

Final TFG. Semestre de tardor. Curs 2023-24

		Alumne
1. New materials		
1.1	Microfluidic synthesis of 3D covalent organic frameworks (COFs) (resum)	Adell Roca, Miquel
1.2	Development of microcapsules with thermal, mechanical and chemical resistance from plastic waste to contain MPCM (resum)	Baltykova, Altana
1.3	Amphiphilic compounds and their role in biomineralization. (resum)	Calderon Miranda, Elena
1.4	Fabrication and characterization of clot-in-chip platforms (resum)	Cornejo Paredes, Marco
1.5	Synthesis of expanded perovskites with controllable electrical doping (resum)	Espuch Escobar, Miquel
1.6	Synthesis of single-crystals of quasi-2D perovskites for light-absorbing applications (resum)	Mediavilla Pina, Miquel
1.7	Low-cyanide electrolyte for AuCu alloy electrodeposition. (resum)	Sebastià Castarlenas, Enric
2. Food and health		
2.1	Characterization and authentication of meat and meat products using chromatographic metabolomic fingerprints (resum)	Aijon Xalmet, Nil

2.2	Combination of optical and electrochemical methods for the resolution of pharmaceutical formulations (resum)	Baun Carazo, Pol
2.3	Interactions between drugs and biliary salts micelles present in intestinal fluids (resum)	Cabañas Castaño, Ruben
2.4	Design of sensors and preconcentration strategies for the electroanalytical determination of pharmaceuticals (resum)	García Arnan, Xènia
2.5	Gradient elution HPLC/UV method for the determination of sweeteners in soft drinks. (resum) (dipòsit)	Huetos Gual, Joel
2.6	Voltammetric analysis of bioactive compounds in food samples (resum)	Roca Aracil, Marc
3. Environment		
3.1	Photocatalytic Removal of Emerging Organic Pollutants in Water (resum) (dipòsit)	Bautista Rosas, Queralt Lu
3.2	Physicochemical characterization of wastes: providing proficiency testing according ISO 17043. (resum)	Blasco Villegas, Carla
3.3	Simultaneous analysis of plutonium isotopes and ^{90}Sr with fluorescent polymers in tandem. (resum)	Giner Mestre, Mònica
3.4	Optimization of experimental parameters for the electro-oxidation of kraft lignin (resum)	Lladós Clos, Jaume

3.5	Iridium electrocatalysts supported on doped titania nanotubes for oxygen evolution reaction. (resum)	Mena Andrade, Santiago Andrés
4. Computational Studies		
4.1	Stereochemical influence on tuning the transition temperature in Spin-Crossover molecules (resum) (dipòsit)	Alcocer Bernuz, Carlota
4.2	Atomic Doping in Nano-oxides for Photocatalysis (resum)	Huang Haoyu
4.3	Preliminary study of organic radicals generated from 1,3,2-dithiazolyl capable of forming magnetic crystals. (resum)	Montes Segarra, Ainhoa
5. Synthesis and Reactivity		
5.1	Synthesis of molecular boxes using heptazine ligands. (resum)	Blanco Gea, José Antonio
5.2	Synthesis of cyclic peptide antibiotics and related compounds. (resum) (dipòsit)	Candelario Ribas, Hermes
5.3	Synthesis of N-acyl thioimides. Direct, catalytic and asymmetric reactions of construction of C-C bonds. (resum) (dipòsit)	Castella Rodríguez, Josep
5.4	Water-soluble organometallic complexes of lanthanides. (resum)	Conesa Escoda, Marc
5.5	Synthesis of functional organic dyes and their characterization using NMR, MS, UV-vis and fluorimetry. (resum) (dipòsit)	Font Fraga, Oscar

5.6	Synthesis and characterization of imine palladacycles. (resum)	Guadalupe Phang, Eva Sofia
5.7	Fluoride-triggered homoallylic trifluoromethylation of allyl fluorides with gem-difluoroalkenes. (resum) (dipòsit)	Insausti Brull, Gerard
5.8	Synthesis of PROTACs for Castration-Resistant Prostate Cancer. (resum)	Lluch Díez, Xavier
5.9	Synthesis of luminescent phosphane gold(I) complexes. (resum)	Onetti i Batlle, Oriol
5.10	Synthesis of iron (III) porphyrins and study of their magnetic properties. (resum)	Romo Carmona, Marc
5.11	Catalytic alkene and alkyne hydroacylation using Rh(I) complexes with diphosphanes. (resum) (dipòsit)	Saumell Palacios, Nil
5.12	Synthesis, structural and magnetic studies of new coordination complexes 3d and 4f with schiff bases derived from oxalic dihydrazide. (resum)	Sitjar Bote, Pedro
5.13	Characterization of complexes derived from the Ag ^{II} cation as candidate to quantum computation QUBITs. (resum)	Xuriguera Bravo, Clàudia

6. Methods and Techniques		
6.1	Characterisation of modified industrial filtration membranes by chemical imaging and chemometrics (resum)	Frías Bermúdez, Adrià
6.2	Ink optimization for the fabrication of Cu ₂ O-CeO ₂ gas diffusion electrodes. (resum) (dipòsit)	Orcera Busquets, Júlia
6.3	Effect of oxidations in the kinase domain of Src. (resum)	Urbano Romero, Laia
6.4	Copper hydrometallurgic processes. (resum)	Vindel Deras, Katherine N
7. Bibliographic research		
7.1	Metabolomic approach to assess arsenic stress in plants and algae. (resum) (dipòsit)	Bujons Lario, Jana
7.2	Activation of carbon dioxide mediated by organometallic complexes derived from earth-abundant metals. (resum) (dipòsit)	Carrascosa Estaún, Àngela
7.3	Superfluid helium nanodroplets and Chemistry. Fundamentals and applications. (resum)	Costa Boatella, Maria
7.4	Analysis of the effect of viscosity in the design of fluorescent molecular rotors. (resum) (dipòsit)	Gambin Sáez, Albert
7.5	Creation of a database of polonium distribution coefficient in soils. (resum) (dipòsit)	Planas Rafel, Aleix

7.6	Photoactive structures with multiple azobenzene units. (resum)	Ruiz Tienda, Eva
7.7	Formamide formation by different routes and on Titan. (resum)	Santillana López, Noemí
8. External Organizations		
8.1	Human biomonitoring and wastewater-based epidemiology as complementary approaches for early identification of chemical exposure risks at the neighborhood level. (resum) (dipòsit)	Ballester Miró, Olivia
8.2	Effect of TiO2 particle size: haemolytic activity and cell viability determination interference. (resum) (dipòsit)	Bescós Tenas, Laura
8.3	Developing of analytical methodology for the determination of per- and polyfluoroalkyl substances in drinking water. (resum)	Gil Estela, Carlota
8.4	Target Screening of Organic Contaminants in Lettuce Partially Irrigated with Reclaimed Wastewater. (resum)	Jiménez de Parga Gros, Ana
8.5	Implementation of the regulations of Annex 1 of GMP (Good Manufacturing Practice) in the production area of Laboratorios Grifols S.A. P9, Parets del Vallès. (resum)	Martínez Montes, Sonia
8.6	Occurrence of contaminants of emerging concern in urban groundwater samples from Barcelona city. (resum)	Mestanza Castelltort, Erik
8.7	Analysis of plasticizers in bird eggs from Doñana National Park. (resum)	Ortiz Lisbona, Sandra

8.8	Comparative evaluation of different film-forming ingredients as water resistance agents in sun protection products. (resum)	Ruiz Vea, Emma.
8.9	Atroposelective C–H amination. Synthesis of ligands and methodology. (resum) (dipòsit)	Sans Claro, Ariadma
8.10	Study of the electromagnetic shielding effect in a cable of a polymeric compound combined with different types of carbon nanoparticles. (resum)	Sufuentes Pérez, Abel Hermes
9. Erasmus/Sicue		
9.1	Deposition of $\text{BaCo}_{0.4}\text{Fe}_{0.4}\text{Zr}_{0.2}\text{O}_{3-\delta}$ material thin films through chemical solution via Spin-Coating. (resum) (dipòsit)	Gutierrez Arce, Judith
9.2	Transforming waste into fertilizer: exploring the future utilization of spent alkali activated material (aam) adsorbent (resum)	Serrahima Serra, Anna

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		Alumne
1. New materials		
1.1	Exploring high-entropy perovskites for high energy storage capacity. (resum) (dipòsit)	Angulo Ballester, Marta
1.2	Drug encapsulation in protein nanoparticles. (resum) (dipòsit)	Castellanos Pons, Emma
1.3	Use of a low content magnesium oxide to obtain a basic magnesium carbonate of high purity. Laboratory scale study. (resum) (dipòsit)	Freixa Arumí, Núria
1.4	Use of plastic waste to formulate new microencapsulated phase change materials (MPCM) with thermal, mechanical and chemical resistance (resum)	García Carreras, Laura
1.5	Functionalization of hyaluronic acid-based 3D bioinks for 3D printing of neural tissue. (resum)	Mañas Roman, Laura
1.6	Reactive Magnesia Cement: Low carbon cements. (resum)	Melendez Cobo, Míriam
1.7	Preparation of ceramic particles and suspensions for the design of radiofrequency sheets. (resum)	Palau Blanes, Cèlia

1.8	Synthesis and characterization of an 18-karat gold-copper alloy obtained from a low-cyanide bath. (resum)	Puig Pursals, Pere
1.9	Functionalization of microstructures for photo-thermal production of γ -valerolactone. (resum) (dipòsit)	Rigual Miret, Jordi
1.10	Synthesis and characterization of photocurable star-shaped and linear polymers based on polylactic acid (PLA) and polyethylene glycol (PEG). (resum) (dipòsit)	Sanz Fuentes, Alejandro
1.11	Colloidal synthesis of ternary semiconductor nanostructured materials with high NIR absorption. (resum) (dipòsit)	Volkova Volkova, Anna
2. Food and health		
2.1	Identification of bioactive compounds in quinoa groains following a chemometrics-assisted metabolomics approach. (resum) (dipòsit)	Compte Peña, Josep
2.2	Effect of polyphenols on the performance of spectrophotometric assays for the determination of total sugars. (resum) (dipòsit)	Hidalgo Duque, Alex
2.3	Determination of food dyes in soft drinks by UV/Vis spectrophotometry and HPLC-UV/Vis. (resum)	Lorente Saorin, Pau

2.4	UHPLC/UV determination of sweeteners in soft drinks and energy drinks. (resum)	Martínez Herrero, David
2.5	Characterization of Afalfa protein extracts for safe foods. (resum)	Pérez Amor, Adrià
2.6	Characterization and authentication of red wines by Uv-visible and molecular fluorescence spectroscopy. (resum)	Rodríguez Espés, Joel
2.7	Evaluation of liquid chromatography coupled to mass spectrometry for the analysis of glycopeptide biomarkers of pancreatic cancer. (resum)	Sánchez Vilanova, Víctor
3. Environment		
3.1	Metal oxide supported iridum electrocatalysts for the oxygen evolution reaction. (resum) (dipòsit)	Calabrés Casellas, Carlos
3.2	Advanced Photocatalyst Synthesis for Efficient Removal of Emerging Water Contaminants. (resum) (dipòsit)	Domingo Farrà, Anna
3.3	Comparative study between alpha-spectrometry and mass-spectrometry for the analysis of uranium isotopes in drinking water samples. (resum)	Puig Martí, Carles
3.4	Synthesis of photoactive heterostructures for green hydrogen production. (resum) (dipòsit)	Sieiro Deumal, David

4. Computational Studies		
4.1	Calculation of n-hexane/water interfacial tension using molecular dynamics simulations: optimal determination of statistical errors. (resum)	Alorda Borrego, Oriol
4.2	Molecular modeling of the selectivity in artificial DNA base pairs. (resum) (dipòsit)	Bermejo Borrella, Andreu
4.3	Analysis of the electronic structure of Thiele's hydrocarbon analogues with heteroatoms. (resum)	López Martínez, Alex
4.4	Computational study of the optical properties of open-shell antiaromatic molecules. (resum)	Macías Pérez, Adrian
4.5	Computational Study of Membrane-inserted BAK. (resum) (dipòsit)	Sierra Rodríguez, Julian
5. Syntesis and Reactivity		
5.1	Preparation of pentadentate encapsulating ligands with a carboxylate group and its coordination to a Co(III) centre. (resum)	Alfaro Retamero, Javier
5.2	Alternatives to syngas in hydroformylation chemistry. (resum)	Arroyo Moso, Unai

5.3	Lanthanide complexes with phosphine oxides: synthesis, luminescence and magnetism. (resum) (dipòsit)	Balcells Gonfaus, Oriol
5.4	Synthesis of novel building blocks for the formation of redox-responsive supramolecular organic frameworks. (resum) (dipòsit)	Ballester González, Javier
5.5	Construction of homoallylic trifluoromethylated compounds via fluoride-triggered cross-electrophile coupling. (resum) (dipòsit)	Barroso Herrero, Clàudia
5.6	Synthesis of Fe ₃ O ₄ nanocubes coated by spin crossover polymer (Fe ₃ O ₄ @SCO) shell. (resum) (dipòsit)	Bornay Carballal, Noelia
5.7	Synthesis of functional organic dyes and their characterization using NMR, MS, UV-vis and fluorimetry. (resum)	Buedo Castellón, David
5.8	Development of new MOF-based materials for gas sensing. (resum)	Cabañas Gaza, Gerard
5.9	Synthesis and study of the encapsulation of M(oxalate) ₃ [M = Ru (S=1/2), Cr (S=3/2) and Fe (S=5/2)] inside Fe-Helicates. (resum)	Canela Domingo, Eva
5.10	Synthesis of luminescent and/or magnetic compounds derived from lanthanide. (resum)	Choque Alba, Kevin A

5.11	Synthesis of monomers for obtaining liquid-crystalline elastomers with smectic mesophases. (resum) (dipòsit)	De La Dueña Pascuet, Jordi
5.12	Synthesis of deuterated monomers to study the local order in liquid crystal elastomers. (resum)	Delgado Marfil, Anna
5.13	Derivatisation of chiral adducts from reactions of N-Acyl-1,3-oxazolidine-2-thiones with Propargylic Acetals. (resum) (dipòsit)	Fernández Vilana, Marc
5.14	Tailoring the future of quantum computing through rational molecular design of host-guest supramolecular assemblies. (resum)	Luco Pérez, Bernat
5.15	NMR and biophysical studies of stabilized i-motif structures. (resum)	Martínez Aranda, Pedro
5.16	Supramolecular switchable materials based on Spin-Crossover compounds. (resum)	Martínez Vives, Oscar
5.17	Dual catalysis in the reactions of cinnamaldehydes with enamines and Ni(II) enolates. (resum)	Oruña Arasanz, Javier
5.18	Synthesis and characterization of new HIV-1 antiviral agents. (resum) (dipòsit)	Paytubi Cendrós, Albert
5.19	Porphyrins as photoredox catalysts. Photophysical and electrochemical studies of functionalized porphyrins. (resum)	Ponzano Sala, Enric

5.20	Claisen condensations by mechanochemistry. (resum)	Rico Habás, Joel
5.21	Synthesis, structural and magnetic study of Schiff base-derived coordination compounds. (resum)	Rodríguez Domínguez, Carla
5.22	Cyclization reactions via C–H activation processes. (resum)	Ruiz Badia, Víctor
5.23	Heparin responsive Supramolecular Nanomaterial for analyte sensing. (resum)	Ruiz Camps, Ivette
5.24	Synthesis and kinetics of photoisomerization processes of square-planar Pd(II) and Pt(II) water soluble compounds. (resum)	Sanchez Rodríguez, Joel
5.25	Synthesis of novel phenanthroline-based Ru (II) complexes as photosensitizers potentially useful for photodynamic therapy under hypoxia. (resum)	Ventura Crespo, Albert
6. Methods and Techniques		
6.1	Sc-Fe-IIP: Novel scintillating material for selective analysis of ^{55}Fe . (resum)	Alcaide González, Irene
6.2	Characterization of retention for neutral and ionized solutes in hydrophilic interaction liquid chromatography. (resum)	Almarcha Ruiz, Francesc

6.3	Exploring non-oriented substrates for STM Break-Junction Technique. (resum)	Balas, Daria Emily
6.4	Optimization of an airbrush-spray deposition method to fabricate copper-based gas diffusion electrodes. (resum) (dipòsit)	Batalla Porta, Gerard
6.5	Continuous flow cell operation using a Cu ₂ O-CeO ₂ -based gas diffusion electrode. (resum)	Bocanegra Colomer, Roger
6.6	Novel Machine Learning Tools for data treatment in STM Break Junction Technique. (resum) (dipòsit)	Cuscó Rovira, Sara
6.7	Physicochemical processes under microfluidic conditions. (resum) (dipòsit)	Estrades Bestit, Júlia
6.8	Determination of acidity constants in hydroorganic mixtures by potentiometry. (resum)	Garriga Ors, Clàudia
6.9	Innovative Creation of Chemistry Resources and Workshops Tailored for Obligatory Secondary Education. (resum)	Gómez Jiménez, Carla
6.10	Active learning methodologies to improve academic performance: Synchronous Flipped Classroom. (resum)	Guarner Sebastian, Mireia
6.11	Kinetic processes in photosensitive active biomaterials. (resum)	Hidalgo Bueno, Natalia

6.12	Reconstruction of Genome-Scale Metabolic Models using CORDA in colorectal cancer cells. (resum)	Huang, Hengxin
6.13	Feasibility of the method of dating bone remains with Ca-41. (resum)	Marabé Bueno, Sara
6.14	Preparation of a CPSresin for the selective analysis of Ni-63. (resum)	Martínez García, Oscar
6.15	Development of a plasmonic-based optical biosensor. (resum)	Massagué Periago, Martina
6.16	Oxidation of hydrogen peroxide by tungstate ion: kinetic study. (resum)	Salido Pons, Adrià
7. Bibliographic research		
7.1	Platinum complexes containing n-heterocyclic carbena ligands:properties and applications. (resum)	Anguera Travé, Andreu
7.2	Bibliographic search for carbon-carbon coupling reactions catalysed by transition metal complexes. (resum)	Astray Castañeda, Jennifer
7.3	Photochemistry of EDA complexes in enantioselective synthesis. (resum)	Caballé Rodríguez, Sandra
7.4	Alternative ethereal solvents for sustainable organic synthesis. (resum)	Cerrada Palma, Adrián

7.5	Asymmetric photoredox and electrochemical crossdehydrogenative coupling reactions, 2018-2024. (resum)	Crespo Ramiro, Albert
7.6	Plasmonic materials for the analysis and monitoring of the composition of cultural heritage objects. (resum)	Damaré Rodríguez, Daniel
7.7	Cataloguing of ancient scientific instruments from the Analytical Chemistry Section for the Virtual Museum of the UB. (resum)	Fernández Apolinario, Alexia
7.8	Past, present and future prospects of ferrocene and half-sandwich organometallic derivatives as antiviral agents. (resum)	González Molero, Joel
7.9	Additive Manufacturing of Metals and Alloys: tecnologies and applications. (resum)	Herranz Osorio, Judith
7.10	Sustainable synthesis using ionic liquids as solvents. (resum)	Mitjavila Viles, Alba
7.11	Mechanochemistry in organic synthesis. (resum)	Muñoz Solá, Andrea
7.12	Bibliographic help in understanding the physicochemistry of macromolecules by P.J.Flory and its application to polymer chemistry. (resum)	Pallarols Arguilé, Arnau

7.13	Analytical application of UV-vis spectroscopy in an advanced teaching laboratory. (resum)	Pomés Pol, Susana
7.14	A Bibliographic Study of Diradical and Polyradical Molecular Species in Organic Chemistry. (resum)	Puig Nualart, Adrià
7.15	MAX and MXenes-based systems as catalysts for reforming processes. (resum) (dipòsit)	Pulido Borrás, Pol
7.16	Triplex DNA structures in chemical and biochemical analysis. (resum) (dipòsit)	San Millan Castillejos, Ana M
7.17	Synthesis and applications of azocompounds. (resum)	Tonato Arequipa, Andrea E
7.18	Progress on 2D carbide-based photocatalysts. (resum)	Usó Moragues, Verònica
7.19	Purification of plant extracts with high antioxidant activity using macroporous resins. (resum)	Walczykowski, Damian
8. External Organizations		
8.1	Analysis of endocrine disrupting plastic additives in menstrual products. (resum) (dipòsit)	Calvo Salvador, Júlia
8.2	Inorganic-organic hybrid nanomaterials from biocompatible polymers as potential therapeutical tools. (resum)	Enguita Royo, Isaac

8.3	3D printing of innovative catalytic reactors for CO ₂ valorisation by Power to Gas routes. (resum)	Indurain Freixa, Júlia
8.4	Evaluation of elimination processes for micro- and nanobioplastics in waste water treatment plants. (resum)	López Palomeque, Valentina
8.5	Photolysis assessment of three wastewater borne pharmaceuticals, and identification of their transformation products by means of high-resolution mass spectrometry. (resum)	Motis Bria, Marc
8.6	Impact of morphological and compositional features on the optical properties of Bi ₂ S ₃ Nanoparticles. (resum)	Pradas Rodríguez, Albert
8.7	Optimization of the use of water with glycol to clean paint tanks. (resum)	Quesada Martín, Aurora
8.8	Comparing the cytotoxicity and genotoxicity induced by compound with different phototoxic properties. (resum) (dipòsit)	Reig Plazas, Eloi
8.9	Consolidation of data integrity control in the Quality Control department of Recipharm Parets SLU. (resum)	Rigau Castells, Marta
8.10	Deposition of Polymeric Layers on Seeds using Plasma Technology and their Effects on Germination Processes. (resum) (dipòsit)	Salguero Hormichea, Paula

8.11	Synthesis of TiO ₂ -modified Fischer-Tropsh catalysts by Atomic Layer Deposition. (resum) (dipòsit)	Soler Martín, Ruben
8.12	Integration of analytical and chemometric tools for monitoring water pollutants. (resum)	Torner Ortiz, Jaume
8.13	Evaluation of elimination processes for bioplastic additives in waste water treatment plants. (resum)	Torres Arévalo, Eloy
8.14	Supramolecular Cages for the Recognition and Transmission of Chirality. (resum) (dipòsit)	Usan Escala, Eudald
8.15	Synthesis and optimization of Tyrosine molecular receptors with anticancer activity. (resum)	Valero Roman, Anna
9. Erasmus/Sicue		
9.1	Synthesis of vicinal chloro-fluoropyranoses and study of their lipophilicity. (resum)	Calderon Rodríguez, Ariadna
9.2	Reuse of alkaline sulphate emission from battery industry. (resum)	Capdevila Resa, Judith
9.3	Exploring Protein Biochemistry through Individualized Experiments. (resum)	Conde Piera, Marta
9.4	Synthesis and characterization of thermo-responsive and cross-linkable Hydroxypropyl Cellulose Acrylate microgels. (resum)	Enriquez Barrero, Fernando

9.5	Solvent-Free and Ball Mill-Free Halogenation of Heteroarenes via C–H Activation by Rhodium Catalysis. (resum)	Estebanez Rosich, David
9.6	Investigating the viability of solventless Native Chemical Ligation (NCL) using mechanochemistry. (resum)	Gòdia Soler, Gemma
9.7	Biohybrid Adhesives: Access to Tannin-based Crosslinkers for TCCchemistry. (resum)	Mihasan, Alejandra
9.8	Calculations of Transient Absorption Spectra of Transition Metal Complexes. (resum)	Planelles Samper, Jan
9.9	Recovery of critical raw materials from LED samples. (resum)	Ruiz Sánchez, Clàudia
9.10	Development of New Electron Transport Layer Materials for Perovskite Solar Cells. (resum) (dipòsit)	Van der Berg Ferrer, Gaia