

6. Industrial Applications of Homogeneous Catalysis, Editors: **Mortreux, A., Petit, F.** (Eds.) Springer, 1988
7. Louis S. Hegedus, Björn C. G. Söderberg Transition Metals in the Synthesis of Complex Organic Molecules Björn C. G. Söderberg, Springer 1994.
8. Nikolay Gerasimchuk, Sergiy Tyukhtenko: Inorganic Synthesis: A Manual for Laboratory Experiments Cambridge Scholars Publishing, 2021.
9. Colquhoun, H M, Holton, J, Thompson, D J, and Twigg, M V. New pathways for organic synthesis. Practical applications of transition metals. United States: N. p., 1984.

ICP 507: SYSTEMATIC QUALITATIVE ANALYSIS AND IDENTIFICATION OF ORGANIC COMPOUNDS

Course Objectives:

- To learn separation and estimation of binary mixture.
- To understand the identification of organic compounds by using spectroscopic technique such as $^1\text{H-NMR}$, FT-IR, MASS, $^{13}\text{C-NMR}$.

1. Separation and estimation of binary mixtures.
2. Structural elucidation of organic compounds by spectroscopic techniques.

Course Outcomes:

- Students learn about separation and estimation of binary mixtures
- Students can able to identify functional groups and determine the structure of organic compounds by spectroscopic techniques.

References:

1. Comprehensive practical organic chemistry: Qualitative analysis by VK Ahluwalia, Sunita Dhingra
2. More Spectroscopic Problems in Organic Chemistry-A.J. Baker et al., Hayden, 1975.
3. Spectral Problems in Organic Chemistry, Davis & Wells, Chapman & Hall, 1984.
4. Elementary Practical organic chemistry, Part 2: Quantitative organic analysis by Arthur I. Vogel, 2nd Edition, CBS Publishers and distributors, 1987.