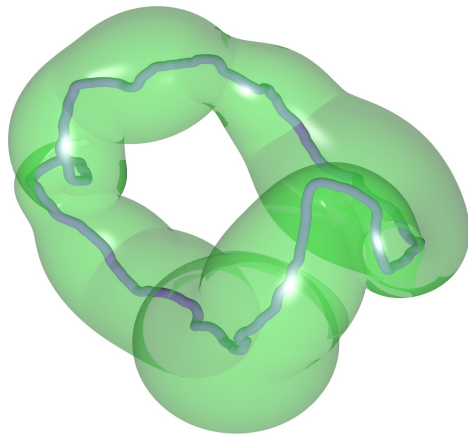


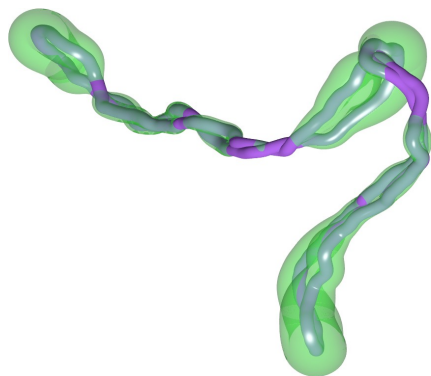
# Effects of physiological self-crowding of DNA on shape and biological properties of DNA molecules with various levels of supercoiling

Fabrizio Benedetti , D. Racko, A. Japaridze, J. Dorier, R. Kwapich, Y. Burnier, G. Dietler, A. Stasiak

$\Delta l_k = 0$ , crowding conditions:  
diluted



$\Delta l_k = 0$ , Crowding conditions:  
20% occupancy



We show that self-crowding of supercoiled DNA molecules acts in a similar way as increasing effective density of supercoiling in non-crowded DNA molecules.

Physiological crowding of DNA molecules stimulates interaction between cis-regulatory elements in circular DNA molecules.

