

**22.903 Final Term Paper Topics Assignment (Spring 2005)-Prof. S.H. Chen
May 4, 9, 11, 2005; Time for each presentation: 30 min.**

1. Magnon Neutron Scattering and Its Applications.
2. Phonon Dispersion Curves in Plutonium and Plutonium Alloys.
3. Studies of the collective motions of DNA molecules in liquid crystalline states with the high resolution inelastic X-ray scattering.
4. Neutron Diffraction, Inelastic Neutron Scattering, and MD Simulation Study of Water Adsorbed in Carbon Nano-Tubes.
5. Phonon Dispersion Relation of Single-wall Carbon Nanotubes (SWNT).
6. Photon correlation spectroscopy in non-ergodic systems.
7. Superconductivity with Linear Response Theory.
8. Fluctuation-Dissipation Theorem in Coarse-Grained Harmonic Chain.
9. Small Angle Neutron Scattering (SANS) and Applications in Biological Research.