

DEPARTAMENT DE QUÍMICA ORGÀNICA

NÚMERO	TEMA	TUTOR(S) ACADEMIC(S) (si un es d'un altre departament, posa'l entre parèntesi)	TUTOR EXTERN (si escau)
1	Desymmetrization of bisphenols through an organocatalytic acylation	Carlos Vila Descals	
3	The use of alpha, beta-unsaturated carbonyl compounds with silylated substituents at the beta position as electrophiles in asymmetric catalysis	Isabel Fernández Picot / Carlos Vila Descals	
6	Diastereoselective hydrodifluoromethylation of a,b-unsaturated carbonyl compounds via electrochemical reduction	Amparo Sanz Marco	
11	Strained compounds as building blocks in organic synthesis	Carmen Ramírez de Arellano Sánchez / Andrea Olmos Vergé	
12	Improving unsaturated C-C bond activation through catalyst design	Andrea Olmos Vergé / Carmen Ramírez de Arellano Sánchez	
13	Catalytic synthesis of carbonyl derivatives of industrial interest from raw materials	Carmen Ramírez de Arellano Sánchez / Andrea Olmos Vergé	
14	Covalent organic frameworks (COFs) supported copper particles as sustainable heterogenous catalysts for the click of 1,2,3-triazoles in water	Salah-Eddine Stiriba Lakani	
19	Development of luminescent metal-organic frameworks for drug detection	José Antonio Sáez Cases / José Manuel Herrero Martínez (Química Analítica)	
33	Theoretical characterization of C-X bond formation in organic reactions	M ^a del Mar Ríos Gutiérrez	
36	Asymmetric reactions for the preparation of organic compounds of pharmaceutical interest	Juan Francisco Sanz Cervera	
38	Synthesis of NHPI esters of the 2-sulfoacetic acid for photoredox decarboxylative sulfoalkylation reactions	Gonzalo Blay Llinares	
40	Photocatalytic Properties of Upconversion Nanoparticles	Laura Francés Soriano	
41	Nanoengineering photoactive nanoparticles: synthesis, characterization, and surface modification	Laura Francés Soriano / Julia Pérez Prieto	
43	Study of the reactivity of dihalocyclopropanes	Andrea Olmos Vergé / Mercedes Medio Simón	
46	Computational study of click chemistry reactions involving cyclopropene derivatives	Jorge Escorihuela Fuentes	
47	Synthesis and characterization of gold nanoclusters coated with thiolated ligands	Jorge Escorihuela Fuentes / Elena Zaballos García	

VNIVERSITAT DE VALÈNCIA Facultat de Química

DEGREE FINAL PROJECT CHEMISTRY DEGREE

ACADEMIC TUTOR: Carlos Vila Descals

ACADEMIC TUTOR (if needed):

EXTERNAL TUTOR (if needed):

Department: Química Orgànica

TITLE (Mandatory in English)

Desymmetrization of bisphenols through an organocatalytic acylation

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

Es ben coneguda la importància de la quiralitat de les molècules orgàniques en diferents àrees, que van des de la Biologia a la Ciència dels Materials. Així, el desenvolupament de nous mètodes de síntesis enantioselectiva constitueixen en la actualitat un àrea de intensa investigació. Entre ells, els procediments catalítics (catàlisis asimètrica) resulten especialment atractius ja que permeten minimitzar el consum de quiralitat i disminuir la producció de residus. En este context existeixen molt pocs exemples de la desimetrització de compostos orgànics amb dos anells de fenol per generar compostos quirals de manera enantioselectiva. Així en aquest projecte es planteja com objectiu l'estudi de la desimetrització de compostos amb dos anells de fenol utilitzant una reacció d'acilació organocatalítica.

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

Es seguirà una metodologia similar a la utilitzada pel nostre grup de investigació en altres reaccions enantioselectives organocatalítiques. En concret es durà a terme:

- 1) Síntesis de diferents substrats de partida.
- 2) Identificació de les condicions òptimes de reacció, en lo que fa referencia al rendiment de la reacció i, en especial, a la enantioselectivitat, utilitzant diferents organocatalitzadors.
- 3) Estudi de l'abast i limitacions de la reacció, utilitzant diferents compostos orgànics.
- 4) L'anàlisi dels productes finals de cada reacció es durà a terme segons la metodologia estàndard en síntesis orgànica (mètodes cromatogràfics i espectroscòpics). L'excés enantiomèric per a cadascun dels productes obtinguts es determinarà mitjançant cromatografia líquida d'alta resolució (HPLC) i la configuració absoluta es determinarà per difracció de raigs X de monocristall.



DEGREE FINAL PROJECT
CHEMISTRY DEGREE

ACADEMIC TUTOR: Isabel Fernández Picot

ACADEMIC TUTOR (if needed): Carlos Vila Descals

EXTERNAL TUTOR (if needed):

Department: Química Orgànica

TITLE (Mandatory in English)

The use of alpha, beta-unsaturated carbonyl compounds with silylated substituents at the beta position as electrophiles in asymmetric catalysis

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

El desarrollo de nuevos métodos de síntesis enantioselectiva constituye en la actualidad un área de intensa investigación. Entre estos, los procedimientos catalíticos (catálisis asimétrica) resultan especialmente atractivos ya que permiten minimizar el consumo de quiralidad y disminuir la producción de residuos. El objetivo de este trabajo es el estudio bibliográfico de los artículos donde se describan procesos catalíticos enantioselectivos en los que se utilicen compuestos carbonílicos alfa, beta-insaturados con sustituyentes sililados en posición beta.

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

- 1) Búsqueda bibliográfica en diferentes fuentes como scifinder, web of knowledge, etc.
- 2) Cribado y selección de artículos.
- 3) Análisis de los diferentes sistemas catalíticos donde se utilicen este tipo de compuestos.
- 4) Búsqueda y análisis de las aplicaciones de estos sistemas catalíticos



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DEGREE FINAL PROJECT CHEMISTRY DEGREE

ACADEMIC TUTOR: Amparo Sanz Marco

ACADEMIC TUTOR (if needed):

EXTERNAL TUTOR (if needed):

Department: Organic Chemistry

TITLE (Mandatory in English)

Diastereoselective hydrodifluoromethylation of α,β -unsaturated carbonyl compounds via electrochemical reduction

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

- Síntesis de compuestos carbonílicos α,β -insaturados quirales
- Optimización de las condiciones de reacción de hidrofluorometilación diastereoselectiva
- Estudio del alcance y limitaciones de la reacción empleando las condiciones optimizadas

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

Se llevarán a cabo reacciones orgánicas clásicas, empleadas para la síntesis de los productos de partida y reacciones electroquímicas enfocadas para llevar a cabo reacciones orgánicas, en concreto en este trabajo reacciones de hidrodifluorometilación.

Los productos difluorometilados se caracterizarán mediante técnicas espectroscópicas y su relación enantiomérica se medirá mediante cromatografía HPLC.

El alumno debería adquirir competencias en los siguientes aspectos:

- Búsqueda bibliográfica.
- Técnicas de síntesis orgánica y electroquímica.
- Técnicas cromatográficas (cromatografía de capa fina y de columna)
- Análisis estructural (RMN, EM, etc.)
- Análisis instrumental (HPLC, CG, etc.)



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VNIVERSITAT DE VALÈNCIA Facultat de Química

DEGREE FINAL PROJECT CHEMISTRY DEGREE

ACADEMIC TUTOR: Carmen Ramírez de Arellano Sánchez

ACADEMIC TUTOR (if needed): Andrea Olmos Vergé

EXTERNAL TUTOR (if needed): _____

Department: Departamento de Química Orgánica

TITLE (Mandatory in English)

Strained compounds as building blocks in organic synthesis

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

- Determination of the scope and preparation of strained substrates for catalytic syntheses of complex derivatives.
- Design and synthesis of potential electrophilic catalysts of 3d metals for the activation of strained compounds.
- X-ray crystal structure determination and study of intermediates.
- Study of the catalytic activity for a sustainable increase of molecular complexity.

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

- Theoretical and practical initiation to the preparation of strained substrates.
- Theoretical/practical introduction to the synthesis of metal complexes in inert conditions (use of Schlenk line and dry box) and crystallization of metallo-organic systems.
- Theoretical/practical introduction to structural determination using single-crystal X-ray diffraction, including: crystal isolation and treatment, diffractometer handling, use of computer programs for data processing and interaction studies.
- Theoretical/practical initiation to the spectroscopic characterization of the characterized systems.



DEGREE FINAL PROJECT
CHEMISTRY DEGREE

ACADEMIC TUTOR: Andrea Olmos Vergé

ACADEMIC TUTOR (if needed): Carmen Ramírez de Arellano Sánchez

EXTERNAL TUTOR (if needed):

Department: Departamento de Química Orgánica

TITLE (Mandatory in English)

Improving unsaturated C-C bond activation through catalyst design

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

- Design and synthesis of potential electrophilic catalysts of 3d metals. Modification of the catalytic pocket.
- X-ray crystal structure determination and study of possible conformations and interactions.
- Study of the redox behavior of new complexes.
- Study of the catalytic activity in activation processes of unsaturated C-C bonds.

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

- Theoretical/practical introduction to the synthesis of metal complexes in inert conditions (use of Schlenk line and dry box) and crystallization of metallo-organic systems.
- Theoretical and practical initiation to the catalytic processes of activation of unsaturated C-C bonds.
- Theoretical/practical introduction to structural determination using single-crystal X-ray diffraction, including: crystal isolation and treatment, diffractometer handling, use of computer programs for data processing and interaction studies.
- Theoretical/practical initiation to the spectroscopic characterization of the characterized systems.



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VNIVERSITAT DE VALÈNCIA Facultat de Química

DEGREE FINAL PROJECT CHEMISTRY DEGREE

ACADEMIC TUTOR: Carmen Ramírez de Arellano Sánchez

ACADEMIC TUTOR (if needed): Andrea Olmos Vergé

EXTERNAL TUTOR (if needed):

Department: Departamento de Química Orgánica

TITLE (Mandatory in English)

Catalytic synthesis of carbonyl derivatives of industrial interest from raw materials

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

- Determination of the scope of raw substrates for the catalytic synthesis of carbonyl derivatives.
- Design and synthesis of potential electrophilic catalysts of 3d metals for the synthesis of carbonyl derivatives.
- X-ray crystal structure determination and study of intermediates.
- Study of the catalytic activity in carbonyl derivative formation processes.

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

- Theoretical/practical introduction to the synthesis of metal complexes in inert conditions (use of Schlenk line and dry box) and crystallization of metallo-organic systems.
- Theoretical and practical initiation to the catalytic processes for carbonyl derivatives preparation.
- Theoretical/practical introduction to structural determination using single-crystal X-ray diffraction, including: crystal isolation and treatment, diffractometer handling, use of computer programs for data processing and interaction studies.
- Theoretical/practical initiation to the spectroscopic characterization of the characterized systems.



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VNIVERSITAT DE VALÈNCIA Facultat de Química

DEGREE FINAL PROJECT CHEMISTRY DEGREE

ACADEMIC TUTOR: SALAH-EDDINE STIRIBA LAKANI

ACADEMIC TUTOR (if needed):

EXTERNAL TUTOR (if needed):

Department: Organic Chemistry

TITLE (Mandatory in English)

Covalent organic frameworks (COFs) supported copper particles as sustainable heterogenous catalysts for the click of 1,2,3-triazoles in water

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

The objectives of this TFG project are as follows:

- i) The design, preparation and characterization of imine-based COFs.
- ii) The preparation and characterization of imine-based COFs supported copper particles (Cu-COFs).
- ii) The evaluation of the Cu-COFs as potential heterogenous catalysts in the click of 1,2,3-triazoles in water as solvent.

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

The scope of the above objectives will be addressed through the condensation of topologically precise aromatic amines with C3-symmetry (knot) and pyridine donor-group functionalized aldehydes having a C2-symmetry.

The type of covalent organic network will depend on several parameters namely the amine/aldehyde ratio, the topology of these reactants, the reaction temperature and the type of process (conventional vs. innovative).

The organic materials with porous crystalline networks obtained will be characterized by Infrared, solid NMR, and X-ray powder spectroscopy and gas sorption

Copper species will be immobilized in the prepared materials and the final COFs supported copper will be used as heterogenous catalysts in the copper-catalyzed azides-alkynes [3+2] cycloaddition (CuAA) click reaction in a sustainable manner.



VNIVERSITAT DE VALÈNCIA Facultat de Química

DEGREE FINAL PROJECT CHEMISTRY DEGREE

ACADEMIC TUTOR: José Antonio Sáez Cases

ACADEMIC TUTOR (if needed): José Manuel Herrero Martínez

EXTERNAL TUTOR (if needed):

Department: Química Analítica (Química orgánica)

TITLE (Mandatory in English)

Development of luminescent metal-organic frameworks for drug detection

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

- Desarrollo y caracterización de redes metal-orgánicas luminiscentes.
- Evaluación del empleo de los materiales desarrollados para la detección de drogas.

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

- Revisión bibliográfica sobre los antecedentes relativos al uso de MOFs luminiscentes para la detección de drogas.
- Estudio de las condiciones experimentales de síntesis de MOFs.
- Estudio de las condiciones experimentales de ligandos luminiscentes.
- Estudio de las condiciones del acoplamiento/funcionalización ligandos-MOFs.
- Caracterización de los materiales sintetizados (SEM, FTIR, XRD, entre otras).
- Validación de la metodología analítica propuesta.
- Aplicación del método desarrollado al análisis de drogas.
- Preparación, discusión y revisión del proyecto final.



VNIVERSITAT DE VALÈNCIA Facultat de Química

DEGREE FINAL PROJECT CHEMISTRY DEGREE

ACADEMIC TUTOR: M^a del Mar Ríos Gutiérrez

ACADEMIC TUTOR (if needed):

EXTERNAL TUTOR (if needed):

Department: Química Orgànica

TITLE (Mandatory in English)

Theoretical characterization of C-X bond formation in organic reactions

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

La caracterización de la formación de los enlaces sencillos carbono-heteroátomo es imprescindible para establecer el mecanismo de las reacciones orgánicas. Al igual que los enlaces sencillos C-X (X = C, O, N) tienen una distancia interatómica que permanece constante en muchas moléculas orgánicas, la formación de estos enlaces en las reacciones orgánicas tiene lugar en un estrecho rango de distancias.

En el presente TFG se llevará a cabo el estudio de una serie de reacciones orgánicas en las que se formen nuevos enlaces C-X con el fin de caracterizar cuándo se forman, a qué distancia C-X, y cuál es el modelo de formación de estos enlaces, dativo o por compartición, mediante el uso de técnicas computacionales.

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

El alumno se familiarizará con el uso del programa de cálculo Gaussian para la optimización geométrica de moléculas orgánicas, así como con cálculos mecano-cuánticos basados en el análisis de la densidad electrónica a lo largo del camino de reacción.



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VNIVERSITAT DE VALÈNCIA Facultat de Química

DEGREE FINAL PROJECT CHEMISTRY DEGREE

ACADEMIC TUTOR: Juan Francisco Sanz Cervera

ACADEMIC TUTOR (if needed):

EXTERNAL TUTOR (if needed):

Department: Organic Chemistry

TITLE (Mandatory in English)

Asymmetric reactions for the preparation of organic compounds of pharmaceutical interest.

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

Este TFG tiene dos objetivos: el primero es la localización de ejemplos relevantes recientes de síntesis asimétrica de compuestos activos de interés farmacológico. El segundo se centra en el estudio detallado y descripción de algunos de los ejemplos encontrados.

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

El/la estudiante obtendrá información mediante una búsqueda bibliográfica y desarrollará un trabajo que incluya los aspectos más relevantes de los objetivos indicados arriba, todo ello bajo la tutela y dirección del tutor del TFG.



UNIVERSITAT DE VALÈNCIA Facultat de Química

DEGREE FINAL PROJECT CHEMISTRY DEGREE

ACADEMIC TUTOR: Gonzalo Blay Llinares

ACADEMIC TUTOR (if needed): _____

EXTERNAL TUTOR (if needed): _____

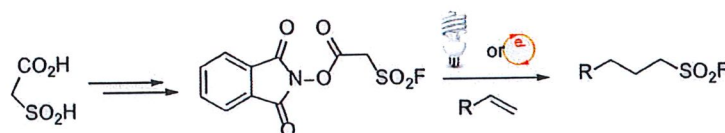
Department: Química Orgànica

TITLE (Mandatory in English)

Synthesis of NHPI esters of the 2-sulfoacetic acid for photoredox decarboxylative sulfoalkylation reactions

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

- Development of a synthetic procedure for the preparation of NHPI esters of 2-fluorosulfonyl acetic acid from 2-sulfoacetic acid.



- Preliminary study of the fluorosulfonylalkylation of alkenes under photoredox or electrochemical conditions

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

To achieve the synthesis of the target NHPI ester, sulfoacetic acid will be transformed into its carboxylic acid chloride and treated with *N*-hydroxyphthalimide. The resulting NHPI ester will be converted into the corresponding fluorosulfone upon treatment with thionyl chloride and KF. Once prepared, the NHPI ester will be used to achieve the introduction of a fluorosulfonylmethyl group into alkenes via a radical pathway under photochemical or electrochemical conditions.

The reaction conditions will be optimized to achieve the highest possible yields and the scope of the reaction will be studied.

The student should acquire skills in the following aspects:

Bibliographic search.

Advanced organic chemistry laboratory techniques.

Chromatographic techniques (thin layer and column chromatography)

Structural analysis (NMR, EM, etc.)

Instrumental analysis (HPLC, GC, etc.)



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VNIVERSITAT DE VALÈNCIA Facultat de Química

DEGREE FINAL PROJECT CHEMISTRY DEGREE

ACADEMIC TUTOR: Laura Francés Soriano

ACADEMIC TUTOR (if needed):

EXTERNAL TUTOR (if needed):

Department: Química Orgánica

TITLE (Mandatory in English)

Photocatalytic Properties of Upconversion Nanoparticles

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

This bibliographic work aims to provide a review of the existing literature on the photocatalytic properties of upconversion nanoparticles (UCNPs). It will identify current challenges and explore future opportunities in their application as photocatalysts in near-infrared triggered reactions.

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

- Explore upconversion nanoparticles (UCNPs).
- Investigate the conversion of near-infrared light into visible or ultraviolet light by UCNPs.
- Analyze different factors influencing the photocatalytic efficiency of UCNPs, including particle size, shape, and surface modifications.
- Discuss the existing challenges in the research, development, and practical application of UCNP-based photocatalysts.



VNIVERSITAT DE VALÈNCIA Facultat de Química

DEGREE FINAL PROJECT CHEMISTRY DEGREE

ACADEMIC TUTOR: Laura Francés Soriano

ACADEMIC TUTOR (if needed): Julia Pérez Prieto

EXTERNAL TUTOR (if needed):

Department: Química Orgánica

TITLE (Mandatory in English)

Nanoengineering photoactive nanoparticles: synthesis, characterization, and surface modification

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

The primary objective of this study is to synthesize homogeneous and uniform photoactive nanoparticles. These nanoparticles will be further functionalized with organic ligands, aiming to enhance their stability and optical properties.

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

- Synthesis of photoactive nanoparticles with precise control over size, shape, and composition to ensure homogeneity.
- Characterize the structural and optical properties of the synthesized nanoparticles using techniques such as transmission electron microscopy (TEM), X-ray diffraction (XRD), UV-Vis, and emission spectroscopy.
- Modify the surface properties of nanoparticles through organic ligand functionalization strategies.
- Confirm the successful attachment of organic ligands using techniques such as infrared or nuclear magnetic resonance spectroscopy, or zeta potential analysis.
- Optimize the functionalization process to achieve uniform coverage and improve the nanoparticles properties.
- Compare the performance of different synthesis and functionalization methods based on experimental results.

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VNIVERSITAT DE VALÈNCIA Facultat de Química

DEGREE FINAL PROJECT CHEMISTRY DEGREE

ACADEMIC TUTOR: Andrea Olmos Vergé

ACADEMIC TUTOR (if needed): Mercedes Medio Simón

EXTERNAL TUTOR (if needed):

Department: Organic Chemistry

TITLE (Mandatory in English)

Study of the reactivity of dihalocyclopropanes

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

- Sintetizar y caracterizar diferentes dihalociclopropanos para el estudio de su reactividad.
- Hacer reaccionar los dihalociclopropanos con diferentes reactivos organometálicos en presencia de compuestos electrófilos.
- Identificar los parámetros principales que influyen en las transformaciones.

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

- Iniciación teórico/práctica a los procesos de síntesis de los sustratos orgánicos necesarios.
- Iniciación teórico práctica al uso de reactivos organometálicos en condiciones de atmósfera inerte (uso de línea de vacío, matraces schlenk).
- Iniciación teórico práctica a los procesos de transmetalación y reacción de reactivos organometálicos con diferentes electrófilos.
- Iniciación teórico/práctica a la caracterización espectroscópica de los sustratos y productos preparados.



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VNIVERSITAT DE VALÈNCIA Facultat de Química

DEGREE FINAL PROJECT CHEMISTRY DEGREE

ACADEMIC TUTOR: Jorge Escorihuela Fuentes

ACADEMIC TUTOR (if needed): _____

EXTERNAL TUTOR (if needed): _____

Department: Organic Chemistry

TITLE (Mandatory in English)

Computational study of click chemistry reactions involving cyclopropene derivatives

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

The objectives of this Final Degree Project in Chemistry are the computational study of click-type cycloaddition reactions through theoretical calculations based on DFT methodology in combination with a distortion/interaction analysis to select systems with high reaction rates. Likewise, the TFG report will be prepared and the oral presentation and its defense will be prepared.

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

The methodology of this Final Degree Project in Chemistry will consist of a bibliographic search of organic compounds with stressed cyclic systems in the different databases (SciFinder) in combination with the use of Computational Chemistry tools (Gaussian, Gaussview, Spartan) for the modeling of cyclic organic molecules and the study of them in click chemistry reactions such as SPAAC (Strain-promoted alkyne-azide cycloadditions), SPOCQ (Strain-Promoted Oxidation-Controlled Cyclooctyne-1,2-Quinone) reactions Cycloaddition or IEDDA (Inverse electron-demand Diels-Alder reaction).

For similar examples see: J. Org. Chem. 2018, 83, 244-252; J.Org. Chem. 2018, 83, 244-252; Org. Biomol. Chem. 2022, 20, 6400-6412



DEGREE FINAL PROJECT
CHEMISTRY DEGREE

ACADEMIC TUTOR: Jorge Escorihuela Fuentes

ACADEMIC TUTOR (if needed): Elena Zaballo García

EXTERNAL TUTOR (if needed):

Department: Organic Chemistry

TITLE (Mandatory in English)

Synthesis and characterization of gold nanoclusters coated with thiolated ligands

OBJECTIVES / OBJECTIUS / OBJETIVOS (Choose the language)

The objectives of this Final Degree Project in Chemistry are the synthesis and characterization of thiolated ligands for the preparation of gold nanoclusters capped with thiolated ligands. The final application of these gold nanoclusters will be oriented towards the detection of organic molecules such as antibiotics.

METHODOLOGY / METODOLOGIA / METODOLOGÍA (Choose the language)

Synthesis and characterization of thiolated ligands.

Preparation and characterization of gold nanoclusters capped with thiolated ligands.

Detection of antibiotics or other target molecules of interest.

