School of Chemistry

Aims and Objectives: Session 2022-2023

Module CH3512: Organometallic Chemistry

Course Title: Organometallic Chemistry

Duration: 15 hours

Lecturer: Dr A. Stasch* and Dr P. B. Webb

(*Module Convenor)

Aims: This course will give an overview of organometallic compound classes, mainly from the s-, p-, and d-block of the periodic table, including their synthesis, structures, properties, reactivity and use in catalysis.

Objectives:

1. To know and understand the different properties and structures for organometallic compounds from different parts of the periodic table and their trends.

2. To know principal synthetic routes to various classes of organometallic compounds.

3. To know and understand the reactivity of organometallic compounds including their application in synthesis.

4. To know methods and examples for the study of organometallic compounds in the gas phase, solution phase and solid state.

5. To know common ligand classes in organometallic chemistry, their effects on organometallic compounds, and influence on reactivity and catalysis.

6. To know and understand key mechanistic steps in reactions involving organometallic compounds.