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Topic: **Lanthanide Shift Reagents**
Goals of the project:

- Describe what is the use of a lanthanide shift reagent to analyze NMR spectroscopy; H^1-NMR spectroscopy and C^{13}-NMR spectroscopy.
- Present an overview of the theoretician and practical aspects of the reagents.
- Their application in the case of chiral compounds.
- Explain the effect of the Lewis acid complexation of the lanthanide atom with basic sites on molecules in the chemical shift (NMR).
- Present several NMR spectrums, the normal spectrum and the spectrum with the lanthanide shift reagent, in order to identify the differences between them.
- Lanthanide complexes and which one to use in specific studies.
- Explain how to do the determination of enantiomeric purity using chiral lanthanide shift reagents.