## **Electronic Supplementary Information:**

## Microspectroscopic SERS Detection of Interleukin-6 with Rationally Designed Gold/Silver Nanoshells

Yuling Wang, Mohammad Salehi, Max Schütz, Katharina Rudi and Sebastian Schlücker\* Department of Physics, University of Osnabrück, Barbarastraße 7, 49069 Osnabrück (Germany) Email: sebastian.schluecker@uos.de



**Fig. S1.** Extinction spectra (A) of hydrophilically stabilized Au/Ag-NS before and after bioconjugation to the antibody, corresponding SERS spectra (B) recorded after each subsequent functionalization step.



**Fig. S2.** Scheme for the functionalized glass slides (from HD-TRIDIA<sup>TM</sup>) used in this study.



Fig. S3. SEM images of Au/Ag-NS on glass slides coated with different antigen concentrations.



**Fig. S4.** SERS false-color images and corresponding average SERS spectra (from 400 points) for IL-6 detection at 1 ng/mL recorded at the same day.



**Fig. S5.** SERS false-color images and corresponding average SERS spectra (from 400 points) for IL-6 detection at 1 ng/mL recorded at different days.



**Fig. S6.** SERS false-color images recorded for IL-6 detection using hydrophilically stabilized Au-NPs at the same size (60 nm).



Fig. S7. Extinction spectra of 60 nm Au/Ag-NS and 60 nm Au-NPs.