

Soft Condensed Matter

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1. Elasticity theory.
2. Dislocations.
3. 2-dimensional melting.
4. Dislocation mediated melting 2, Coulomb gas analogy.
5. Commensurate-Incommensurate and Roughening transition.
6. Liquid crystals 1 (Introduction, classification, elasticity theory).
7. Liquid crystals 2 (Elasticity of smectics).
8. Liquid crystals 3. (Topological defects in liquid crystals).
9. Polymers 1 (Single chain, Flory scaling).
10. Polymers 2 (Polymer Statistics and Critical Phenomena).
11. Polymers 3 (Dynamics - reptation model).
12. Polymers 4 (Rubber elasticity).
13. Membranes 1.
14. Membranes 2.