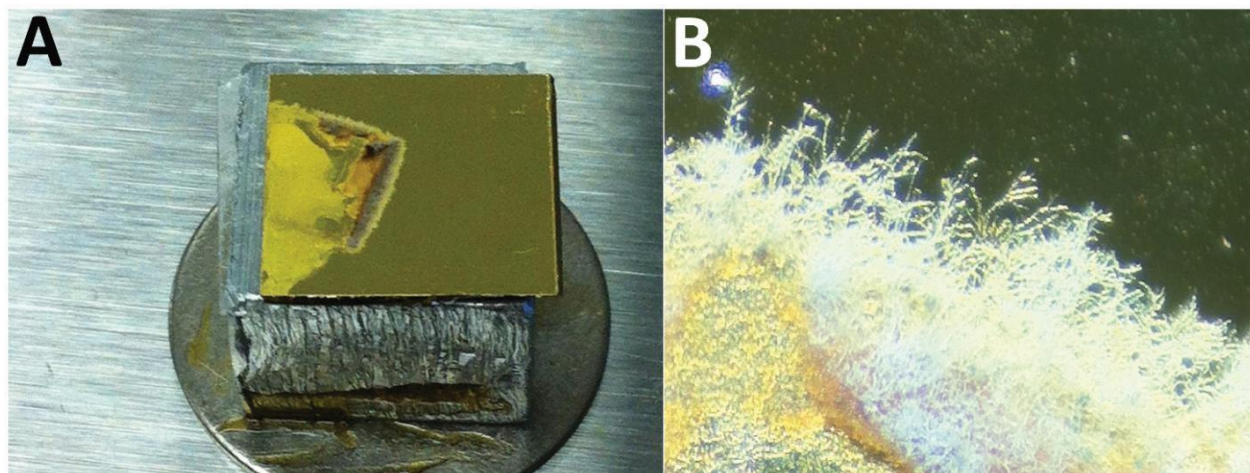


Electronic Supplementary Information Figure 1.



ESI Fig. 1. Sample preparation for SINS experiment. **A.** Gold-coated silicon wafer ($\sim 1 \text{ cm}^2$) with dried fungal hyphae preparation (*ugmA Δ*) is taped to metal chuck for mounting in the AFM-SINS sample chamber. The hyphae grew out across the pristine gold surface, from the 3 mm PDA block. The dried PDA block was removed, but the outline remains. Hyphae at the centre are the best positioned for data acquisition. **B.** Photo of the hyphae emerging from the PDA region. More detailed images are given in the manuscript.