60624 - Applied organometallic chemistry

Información del Plan Docente

Academic Year	2016/17
Academic center	100 - Facultad de Ciencias
Degree	542 - Master's in Chemical Research
ECTS	3.0
Course	1
Period	Second semester
Subject Type	Optional
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

5.2.Learning activities

5.3.Program

1.- Organometallic compounds: clasification, structure and properties.

2.- Metal carbonyls: synthesis, structure, bonding and applications.

3.- Homogeneous catalysis: fundamental processes, industrial applications and mechanisms.

4.- Organometallic compounds in molecular synthesis and preparation of advanced materials.

5.4.Planning and scheduling

5.5.Bibliography and recomended resources

1. Transition Metals in the Synthesis of Complex Organic Molecules. L. S. Hegedus, 3ª ed., Sausalito, California: University Science Books, 2010.

2. Organometallics: A Concise Introduction. C. Elschenbroich, A. Salzer, 3ª ed., VCH, 2005.

3. Organotransition Metal Chemistry. A. F. Hill, Royal Society of Chemistry, 2009.

4. The Organometallic Chemistry of the Transition Metals. R. H. Crabtree, 5ª ed. Wiley: Hoboken, NJ, USA, 2009.

5. Applied Homogeneous Catalysis with Organometallic Compounds, A Comprehensive Handbook. Eds. B. Cornils, W. A. Herrmann, Wiley-VCH, Weinheim, 2000.

6. Applied Homogeneous Catalysis. A. Behr, P. Neubert, Wiley-VCH, 2012.

7. Industrial Catalysis: a practical approach. J. Hagen, Wiley-VCH, 2006.

8. Homogeneous Catalysis. Understanding the Art. P. W. N. M. Van Leeuwen, Dordrecht, Kluwer Publishers, 2004.