

Supporting Information

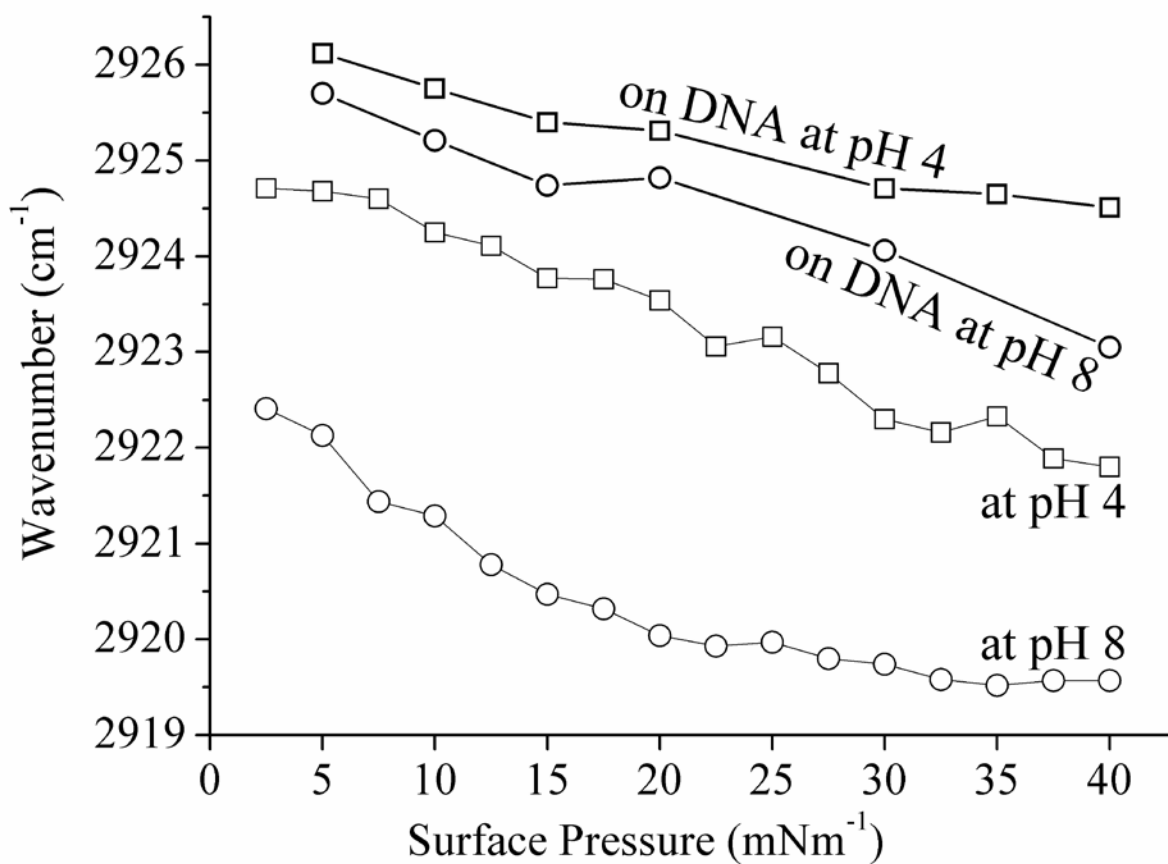


Figure 13. Position of the asymmetric CH₂-stretching vibration of lipid **8** on different subphases at 20°C in dependence of the surface pressure.

Quantification of ctDNA with IRRAS

Table 3. Area per molecule A and integrated reflectance absorbance of the phosphate bands of DNA (relative amount of DNA n_{rel}) in dependence of the surface pressure π of lipid **7** and lipid **8** on DNA subphases at different pH values at 20°C. n_{rel} is the average of two independent measurements.

π (mNm ⁻¹)	A (Å ²)	n_{rel} (a.u.)	A (Å ²)	n_{rel} (a.u.)
lipid 7 on pH 4		lipid 8 on pH 4		
5	141	1.01	140	1.18
10	112	1.59	118	1.52
15	91	2.01	106	1.89
20	79	2.40	97	1.98
30	68	2.78	84	2.31
40	62	2.99	-	-
lipid 7 on pH 8		lipid 8 on pH 8		
5	120	0.84	117	0.93
10	104	1.17	104	1.18
15	89	1.32	94	1.16
20	74	1.61	85	1.27
30	60	1.88	72	1.57
40	53	2.01	61	1.78

Interaxial spacing of DNA strands

Table 4. Area per molecule A and interaxial repeat distance d_{DNA} of DNA strands in dependence of the surface pressure π of lipid **7** and lipid **8** on DNA subphases at different pH values at 20°C.

π (mNm ⁻¹)	A (Å ²)	d_{DNA} (Å)	A (Å ²)	d_{DNA} (Å)
	lipid 7 on pH 4		lipid 8 on pH 4	
10	112	49.4 ⁽¹⁾	118	50.7
15	91	31.0	106	43.6
20	79	30.0	97	35.9
25	–	–	90	33.7
30	68	27.3	84	31.9
37	63	26.6	73	30.2
	lipid 7 on pH 8		lipid 8 on pH 8	
5	–	–	117	53.2
10	104	26.8	104	48.3
15	89	26.8	94	40.9
20	74	26.2	85	31.9
25	66	25.6	–	–
30	60	26.0	72	28.8
40	53	24.8	61	27.4

⁽¹⁾ low intensity, d_{DNA} obtained without Lorentzian fit