

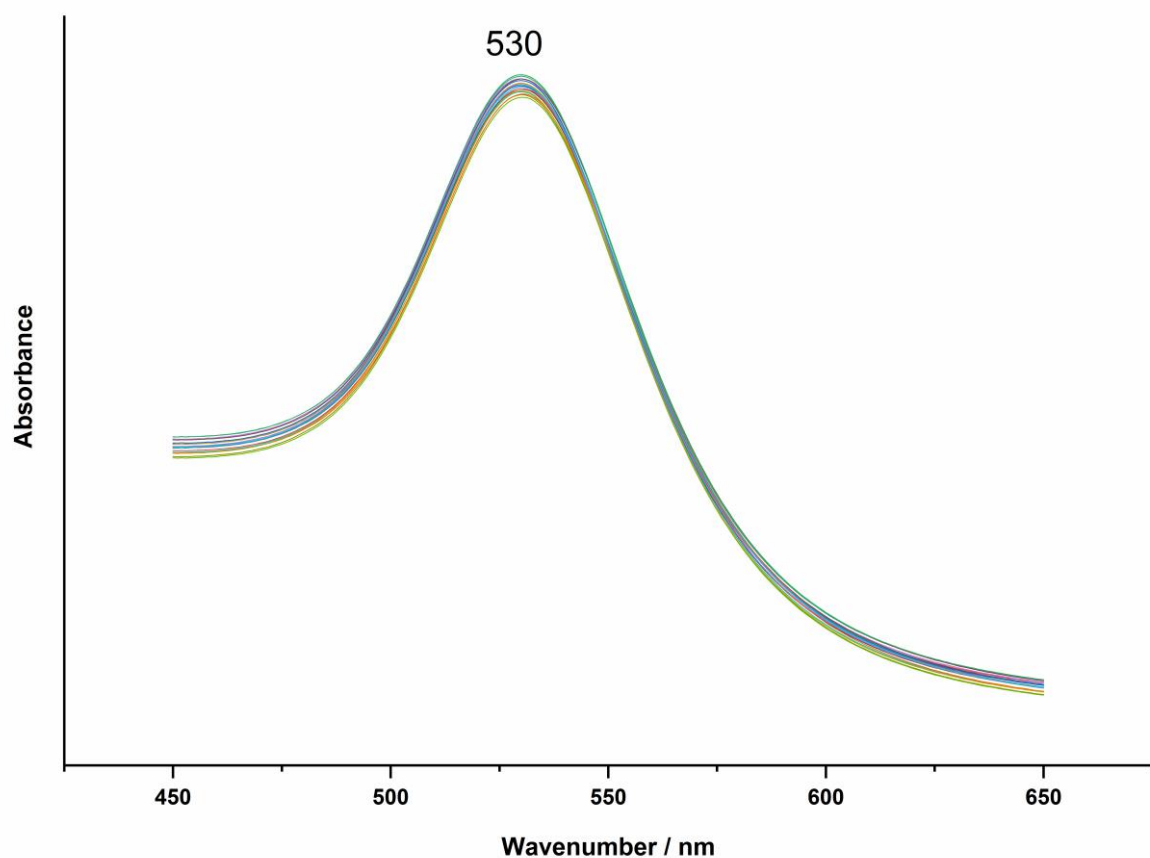


Figure S1. UV-Vis spectra of nanoparticles and nanoparticles with 18 molecules studied in the manuscript: , adenine, cytosine, guanine, thymine and ssDNA: A-(CH₂)₆-SH, C-(CH₂)₆-SH, G-(CH₂)₆-SH, T-(CH₂)₆-SH, CA-(CH₂)₆-SH, C₃A-(CH₂)₆-SH, C₇A-(CH₂)₆-SH, C₁₁A-(CH₂)₆-SH, C₁₅A-(CH₂)₆-SH, AC₁₅-(CH₂)₆-SH, C₇AC₈-(CH₂)₆-SH, T₃A-(CH₂)₆-SH, T₇A-(CH₂)₆-SH, and T₁₁A-(CH₂)₆-SH.

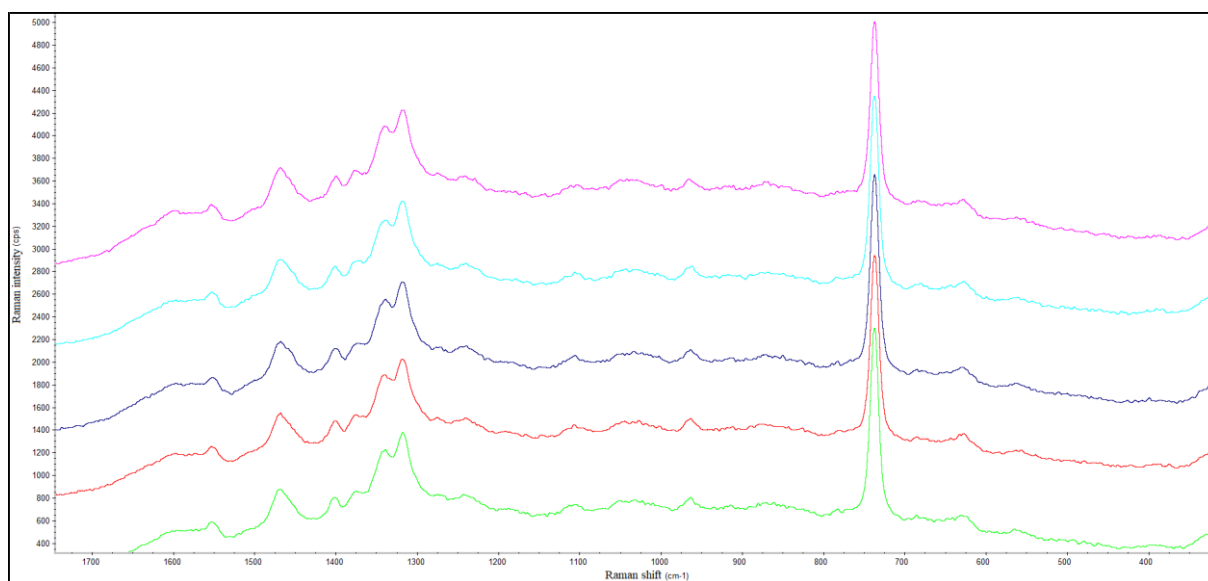


Figure S2. SERS spectra of adenine thiolated mononucleotide collected on one sample in different places. The difference in spectral intensity is around 5%.

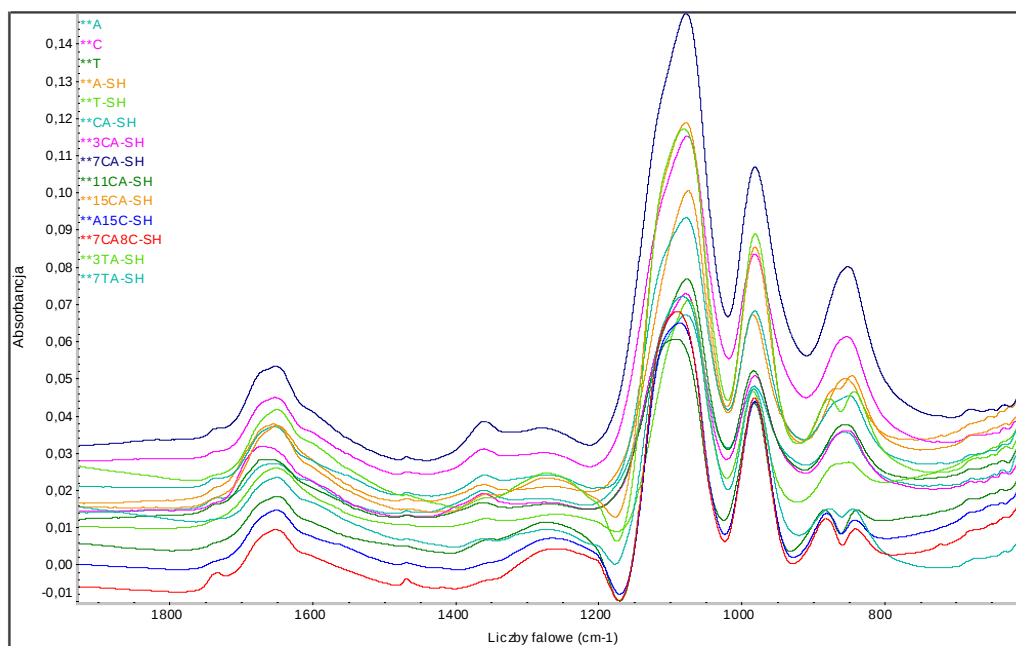


Figure S3. FT-IR spectra of selected samples measured previously by SERS: adenine, cytosine, thymine, A-(CH₂)₆-SH, T-(CH₂)₆-SH, CA-(CH₂)₆-SH, C₃A-(CH₂)₆-SH, C₇A-(CH₂)₆-SH, C₁₁A-(CH₂)₆-SH, C₁₅A-(CH₂)₆-SH, AC₁₅-(CH₂)₆-SH, C₇AC₈-(CH₂)₆-SH, T₃A-(CH₂)₆-SH and T₇A-(CH₂)₆-SH.