

Final TFG. Semestre de tardor. Curs 2021-22

		Alumne
1. New materials		
1.1	3D structured materials for environmental applications. (resum)	Barbero Sánchez, Sergio
1.2	Formulation of bicomponent resins for advanced ceramic 3D printing. (resum)	Bertran Jordan, Jordi
1.3	Reduction and characterization of the band-gap of TiO ₂ nanoparticles. (resum) (dipòsit)	Cela i Junyent, Antía
1.4	Synthesis of functionalised Metal-Organic Cages (MOCs) as building blocks for the preparation of porous supramolecular materials. (resum)	Ciudad Moreno, Javier
1.5	Ru(II) complexes for photochemical applications. (resum)	de Llanos Espinosa, Rubén
1.6	Mechanosynthesis and nanostructuring of luminescent Lanthanide 2D MOFs. (resum) (dipòsit)	Fernández Cortés, Helena
1.7	Fast and easy fabrication of Au tips suitable for Scanning Tunneling Microscopy and tip-enhanced Raman spectroscopy by electrochemical etching. (resum)	Mangues Estany, Guillem
1.8	Controlled thermoresponsive hydrogels based on the stereocomplexed block of PLA-PEG-PLA for tissue engineering. (resum)	Marsol Clop, Júlia
1.9	Synthesis of bi-magnetic core/shell nanoparticles aiming at modulating their magnetic properties at room temperature. (resum)	Rashid, Iqra

1.10	Microfluidic-based bottom-up assembly of nanocellulose fibres. (resum)	Vidal Vilaseca, Cesc
2. Food and health		
2.1	Non-targeted Fingerprinting Methodologies for the Authentication of Tea. Application to the Detection and Quantitation of Frauds in Adulterated Tea Samples with Chicory. (resum) (dipòsit)	Bedmar Chamarro, Àlex
2.2	Purification of wine extracts with high antioxidants activity by extraction chromatography. (resum)	Bonilla Maneus, Xavier
2.3	Determination of amino acids and biogenic amines in wines and sparkling wines by liquid chromatography. (resum)	Buscarons Busquets, Sergi
2.4	Analysis of quinoa proteins by high-performance liquid chromatography with spectrophotometric detection. (resum)	Caballero Alcázar, Nil
2.5	Study of the antioxidant capacity of cocoa and chocolate using spectrometric methods. (resum)	Hernández González, Víctor
2.6	Classification and Authentication of Honey by Chromatographic Profiles and Chemometric Methods. (resum) (dipòsit)	Martínez i Alfaro, Clàudia
2.7	Development of analytical methods based on liquid chromatography with UV-visible and mass spectrometry to determine cholic acids and bilirubin in bile. (resum)	Paz Márquez, Lucía
3. Environment		
3.1	Creation of a database of barium distribution coefficient in soils: exploring chemical analogy with radium. (resum)	Almiñana Farran, Gemma
3.2	Determination of Sr-90 in environmental samples of high volume by using plastic scintillators. (resum)	Apellániz Otxoa de Retana, Ekiñe

3.3	Feasibility study for the preparation of reference materials for the physico-chemical characterisation of solid wastes. (resum) (dipòsit)	Crespo Cardoso, Paula
3.4	Determination of phenolic compounds in water samples by gas chromatography. Development of a laboratory practice for a teaching guide. (resum)	Ginard Manresa, Maria Antònia
3.5	Optimization of PSkits for fast and selective analysis of ⁹⁹ Tc. (resum)	Mendo Nicolàs, Xavier
3.6	Assessment of CoNi alloys as activator substrates in a degradation process. (resum) (dipòsit)	Servat Vidal, Oriol
4. Computational Studies		
4.1	Single-Atom Catalysts based on O-functionalized Mxenes. (resum) (dipòsit)	Buturca, Maria Andreea
4.2	Building Ab initio-based force fields for homoleptic [Cr] ₃₊ compounds. (resum)	Lou Alonso, Sergi
4.3	Theoretical study of the mechanism of 1,3-migration in allylperoxyl radicals. (resum)	Nikolova Ivova, Anna Maria
4.4	Virtual fragment screening using fdMD method. (resum)	Plazas López, Albert
4.5	Magnetic coupling and spin ordering in catena-diaquabis(pyrazine-1,4- dioxide)copper (II) nitrate. A computational study. (resum)	Rodríguez Pérez, Raquel
5. Syntesis and Reactivity		
5.1	Synthesis and Study of Encapsulating Supramolecular Coordination Assemblies. (resum)	Arias Fernández, Marc

5.2	Three component one pot synthesis of cyclopalladated compounds. (resum)	Barrera Gutiérrez, Aleix
5.3	Activation of CH bonds of imines by ruthenium compounds. (resum)	Bernard Martínez, Mario
5.4	Synthesis of luminescent gold organometallic complexes containing triphenylene ligands. (resum) (dipòsit)	Bravo Serres, Xavier
5.5	Synthesis of polyheterocyclic ligands for complexation with metal ions. Application of the resulting complexes as molecular devices. (resum)	Harmut Prats, Coral
5.6	Synthesis and characterization of new chemically modified nucleosides of therapeutic potential. (resum)	Mampel Moreno, Àlex
5.7	Synthesis of coordination complexes 3d/3d' or 3d/4f with chiral asymmetric Schiff bases. Magnetic and spectroscopic study. (resum)	Martínez Navarro, Guillem
5.8	Asymmetric synthesis by combining photoredox with organocatalysis. (resum) (dipòsit)	Meneses Sánchez, Diego Fernando
5.9	Synthesis and study of the thermal stability of N-(pyridin-2-yl)-2-aminoethanol derivatives. (resum)	Pérez Guix, Natàlia
5.10	Cyclometallated compounds with 1-pyrenylphosphanes. (resum)	Piqué Lozano, Maria
5.11	Synthetic Approach to non-symmetric bis(pyrazolylpyridine) ligands. (resum)	Raïch Panisello, Ot
5.12	An approach to direct and catalyzed aldol reaction: Synthesis of N-acyl thioimides. (resum)	Rodríguez Fórneas, Miguel

5.13	Design of Spin Crossover Complexes in H-bonded frameworks. (resum)	Rodríguez Prada, Gemma
5.14	Development of a new asymmetric allylic trifluoromethylation reaction under chiral Lewis-base catalysis. (resum)	Vallcarreras Sanlorenzo, David
5.15	Synthesis of supramolecular helicates with Single-Ion- Magnet response . (resum)	Vives López, Guiu
6. Methods and Techniques		
6.1	Development of a molecularly imprinted polymers-based electrochemical sensor for the determination of capsaicin. (resum)	Bataller Garrido, Gema
6.2	Toluene-water partition to evaluate the intra-/intermolecular interactions of drugs. (resum)	Bisbal González, Laia
6.3	Selectivity of chromatographic columns from the perspective of the solvation parameter model. (resum)	Boneu Font, Mariona
6.4	Voltammetric determination of active pharmaceutical ingredients in commercial preparations. Writing a teaching guide. (resum)	Clares Tomás, Paula
6.5	Characterization of HPLC systems: fully porous silica functionalized with cyanopropyl groups as stationary phase. (resum)	Fernández Rodríguez, Gabriel
6.6	Evaluation of the critical micellar concentration of the components of the simulated intestinal media by UV-Vis and/or fluorescence spectrophotometry. (resum) (dipòsit)	Lopera de Llanos, Ester
6.7	Teaching Chemistry to students with special educational needs. A viability study of adaptations proposed to improve the current inclusion program for SEN students in the Faculty of Chemistry. (resum) (dipòsit)	Rey Montes, Núria
6.8	Experimental measurement of ion-molecule reaction cross-sections. (resum)	Seguí Grivé, Núria

6.9	Gradient elution HPLC method for the determination of active pharmaceutical ingredients in commercial preparations. Writing a teaching guide. (resum)	Wang, Ruiyuan
7. Bibliographic research		
7.1	Literature review about electrocatalysts for the generation of hydrogen by electrolysis. (resum)	Bello Pintor, Marc
7.2	Enamide bond formation in Palmerolide D: review of methods of formation of enamides. (resum)	Iñigo Navas, Belén
7.3	Electrochemical nitrate removal: From electrocatalysis to the electrochemical reactor. (resum)	Lara Pot, Maria Jesús
7.4	ProTide, a strategy for producing nucleoside prodrugs with antiviral activity. (resum)	Martí Fumado, Manel
7.5	Molecular rotors for their use in mechanofluorescent elastomers. (resum)	Montiel Muñoz, Paula
7.6	Neuraminidase superfamily compendium. (resum) (dipòsit)	Recio Sierra, Alba
7.7	Determination of pharmaceutically active compounds and their metabolites in soil from edible crops. (resum)	Rio Mangues, Mar
7.8	FRET pairs for mechanofluorescent elastomers with a dual response. (resum)	Rosell Bartolí, Cristina
7.9	Application of non-canonical DNA structures in analysis. (resum)	Sagué i Torrentà, Paula
7.10	Aquafaba, an egg substitute for food applications. (resum) (dipòsit)	Solé Lamich, Lúdia

7.11	Recovery of Pd from industrial processes. (resum)	Suades Fernández, Ana
8. External Organizations		
8.1	Compounds with unusual halogen, boron and silicon groups as entry point to new reactivity patterns. (resum) (dipòsit)	Chen, Tuo
8.2	Establishment of an in vitro biological photoassay to identify chemical photosensitizer. (resum) (dipòsit)	Chia López, Berta
8.3	Sorption of metals and persistent and mobile organic emerging contaminants onto carbonaceous materials. (resum)	Cruz Castillo, Esther
8.4	Towards a deeper understanding of cerium oxide nanoparticles synthesis and its catalytic properties. (resum)	Escarrà Pont, Alexandre
8.5	Preparation of Ternary Non-Viral Vectors for Central Nervous System Disorders. (resum) (dipòsit)	Espinosa Gómez, Víctor
8.6	Effect of the electrolyte pH on the photoelectrochemical performance of BiVO ₄ photoanodes. (resum)	Ferrer Castella, Neus
8.7	Analysis of mechanical characteristics in electric cable. (resum)	Fuertes Viladoms, Sílvia
8.8	Raman spectroscopy imaging and chemometrics to investigate forensic documents involving delinquent actions such as crossed lines and obliteration. (resum) (dipòsit)	Madrid Valero, Manel
8.9	miRNA-155-5p, miRNA-181a-5p, and miRNA-122-5p as prognostic biomarkers of clinical graft evolution in liver transplant patients. (resum) (dipòsit)	Marone Millà, Eva

8.10	Implementation of a quality management system based on UNE-EN ISO 13485: 2016 in the company AIR-VAL INTERNATIONAL S.A. (resum)	Ponce Serrano, Lidia
8.11	Determination of pharmaceutically active compounds and their metabolites in soil from edible crops. (resum)	Ribas Galdeano, Miquel
8.12	Synthesis of BN hexahydronaphthalene via triallylborane and dialylamine. (resum) (dipòsit)	Roca Codina, Pol
8.13	Electrochemical reduction of CO ₂ using graphene doubly doped with N and S. (resum)	Rodríguez Miguel, Shahadev
9. Erasmus/Sicue		
9.1	Synthesis of azide derivatives of bile acids and their Click reaction with phenylacetylene in water. (resum)	Bigas Vila, Clàudia
9.2	Analysis of short-chain fatty acids as metabolites of the gut microbiota by HS-SPME GC-MS, with applications to Fabry disease in rats. (resum)	Carrera Parra, Andrea
9.3	Schiff bases based on 3-hydroxyaniline and different aromatic aldehydes: synthesis and characterization of the products. (resum)	Delgado Fos, Marina
9.4	Towards the synthesis of TN- and T-Antigen-based glycopeptides for the development of a vaccine candidate against cancer. (resum)	Valdepeñas Fernández, Mar

Final TFG. Semestre de primavera. Curs 2021-22

		Alumne
1. New materials		
1.1	Electroceramic materials for high-energy store capacitors. (resum)	Alonso Ayala, Carlos
1.2	Additive-free electrolytic bath for pulse plated AuCu coatings. (resum)	Boter Carbonell, Josep
1.3	Optimization and controlled synthesis of bacterial cellulose nanofibres via a microfluidic approach. (resum)	Briseño Oloriz, Diego
1.4	Nanostructuring and assembly of semiconductor materials for the development of electronic devices. (resum)	Egea Ortega, Jordi
1.5	Lead-free ferroelectric materials for solar energy harvesting. (resum)	Morante del Pino, Nerea
1.6	Studying dissipative steady-states in a DNA-based receptor system. (resum)	Murcia Peña, Maria

1.7	Fabrication of Colloidal Materials through Microfluidic Techniques. (resum)	Torres Andrés, Joel
2. Food and health		
2.1	Synthesis and characterization of new SARS-CoV-2 antiviral agents. (resum)	Àlvarez Vigatà, Núria
2.2	Synthesis of cyclic antimicrobial peptide compounds. (resum)	Bello Acevedo, Emma
2.3	Characterization of honeys from different botanical origin based on the determination of antioxidant capacity. (resum)	Fernández Estellé, Mònica
2.4	Characterization of bile extracts by liquid chromatography with UV-visible and mass spectrometry detection. (resum)	Marzo Díaz, Raquel
2.5	Comparison of analytical methods for the determination of capsaicin. (resum)	Montes Jiménez, Daniel
2.6	Study of USH3 self-association phenomenon induced by a drug. (resum)	Nicolás Cabrera, Anna

2.7	Voltammetric determination of emerging compounds in urine and water samples. (resum)	Sagristà i Marcet, Gemma
2.8	Separation and characterization of quinoa proteins by liquid chromatography and mass spectrometry-based techniques. (resum)	Titos Guillén, Rubén
2.9	FIA-MS and LC-MS Fingerprinting for the Characterization, Classification and Authentication of Tea. (resum)	Vilà Romeu, Mònica
3. Environment		
3.1	Comparative study of the characteristics of the Arabic and Italian papers used in manuscripts before and after the s. XIV. (resum)	Acevedo Muñoz, Inés
3.2	Identification and characterization of microplastics present on Barcelona beaches. Microplastics watchers project (ApS). (resum)	Montes Besolí, Gabriel
3.3	Photocatalytic degradation of tetracycline antibiotic using MoS ₂ photocatalysts. (resum)	Santamaria Madrid, Gonzalo
3.4	Removal of contaminants of emerging concern from wastewater by a combination of sunlight and chlorine. (resum)	Urbano Romero, Adrián

4. Computational Studies

4.1	Designing organic molecules with electricfield-tunable conformations for memory devices. (resum)	Cortés Llamas, Arnau
4.2	Ranking inhibitors of SARS-CoV-2 Mpro protease with end-point methodologies. (resum)	Cruz Marín, Carlos
4.3	Molecular Dynamics study of the effect of gold nanoparticles on lipid bilayers. (resum)	Garcia Duran, Arnau
4.4	Lateral interactions effect in the kinetic Monte Carlo study of the CO ₂ hydrogenation reaction on Ni(111). (resum)	López Pajuelo, Aleix
4.5	Generation of H ₂ from 2-fluoroaziridine plus ammonia catalysed by an oriented external field. (resum)	Melo Flores, Bryan Alexis
4.6	Study, analysis and normalization of Force-Distance curves obtained by Atomic Force Microscopy (AFM) (resum)	Navarrete Bueno, Albert
4.7	Bandgap Engineering on MXene Compounds by Structure, Composition, and Surface Termination. (resum)	Ontiveros Cruz, Diego

4.8	Infrared and Ultraviolet Characterization of Covalent Organic Frameworks. (resum)	Reus Papaseit, Paula
5. Syntesis and Reactivity		
5.1	Study of the Suzuki-Miyaura cross-coupling reactions with NHC palladium carbenes in MOF structures and Natural Deep Eutectic Solvents. (resum)	Batlle Sabio, Lluís
5.2	Synthesis of polyheterocyclic ligands for complexation with metals ions. (resum)	Casas Serrano, Sergi
5.3	Cyclometallated platinum(II) and platinum(IV) compounds with terdentate ligands. (resum)	Climent Giménez, Ana
5.4	Intercalation of small molecules into metal halides. (resum)	Delgado Aguilera, Ingrid
5.5	Palladium-Catalyzed C–H bond functionalization for the synthesis of tetrahydroisoquinolines. (resum)	Guillamon Daimiel, Pau
5.6	Phosphine oxides as sensors for lanthanide cations. (resum)	Lista Akasuso, Jagoba

5.7	Study of the single-electron oxidation/reduction of aminocatalytic intermediates by means of indirect electrolysis. (resum)	Rodríguez Marijuán, Paula
5.8	Synthesis of luminescent phosphanes and resulting Au(I) complexes. (resum)	Ubach Cervera, Marc
5.9	Synthesis and characterization of 4'-substituted-2,2':6',2''-terpyridine ruthenium(II) complexes. (resum)	Vanrell Sabater, Antoni
6. Methods and Techniques		
6.1	Determination of food colouring candies: implementation of a new activity in an experimental subject. (resum)	Carrera Villanueva, Laura
6.2	Nanotechnology and communication: From Nano to the World. (resum) (diposit)	García-Nieto Arroyo, Juan
6.3	Development of a mixed experimental box (ChemKit) (physical and online) of chemistry for secondary school. (resum)	Monge Asensio, Mercè
6.4	Examining the effect of the methodology in the variability of the uranium solid-liquid distribution coefficient in soils. (resum)	Navarro Ribero, Aaron

6.5	Hexacyanoferrate(II)-hydrogen peroxide reaction: inhibition by polyalcohols and related compounds. (resum)	Prado Díaz, Pol
6.6	Design and development of didactic material of reinforcement for the fundamental theoretical subjects of Chemistry of the Degree of Chemistry of the UB. (resum)	Sayós Crosas, Clara
6.7	Women's contribution to the periodic table. A proposal of learning activities in the Bachelor of Chemistry Degree. (resum)	Torre Martín, Andrea
6.8	Detection of nucleic acid fragments using DNA triplex structures and silver nanoclusters. (resum)	Valls Martínez, Andrea
7. Bibliographic research		
7.1	Electrochemical preparation of nickel-based catalysts. (resum)	Bargués Coma, Núria
7.2	Optic sensors for metal ion determination: state of the art. (resum)	Coromina Boix, Helena
7.3	Interactions in hydrogen-bonded macrocycles. (resum)	Estellers Moreno, Montserrat

7.4	Advanced Oxidation Processes for Cyanobacteria and Cyanotoxins Removal in Waters. (resum)	García Kelland, Federico Héctor
7.5	Eco-metallic surfaces for jewellery application: transition from Cadmium to Indium in a gold alloy. (resum)	Gil Ginebra, Xavier
7.6	Review of advances in the voltammetric determination of hypertensive and diuretic (or similar) drugs. (resum)	Huapaya Gutiérrez, Katherine
7.7	Progress on 2D MXenes-based photocatalysts. (resum)	Lara Jiménez, Mónica
7.8	Stereoselective methodology and stereoinversion strategies for chiral mechanically interlocked molecules. (resum)	Monereo Murcia, Andrea
7.9	State-of-the-Art of Glycerol Electrochemical Valorization in Acidic Medium. (resum)	Pascual Fulquet, Anna
7.10	The Role of LC-MS and LC-HRMS in the Characterization and Determination of Polyphenols and Phenolic Acids in Food. (resum)	Ruiz Gatell, Ivan
7.11	Analysis of emerging contaminants in industrially processed or cooked foods. (resum)	Torres Brenes, Aida

8. External Organizations

8.1	Synthesis of bifunctional molecules for CERT degradation. (resum)	Arredondo Cadenas, Judith
8.2	Synthesis of DES1 inhibitors to study the sphingolipid metabolism in non-alcoholic fatty liver disease. (resum)	Bello Quiñones, Cristina
8.3	Qualification and validation of the automatic washing machine of auxiliary parts of a centrifuge intended for fibrinogen production. (resum)	Gamito García, Glòria
8.4	Validation of the determination of allergenic fining agent proteins residues (casein and ovalbumin) in wine by ELISA TEST. (resum)	Gómez Sánchez, Azahara
8.5	Formation of water-in-water emulsions with ionic liquids. (resum)	Lorenzo Guijarro, Laura
8.6	Development of a gas chromatography-mass spectrometry method for the determination of allergens in cosmetic products according with Regulation (EC) No 1223/2009. (resum)	Mollà Gómez, Celia
8.7	Synthesis of hybrid nanoparticles towards theragnostics. (resum)	Morales Torrent, Marta

8.8	Synthesis of the C-terminal cholesterol fragment of the protein Sonic Hedgehog. (resum)	Pagán Tomás, Pep Lluís
8.9	Design of an environmental study of the water in the natural habitat of amphibians from the Natural Park of Aiguamolls de l'Empordà. (resum)	Parrón Gómez, David
8.10	Biogas purifications under anaerobic conditions from the study of iron oxides. (resum)	Puig Llorens, Abel
8.11	Towards the total synthesis of (-)-Curcumene and (-)-Curcuquinone. (resum)	Riego Mejías, Carlos
8.12	Preparation of biocompatible polymeric nanoparticles containing protamine for biomedical applications. (resum)	Rosell Bermejo, Clàudia
8.13	DART-HRMS analysis of gossypol and theobromine in feed samples. (resum)	Rozúa Álvarez, Daniel
8.14	Study of otter as potential pollution indicators in natural environments. (resum)	Salvadó Roig, Anna
8.15	REACH registration process of a copper(II) complex used as a fertiliser. (resum)	Sánchez Nieto, Sonia

8.16	Determination of sugars in potatoes and honeys by enzymatic methods coupled with automated UV-Vis Spectrophotometry. (resum)	Serradilla Gallego, Sergio
8.17	Study of the aggregation and DNA-intercalation properties of naphthalene bisimides in function of their side charge. (resum)	Sicart Farré, Sergi
8.18	Establishment of analytical methodology based on FTIR spectrophotometry and multivariate calibration for quality control of dairy products. (resum)	Talero Plaza, Marta
9. Erasmus/Sicue		
9.1	Towards an Effective Synthesis of Functionalized Heptacyclo [6.6.0.02,6.03,13.04,11.05,9.010,14]tetradecane: First Steps to Trifunctionalization and Selective C–H Alkynylations. (resum)	Casanova Alberola, Unai
9.2	Synthesis of dehydroamino peptides and enantioselective alkylazidation. (resum)	Casas Muñoz, Maria
9.3	Towards redox-active covalent organic frameworks. (resum)	Casas Portillo, Albert
9.4	Synthesis and Reactivity of Fluorinated Enamides. (resum)	Conejos Jalencas, Joan

9.5	Modelling Barrier-Impaired Skin: New Insights into the Molecular Basis of Atopic Dermatitis. (resum)	Fàbrega Ribas, Núria
9.6	Copper-mediated deuteration of alkynes and application to deuterated heteroaromatic compounds. (resum)	Garcia i Tarrach, Xènia
9.7	Covalent organic/triazine frameworks for the synthesis of thioamides via a photocatalytic Kindler reaction. (resum)	Gil Bandrés, Maria
9.8	Synthesis and characterisation of DTDA and DSDA radicals. (resum)	González Prats, Oriol
9.9	Feasibility study of using HMF from inulin hydrolysis to obtain BHMF. (resum)	Lamarca Rodés, Àlex
9.10	Phase and Interface Design in Potential Earth-Abundant Multi-Component Photocatalysts. (resum)	Llorens Rauret, David
9.11	Electrochemiluminescence of magnetic microbeads for biosensor application. (resum)	Martín i Chulio, Pol
9.12	Testing a β -version of Py-ChemShell for biomolecular QM/MM calculations. (resum)	Mazo Pirla, Laura Meya

9.13	Study of Bi-based nanostructured electrocatalysts for the selective CO ₂ Reduction Reaction to formate. (resum)	Molina Pucurull, Helena
9.14	Research and Study of Xanthates. (resum)	Muñoz Irimia, Carolina
9.15	Autoxidation kinetics of vegetable oils. (resum)	Pina Benages, Albert
9.16	Planar chiral Rh(I) dibenzo[a,e]cyclooctatetraene complexes: synthesis and application in asymmetric catalysis. (resum)	Sánchez Dana, Gemma
9.17	Synthesis of a dual HALO-SNAP reactive molecule to trigger protein dimerization in live cells. (resum)	Sidro Inglés, Martí