Condensed Matter Physics
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Lecture – 41
Epilogue

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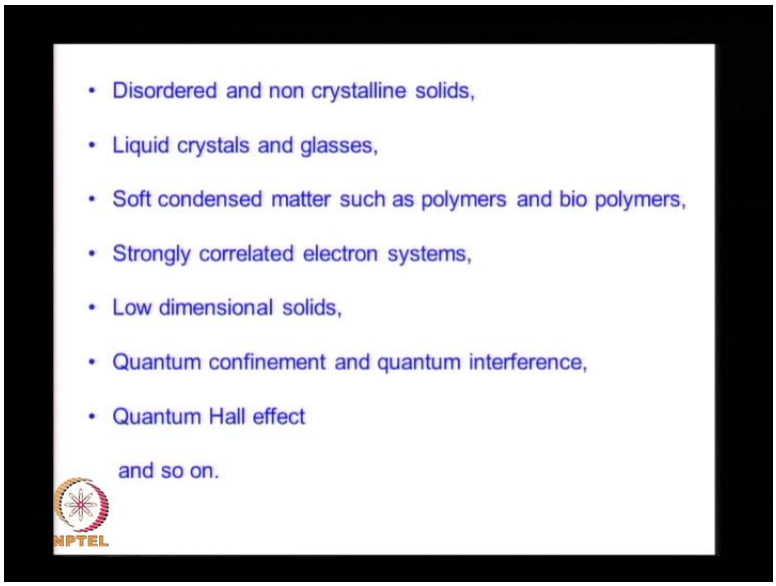

We are now at the end of our basic course on condensed matter physics. While a lot of ground has been covered in this course, many important and current topics have been left out. I list some of these for just information.

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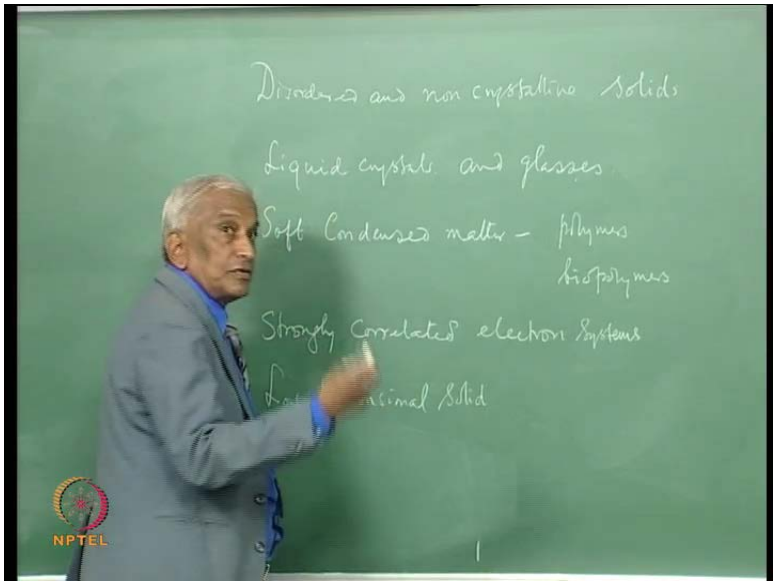

Disordered and non-crystalline solids, this is the major area, for example, amorphous semiconductors and the amorphous metals, amorphous superconductors. Then liquid crystal and glasses as discussed in lecture one, liquid crystal also represent a condense phase which there is a orientational order; and glasses are system in which there is short range instead of long range order. We are not discuss them better ah much. Glasses includes, also metallic glasses; then you have the area of soft condensed matter polymers, biopolymers, general viscous elastic materials and so on.

Then we are not discuss electron correlation, strongly correlated electrons systems. We mentioned high super conducted are strongly correlated electrons systems. Then low dimensional solids, we have thin films for example, which are two-dimensional; then wires or linear chains which are one-dimensional.

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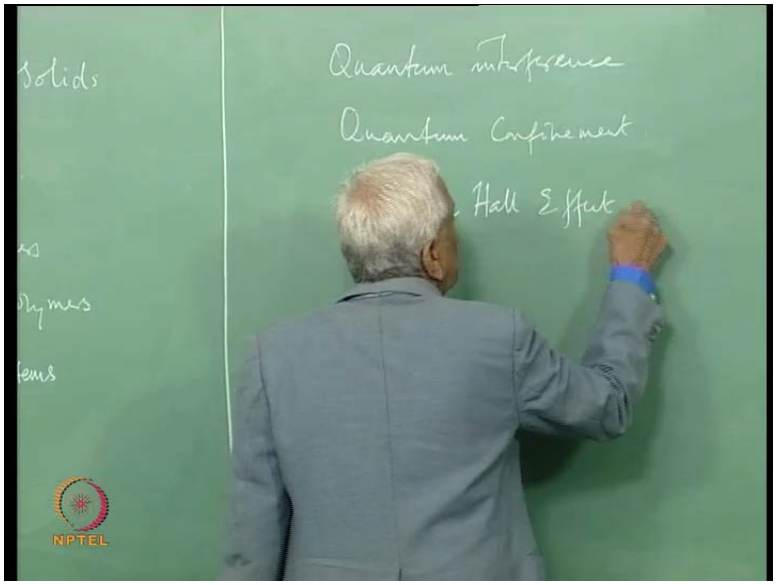

In low dimensional solids, particularly, the effects of quantum confinement and quantum interference are very important. So this lead to very interesting effects which has bomb effects. Then we also has not mentioned anything about the quantum hall effect, which is noble prize topic.

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And many more one can go on, however even though we are not discuss such topics. Enough material has now been covered for the reader to study these topics now himself or herself. It is hoped that he or she will be inspired to do so after listening to these lectures. It only remains for me to place on record my appreciation and gratitude to the wonderful team of youngsters at NPTEL IIT Madras who supported me without reservation in all the aspects of the preparation of this course and made me feel young in their company.

A big thank you, it was fun.