Crystals, Symmetry and Tensors
Professor. Rajesh Prasad
Department of Materials Science and Engineering
Indian Institute of Technology, Delhi
Lecture 19a
3D Point Groups V: Enantiomorphic Point Groups

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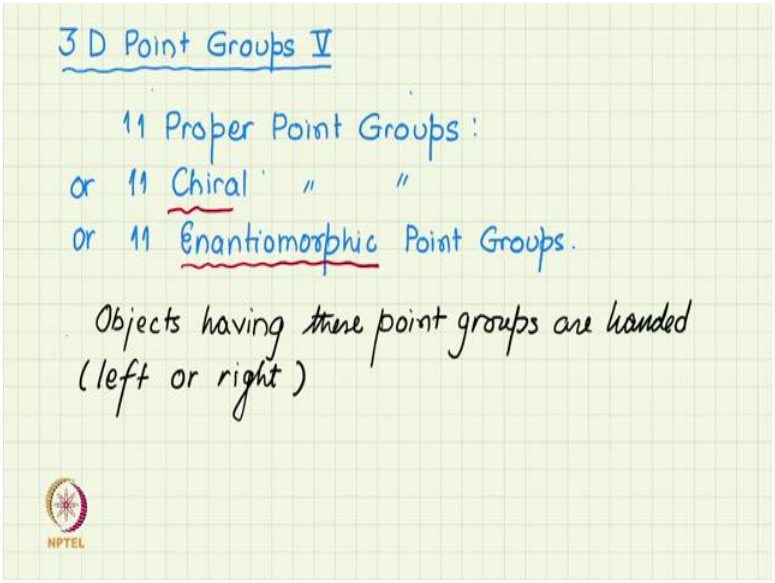

So, in the previous videos of this series, we have developed 11 proper point groups, these are also called 11 Chiral point groups or 11 Enantiomorphic point groups. The word Chiral or Enantiomorphic indicates that objects having these point groups have handedness. So, let me write that, objects having are handed that is they are either left handed or right-handed, other 21 point groups which we will develop you cannot have handedness in them, because handedness occurs only by absence of improper operations.

So, since only these 11 proper point groups have no operations of type 2 or improper operations, only in these operations only in these point groups you can have objects with chirality, so or handedness. Enantiomorphic represents the same idea.

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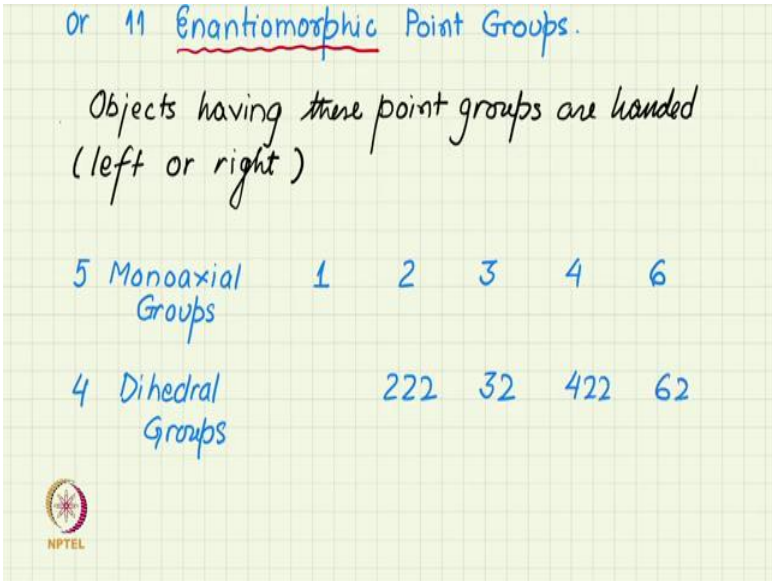

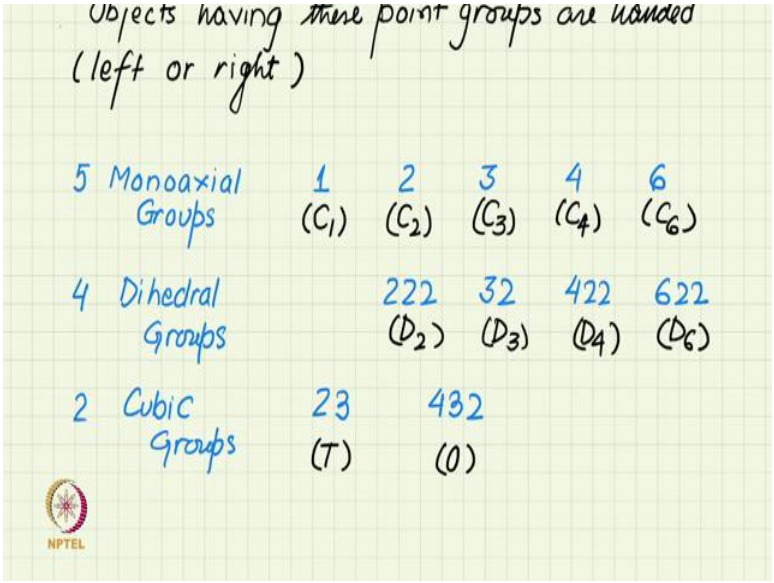

So, if so in this video let us just summarize the 11 Point groups which we have developed just to have all of them at one point in one place. So, we had out of that 11, the 5 were Monoaxial point groups, why Monoaxial groups were 1, 2, 3, 4 and 6, then we had 4 Dihedral group there were 222, 32, 422, 622 and finally there were 2 Cubic groups which were 23 and 432.

Let us not forget the Schoenflies notation. So, in Schoenflies notation these were C1, C2, C3, C4 and C6 and these were D2, D3, D4 and D6, D for dihedral, C for cyclic and finally, they having notations T and O, T for tetrahedral and O for octahedral. So, that completes our development of 11 proper point groups. In the future videos we will develop the improper point groups having mirror planes and inversion centres. Thank you.