

60646 - Alternative Solvents for Industry

Información del Plan Docente

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| Academic Year | 2016/17 |
| Academic center | 100 - Facultad de Ciencias |
| Degree | 540 - Master's in Industrial Chemistry |
| 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

Green Solvents

1.- Introduction. Green solvents. Evaluation criteria. Classification.

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Solvent Properties

2. Physicochemical properties of solvents. Polarity and Polarizability. Intermolecular forces. Dielectric permittivity. Surface tension. Refraction index. Density. Viscosity. Diffusion. Thermal conductivity.

3.- Solubility. Solution and Solvation. Solubility parameter. Cohesive energy density and internal pressure. Empirical models.

High Pressure Fluids and Supercritical Fluids

4. Supercritical fluids as solvents. Thermodynamics on high pressure phase equilibria. Transport properties. Chemical reactions. Supercritical fluids in industrial analysis. Applications in Pharmaceutical Industry, in Cosmetic Industry and in Agro Food Industry.

5.4.Planning and scheduling

5.5.Bibliography and recommended resources