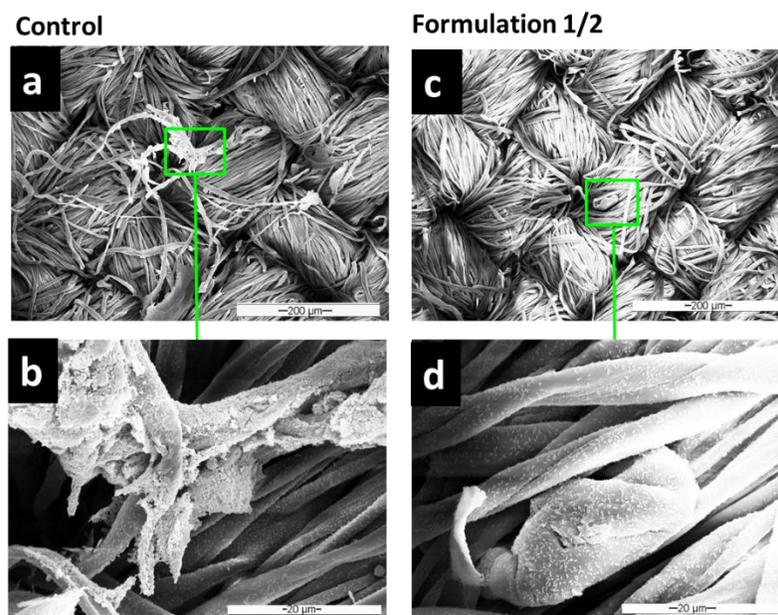


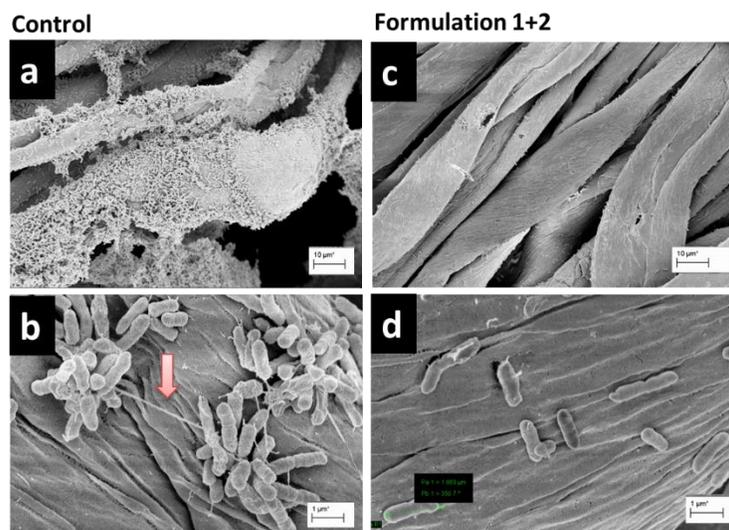
## Supplementary Materials

### Supplementary material S1.



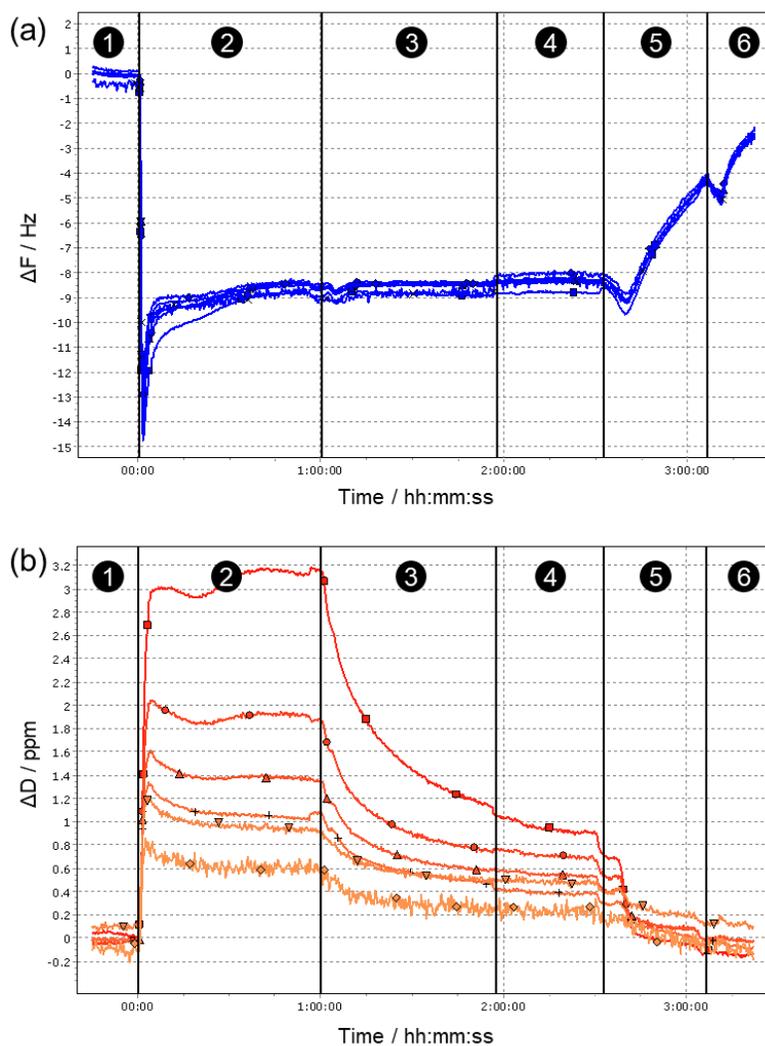
**Figure S1.** SEM images of *P. fluorescens* biofilms grown for 48 h on cellulose substrates after 1 h washing with formulation 1/2 (c, d) in comparison to non-treated controls (a, b). Lower (a, c) and higher (b, d) magnifications of the sections indicated in green are shown. (addition to Fig. 3., independently repeated experiment)

## Supplementary material S2.



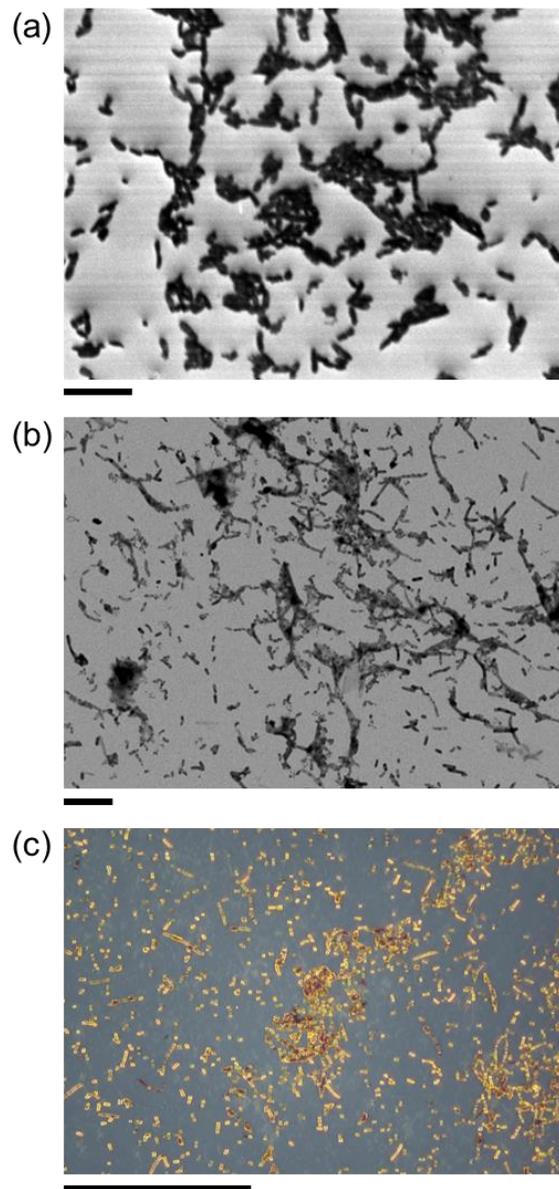
**Figure S2.** FE-SEM images of *P. fluorescens* biofilms grown for 48 h on cellulose substrates after 1 h washing with formulation 1/2 (c, d) in comparison to non-treated controls (a, b). Red arrow indicates inter-bacterial connections via pili. Lower (upper row) and higher (lower row) magnifications are shown. Length of a *P. fluorescens* bacterium is measured with 1,66 µm in d (as addition to Fig. 3. with higher resolution and repeated experiment in tilted plastic well plate)

### Supplementary material S3.



**Figure S3.** Time-dependent changes in (a) frequency and (b) dissipation during sequential incubation of a blank Au-coated surface with (1) hard water, (2) detergent in hard water (F1), (3) enzyme and detergent in hard water (F1/2), (4) detergent in hard water (F1), (5) hard water, and (6) deionized water. For both  $\Delta F$  and  $\Delta D$ , signals from different overtones ( $n$ ) of the main resonance are shown (squares:  $n = 3$ , circles:  $n = 5$ , triangles:  $n = 7$ , inverted triangles:  $n = 9$ , diamonds:  $n = 11$ , crosses:  $n = 13$ ).

**Supplementary material S4.**



**Figure S4.** SEM (a-b) and optical microscopy (c) images of fixed *P. fluorescens* biofilm on QCM sensors (a) before and (b-c) after the QCM experiment shown in Figure 2, Shown is one exemplary picture out of 2 independent QCM measurements. Scale bars are 10  $\mu\text{m}$ .