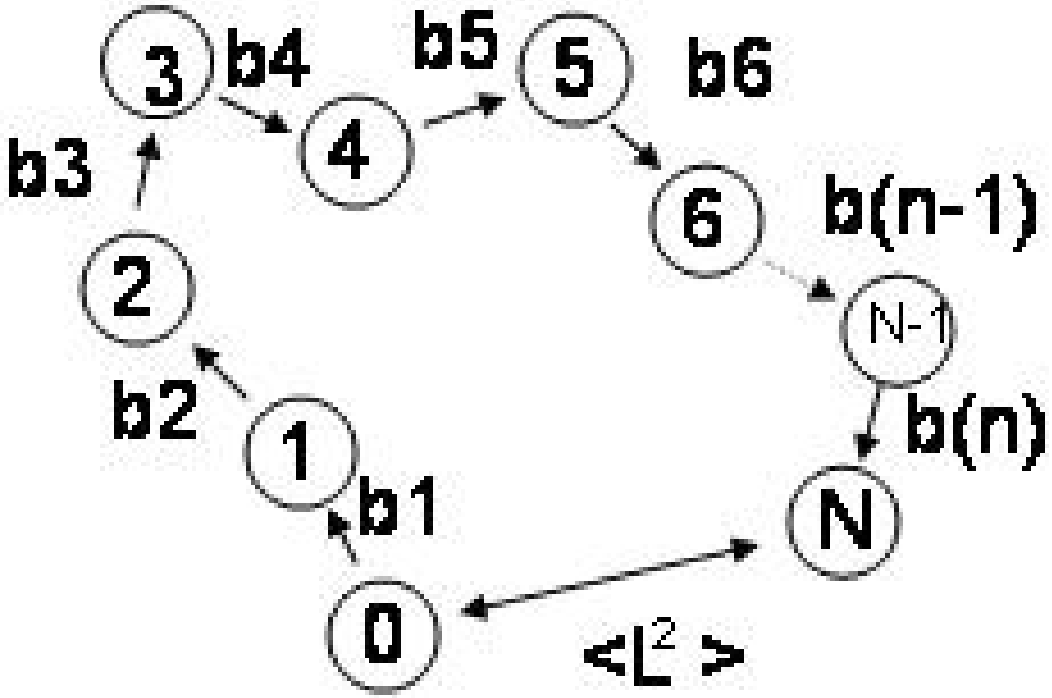
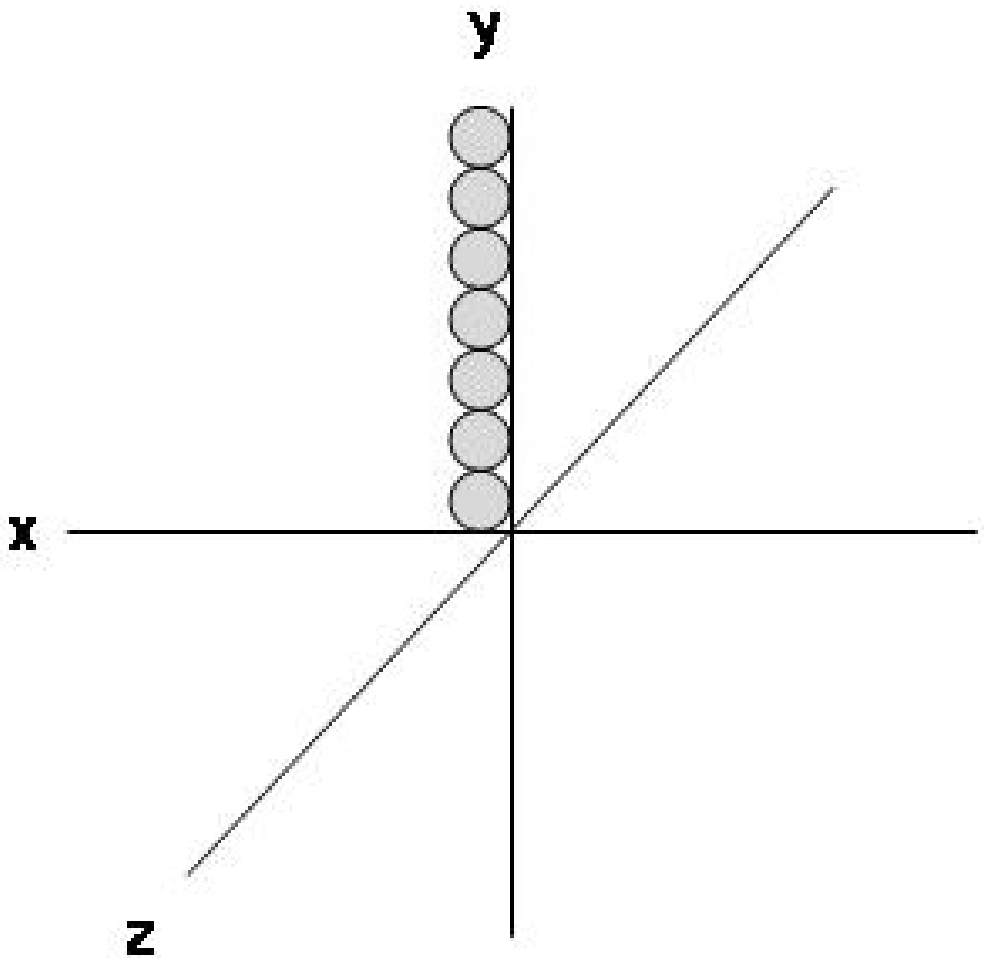
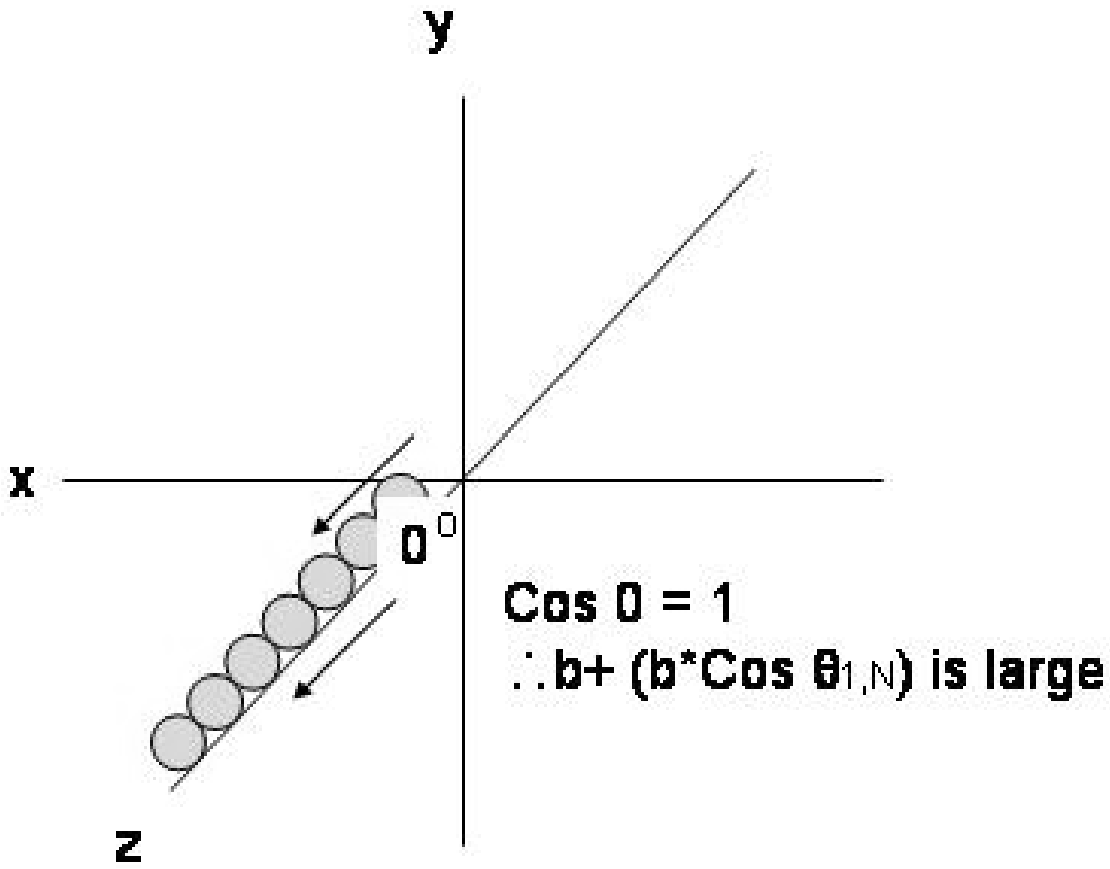
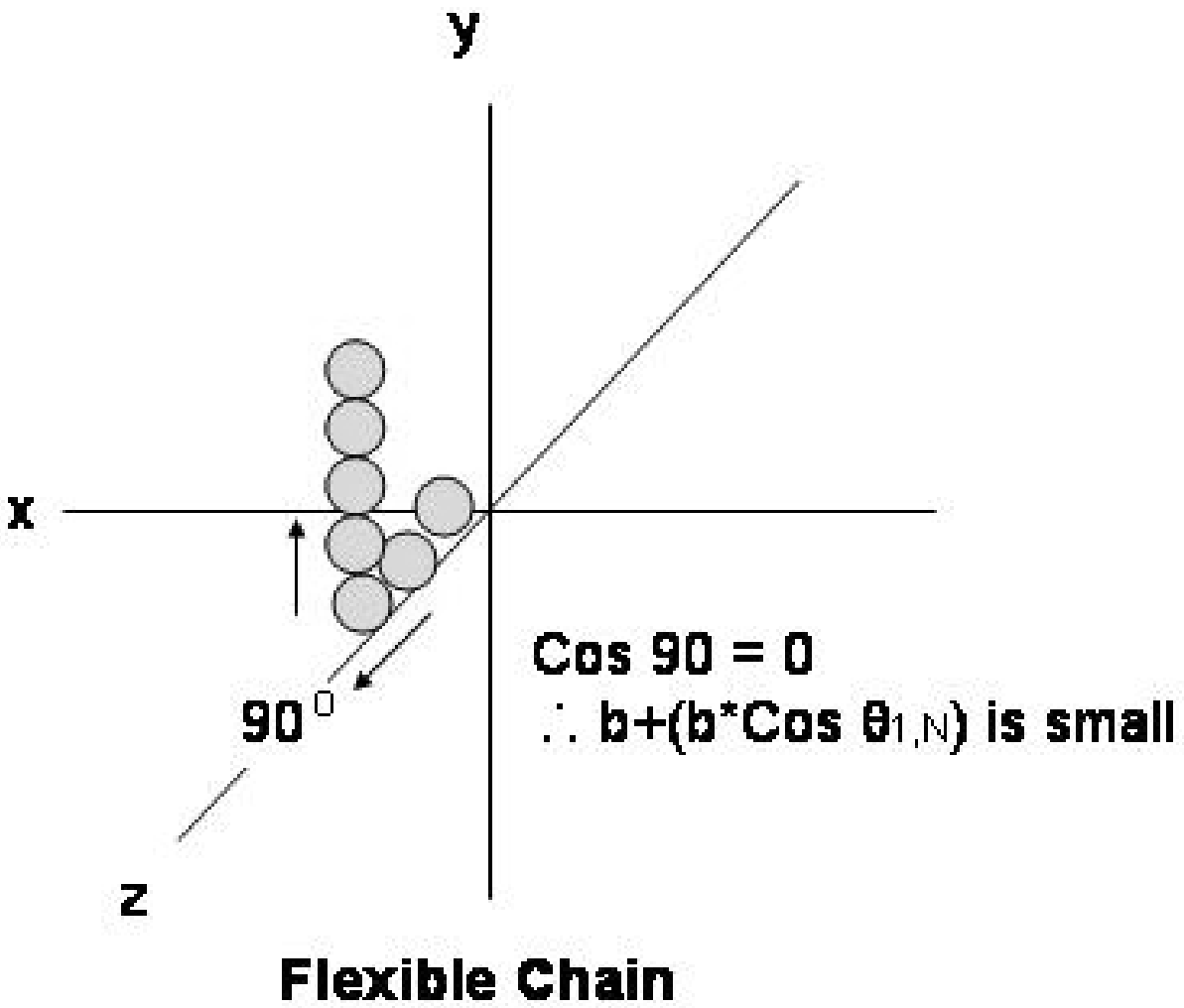

3
b4
b5
5
b6
b3
4
6
b(n-1)
2
N-1
b2
b(n)
1
b1
N
0
<L2 >

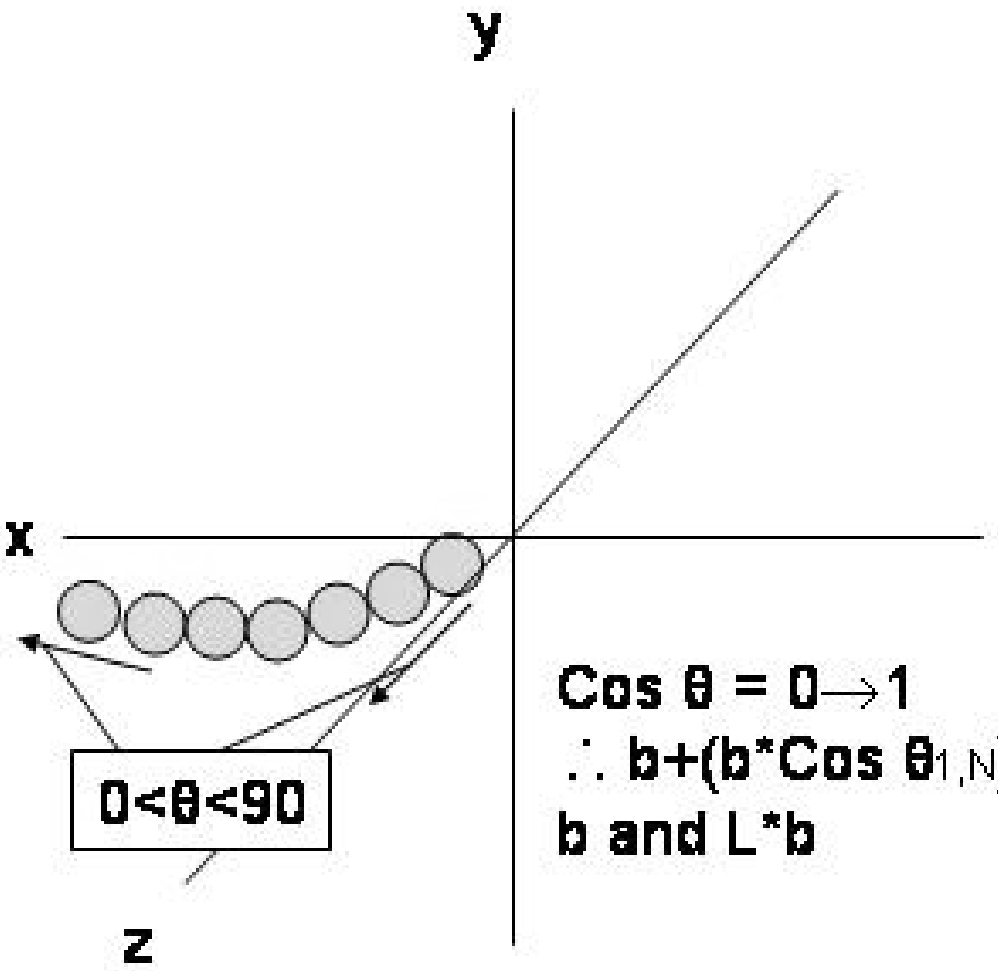

y
x
z



Rigid Rod



Flexible Chain



Wormlike Chain

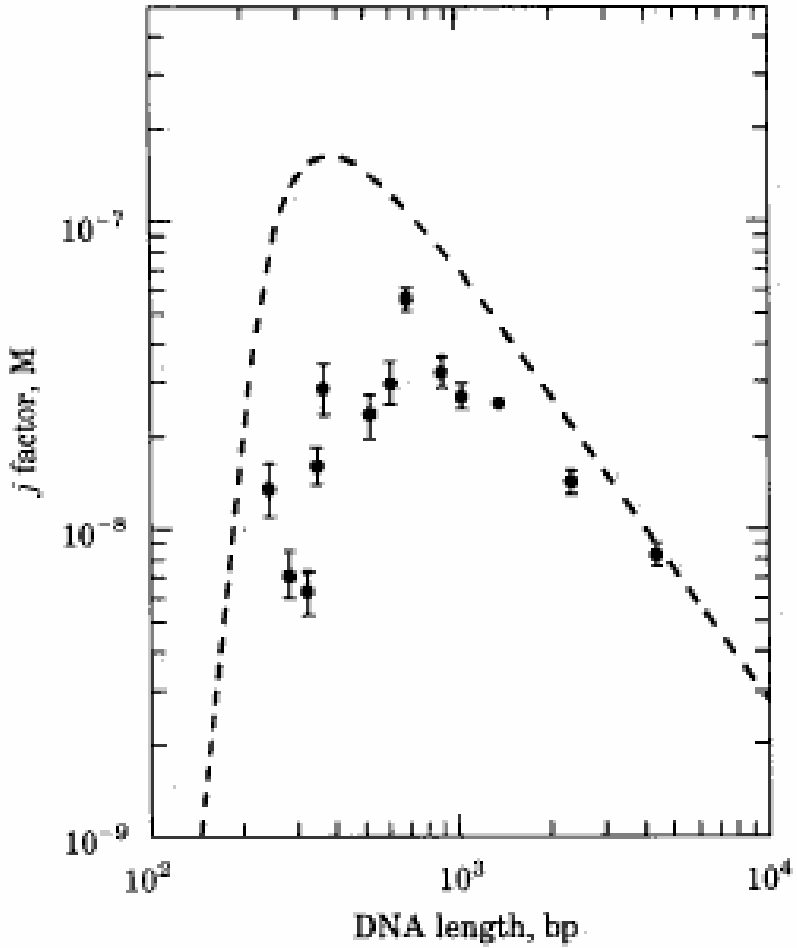


FIG. 5. *j* factor versus DNA length, determined at 20°C. Fragment lengths were 242, 288, 318, 345, 366, 504, 611, 670, 880, 1015, 1361, 2302, and 4361 bp; their origin is described in Table 1. A 126-bp fragment is not shown on this graph because its *j* factor is at least 100-fold lower than that of the 1361-bp reference fragment. The dashed curve is the angle-independent ring closure probability calculated from equation 62 of Yamakawa and Stockmayer (6) for a persistence length of 500 Å.