Symmetry and Group Theory in Chemistry
Chemistry and Biochemistry

Instructor Name: Anindya Datta
Institute: IIT Bombay
Department: Others

Course Intro: This course provides a quantitative treatment of symmetry in chemistry, using group theory. We start with determination of point group, discuss transformation matrices, abstract group theory, unitary transformations, derivation of Great Orthogonality Theorem and its consequences leading to character tables. Then, various applications in Chemistry are discussed. It is equivalent to CH 801 of IIT Bombay. The lectures are already recorded by CDEEP, IIT Bombay.

Pre Requisites: None
Core/Elective: Core
UG/PG: Both
Industry Support: None

Reference: Group theory and Chemistry by D M Bishop, Symmetry in Chemistry by F A Cotton

About Instructor: Since 2002, I have taught courses on Chemical thermodynamics, kinetics, spectroscopy and group theory to undergraduate as well as graduate students in IIT Bombay. This year, I have received an excellence in teaching award. I have also taught in IIT Goa and in several workshops and refresher courses across the country, for students as well as teachers. My area of research is ultrafast processes in Chemistry.
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