

Supplementary information

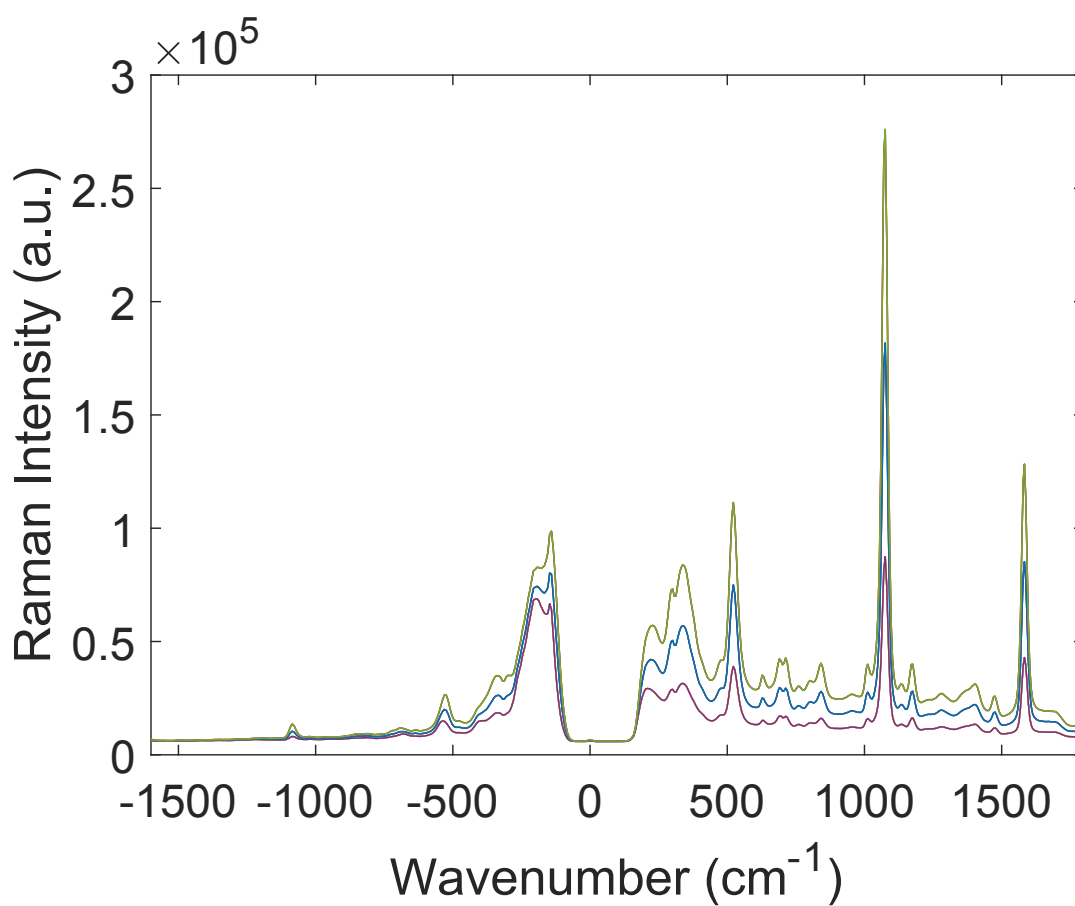


Figure S1. Raw Raman data of Au-MBA nanoparticles co-localised with NIR with NIR absorbing Au-NS deposited on CaF₂, under different illumination powers (250, 500 and 750 mW) at 830 nm.

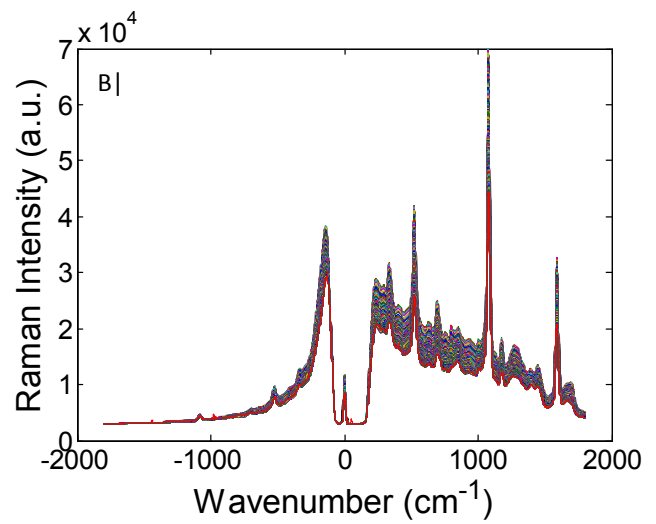
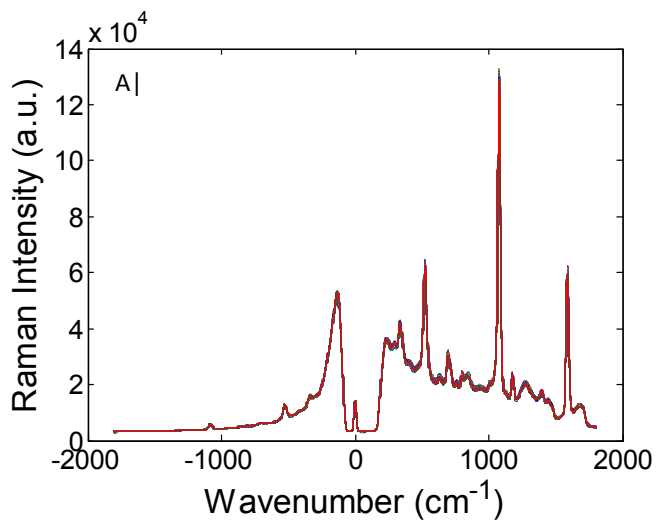


Figure S2. A & B raw Raman spectra of 360 time points of tissue with au-MBA alone (a) and with inclusion of nanospheres (B)

Due to the phenomena discussed in the main body of the article, an initial equilibrium point is required to generate a scaling factor to correlate the theoretical anti-Stokes/Stokes intensity with that observed at depth.

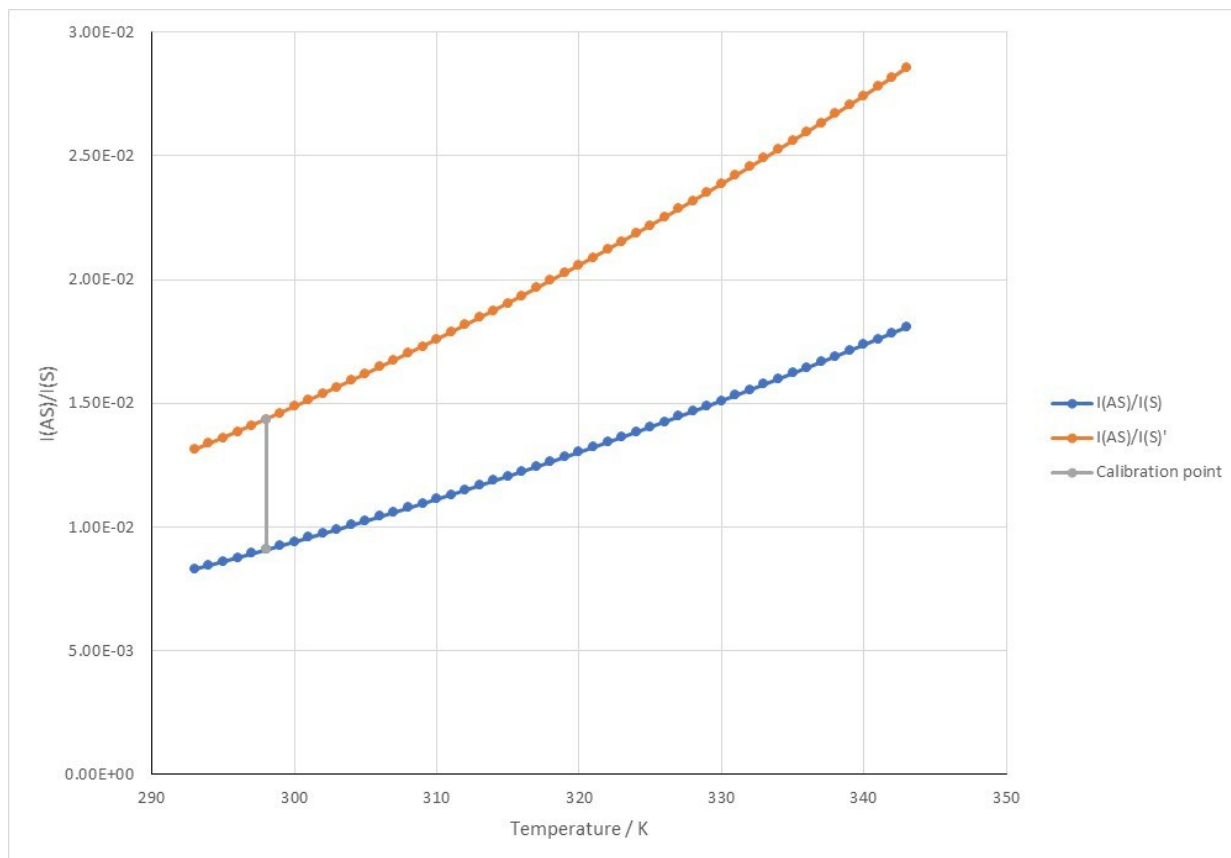


Figure S3. Theoretical data demonstrating the difference between theoretically calculated anti-stokes / stokes $I(AS)/I(S)$ and the observed $I(AS)/I(S)'$.