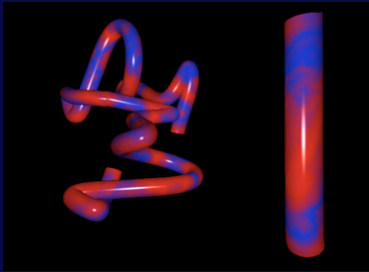
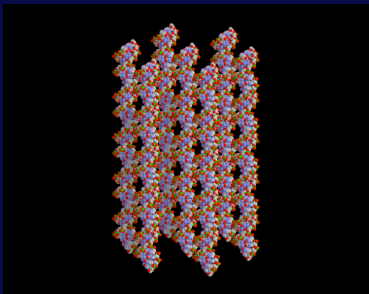


STRUCTURE OF DNA (X-ray scattering, Structure factor of a continuous single helix, Scattering intensity of an orientationally averaged helix, Structure factor of a discrete helix, Scattering intensity of a double helix, Details of B-DNA structure),

BASE-PAIR INTERACTIONS AND DNA MELTING (A model for primary stabilizing interactions, The Peyrard-Bishop-Dauxois model of DNA melting, The DNA melting temperature, Observing DNA melting),

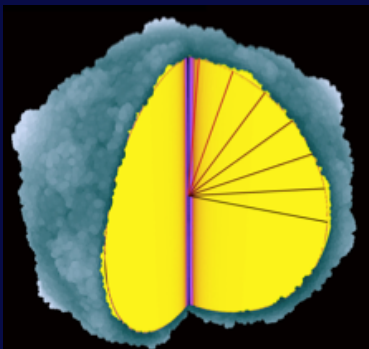


MECHANICS AND STATISTICAL MECHANICS OF DNA (Elastic deformation energy, Elastic equation of state, The Kirchhoff kinematic analogy, The Kratky-Porod model, Light scattering from a Kratky-Porod filament in solution, Elastic response of a Kratky-Porod filament, The limit of small stretching force, The limit of large stretching force, Extensible semiflexible chain, An approximate elastic equation of state for DNA),



ELECTROSTATICS OF DNA and DNA -DNA interactions (Poisson-Boltzmann theory, Counterion distribution, Manning condensation, Salt screening, Strong coupling theory, Correlation attraction, Osmotic stress method, Hydration force, Force equilibria with polyvalent counterions),

DNA COLLAPSE AND DNA MESOPHASES (Collapse of a single DNA molecule, The DNA toroidal globule, Nematic LC transition in a DNA solution, Elastic energy of a DNA hexagonal columnar LC, Cell model of a DNA array, Osmotic pressure of a DNA array, Electrostatic part of the osmotic pressure, Equation of state of a DNA array, Fluctuations and positional order in a DNA array),



DNA ORGANIZATION IN CHROMATIN AND VIRUSES (Nucleosomes, Caspar-Klug theory and elaborations, Continuum elasticity of viral capsids, Viral capsids under mechanical stress, Osmotic encapsulation of DNA, The inverse spool model).