Supporting information

Following the chemical immobilization of membrane proteins on plasmonic nanoantennas using infrared spectroscopy

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Table S1: Representation of the difference between the far field and the near field peak for different antenna lengths (L1, L2 L3, L4, L5). The far field wavenumber corresponds to the peak of transmission of the nanoantennans, while the near field is the peak of the maximum enhancement around the tips of the nanoantennas. The last row corresponds to the difference between the far field and the near field wavenumber.

	L1	L2	L3	L4	L5
L(nm)	1200	1100	1050	1000	900
Far field (cm^{-1})	1428	1523	1578	1626	1724
Near field (cm^{-1})	1344	1438	1492	1555	1666
Shift (cm^{-1})	84	85	86	71	58

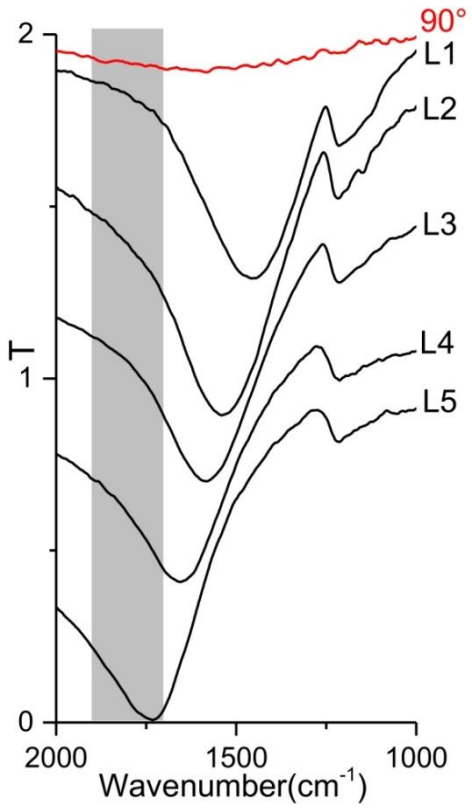

Figure S1: Relative transmittance spectra when the DTSP linker is formed on the antennas (L1, L2, L3, L4, L5) and for the 90°. The shaded grey is where the fingerprint of the DTSP linker.

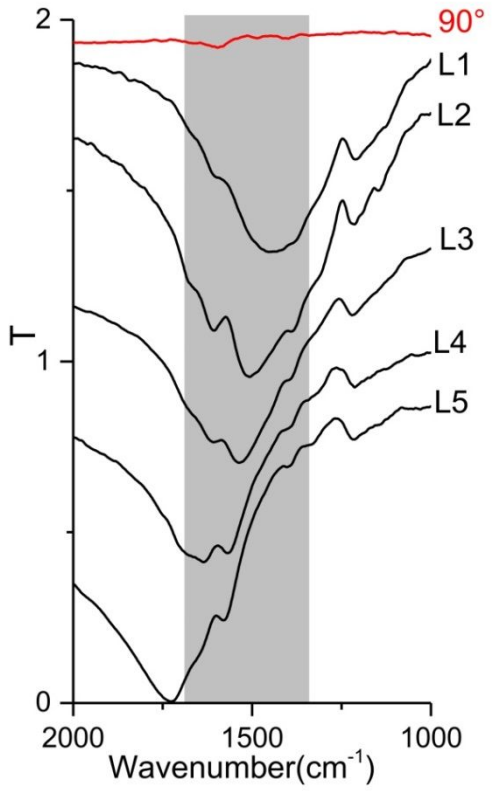

Figure S2: Relative transmittance spectra when the Lysine linker is formed on the antennas (L1, L2, L3, L4, L5) and for the 90°. The shaded grey is where the fingerprint of the Lysine linker.

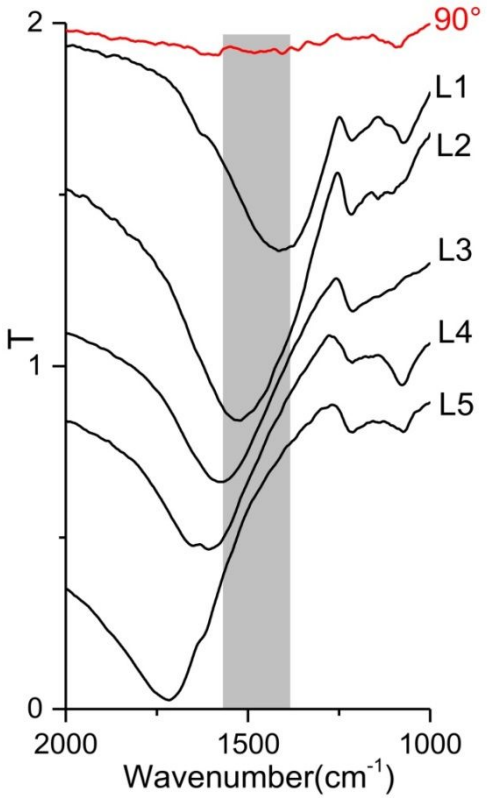

Figure S3: Relative transmittance spectra when the Nickel linker is formed on the antennas (L1, L2, L3, L4, L5) and for the 90°. The shaded grey is where the fingerprint of the Nickel linker.

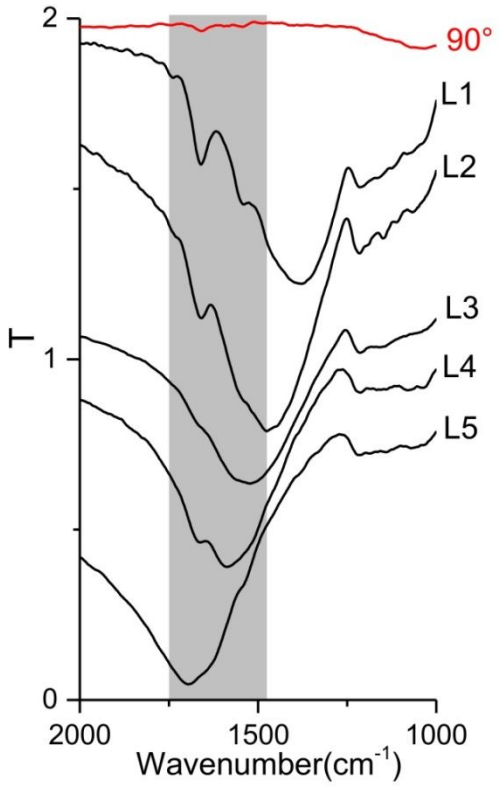

Figure S4: Relative transmittance spectra when the protein is attached on the antennas (L1, L2, L3, L4, L5) and for the 90°. The shaded grey is where the fingerprint of the protein.