## SUPPLEMENTARY INFORMATION

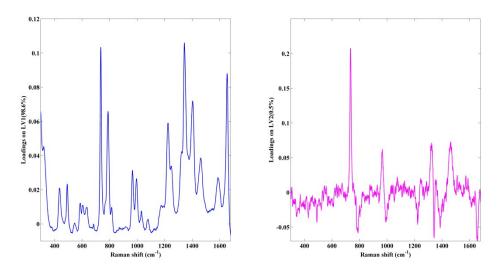


Figure S1. Latent variables (loadings) 1 (blue) and 2 (magenta) from the PLS model for concentration  $C_2$ .

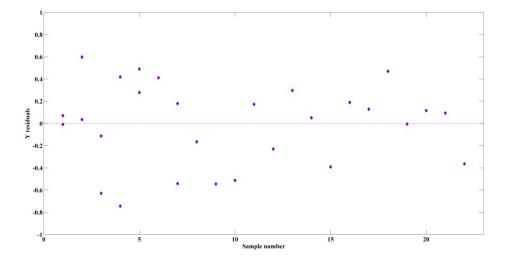


Figure S2. Residuals for the linear fitting of PLS model for concentration C<sub>2</sub>.

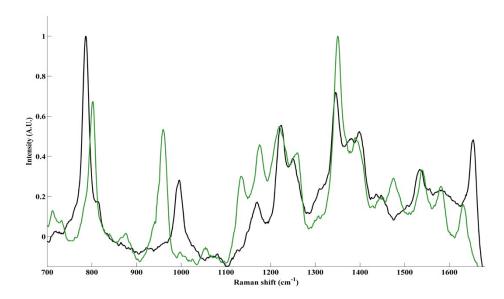


Figure S3. SERS spectra of aqueous solutions of thymine (black) and uracil (green) on AuNPs (Intensity was normalized for comparison).

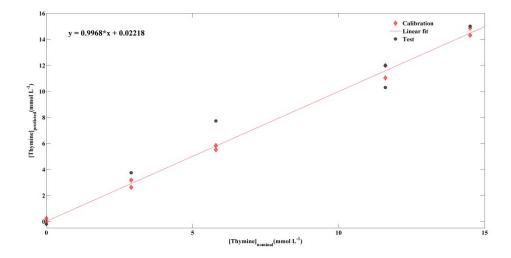


Figure S4. PLS model for indirect determination of thymine in presence of uracil  $2.5 \times 10^{-3} \text{ mol L}^{-1}$  as interference. Calibration (red) and test (black) samples are shown.