



Universidad de
Castilla-La Mancha



XIX YOUNG SCIENCE SYMPOSIUM

FACULTY OF CHEMICAL SCIENCES AND TECHNOLOGY

#XIXYoungScienceSymposium

16 - 18 July 2025

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**CERTIFICATE OF
ATTENDANCE
FOR ALL
PARTICIPANTS**

**DIFFERENT
PRIZES
CATEGORIES!**

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XIX YOUNG SCIENCE SYMPOSIUM

Ciudad Real, 16th-18th July 2025

CERTIFICATE OF ATTENDANCE for all participants



Scientific committee:

Manuel Andrés Rodrigo, Dean of Faculty
Carmen Guiberteau Cabanillas, Vice-dean of Faculty students
Sergio Gómez Alonso, Vide-dean of Faculty Transfer and Visibility
Antonio Manuel Rodríguez García, Vocal STCLM-RSEQ
Claudia López Sánchez, Analytical Chemistry
Inés María Ramos Monge, Food Sciences and Technology
Carlos Ginés Gómez, Inorganic Chemistry
Alberto Rodríguez Gómez, Chemical Engineering
Cristina Martín Jiménez, Organic Chemistry
Sara Artigas Jerónimo, Biochemistry

Organization committee:

Abelardo Sánchez Oliva, Organic Chemistry
Alberto Moreno Fernández, Inorganic Chemistry
Clara Inés Alcolado Olivares, Physical Chemistry
Natalia Villamayor Moreno, Analytical Chemistry
Darío Martínez Martínez, Mathematics
David Robles Cuenca, Applied Physics
Diego Jesús González Serrano, Organic Chemistry
Ester López Fernández, Chemical Engineering
Iván Torres Moya, Organic Chemistry
María Osorio Alises, Food Sciences and Technology

Wednesday 16th of July 2025

SALÓN DE ACTOS, EDIFICIO SAN ALBERTO MAGNO, FACULTAD DE CIENCIAS Y TECNOLOGÍAS QUÍMICAS

9:00- Registration and Welcome

9:30- Invited Lecturer: **Juan Antonio González**: “¿Por qué los científicos no son millonarios?” (Chair: Alberto Rodriguez)

10:15- Invited Lecturer **Dr. Mario Gutiérrez Tóvar**: “Luces, Ciencia, ¡Acción!: Un camino empleando MOFs fotoactivos para enfrentar los retos actuales.”. (Chair: Cristina Martín)

11:00- Coffee Break.

11:30- Opening ceremony: **Dr. Julián Garde (Rector UCLM)**, **Dr. José A. Castro (General Director JCCM)**, **Dr. Manuel Rodrigo (Dean FCTQ)**, **Dra Marian Herrero (President STCLM-RSEQ)** and **Dra. Carmen Guiberteau (Vicedean FCTQ)**.

12:00- Invited Lecturer **Dr José Cernicharo Quintanilla**: “Astrofísica: Observación teoría y laboratorio”. (Chair: Clara Inés Alcolado)

12:45-1st session (Chair: Alberto Rodríguez)

- "Optimizing Reproductive Technologies with Hydrogel-Based Scaffolds". Laura López Castellanos. Química Orgánica.
- “Dual drug delivery by gelatin-hydrogel enhances synergistic effect in breast cancer therapy”. Irene Sevilla Carrillo. Química Inorgánica
- "Unlocking the potential of Quantum Dots as biosensors: new applications for theragnosis". Sofia Blas Gómez. Química Física
- “Modeling and Simulation of the Dynamics of a Subaquatic Hydrothermal Geyser Prototype”. Jesús Saucedo López. Matemáticas.

16:00- 2nd session (Chair: Clara Inés Alcolado)

- “Microalgae-Based Strategies for CO₂ Capture and Valorization”. Sandra María Maldonado Domínguez. Ingeniería Química.
- “Development and Physicochemical and Sensory Characterization of Hybrid Beverages made from Garnacha, Blackberries and Blueberries”. Sofia Parra Cadenas. Tecnología de Alimentos.
- “Tuning lipophilicity in ruthenium-based organometallic complexes for breast cancer therapy”. Beatriz Cuartero Gómez. Química Inorgánica
- “Synthesis of 2D Hybrid Nanomaterials”. José Manuel Moreno del Río. Química Orgánica.
- “Determining oxidative damage in ovine sperm DNA using LC-MS/MS”. Manuel Alfaro Gómez. Química Analítica.
- “Selection of mycoprotein-producing yeasts as a new source of non-meat proteins”. Noelia Viveros Lizondo. Tecnología de Alimentos

TFE FLASH VIDEOS (Chair: Alberto Moreno)

18:00- 3rd session (Chair: Abelardo Sánchez)

- "Determination of folic acid using green nanoparticles: A sustainable nanotechnology-based approach". Dimitrios Ziogkas. Química Analítica
- "Maximizing Photo-CIDNP Efficiency Through Parameter Study and Optimization". Juan Antonio García Romero. Química Orgánica
- “Role of the oxidation of carbonyl compounds initiated by Cl and HOONO in the environment”. Clara Inés Alcolado Olivares. Química Física
- “Assessment of wine's phenolic and volatile composition and sensory impact in wines sequentially inoculated with L. thermotolerans strains isolated from Castilla-La Mancha”. Tania Paniagua Martínez. Tecnología de Alimentos. (online)
- “TiC-SiC as a catalytic support for H₂ production form NH₃”. Carlos Martín. Ingeniería Química.

PhD FLASH VIDEOS (Chair: Abelardo Sánchez)

PRIZES:

- ✓ Prize of Young Science Faculty of Sciences and Technology
- ✓ Virtual-Flash Prize: TFG/TFM/PhD Categories

Thursday 17th of July 2025

SALÓN DE ACTOS, EDIFICIO SAN ALBERTO MAGNO, FACULTAD DE CIENCIAS Y TECNOLOGÍAS QUÍMICAS

9:00- 4th session (Chair: Sara Artigas)

- “Photocatalytic activity of half-sandwich Ir(III) complexes in organic synthesis under mild conditions”. Carlos Gonzalo Navarro. Química Inorgánica.
- “Development of smart biinks for biomedical bioprinting applications”. Juan Alcaide del Río. Química Orgánica.
- “Photolysis of carbonyl compounds in the gas phase under tropospheric conditions”. Azahara Ortiz López. Química Física.
- “Assessment of the native hyperaccumulator plant *Spergularia rubra* for the phytoextraction of rare earth elements from soils and waste”. Carlos Rodríguez de Liébana Avilés. Ingeniería Química.
- “Effect of resveratrol on brain cells and adenosine receptor trafficking”. Zaira Llana Fernández. Bioquímica.

10:15- 5th session (Chair: Ivan Torres)

- “Nanostructures of Heusler alloys for spintronics”. David Robles Cuenca. Física Aplicada.
- “Smart Crystallization of pABA by Microfluidics”. Irene Chacón Jiménez. Química Orgánica.
- “Tailoring of encapsulation microcarriers for spray-dried of olive leaf terpenic acids to enhance bioactive delivery”. Carlos Abellán Diéguez. Tecnología de Alimentos.
- “Valorization of agro-industrial waste for the production of low-methoxyl pectin: towards a more sustainable application and circular economy”. Imed Eddine Benmebarek. Química Orgánica.
- “Overcoming Matrix Effects in SP-ICP-MS using isotope dilution analysis with platinum nanoparticles as a case study”. Marta Hernández. Química Analítica.

11:30- Coffee Break.

12:00- 6th session (Chair: David Robles)

- “Rare-earth-transition-metal alloys and multilayers with perpendicular magnetic anisotropy as promising candidates for information storage devices”. Antonio Marcos de León Sánchez. Física Aplicada.
- “Breaking carbon-carbon bonds: circular synthesis of acetylenes and ketones”. Jesús Naranjo Rodríguez. Química Inorgánica.
- “Development of a 3D-Printed Microbial Fuel Cell Prototype”. Isabel Torrejón Guerrero. Ingeniería Química.
- “Microextraction of mifepristone with a ferrofluid based on a renewable deep eutectic solvent”. Maxell Rafael Rodríguez Medina. Química Analítica.
- "Room temperature CeO₂-based sensor for the monitoring of ammonia gas". Miriam Villa Díaz. Química Física.
- “Synthesis of isocyanate-free bio-polyurethanes (BIO-NIPUI) using supercritical technology”. Patricia Cruza Rodelgo. Ingeniería Química.

PhD FLASH VIDEO (Chair: María Osorio)

16:30- 7th session (Chair: María Osorio)

- “Sustainable H₂O₂ production using nitrogen-doped carbon cathodes derived from residual biomass”. Agustina Parodi. Ingeniería Química
- “Towards a point-of-care diagnostic platform for nucleic acid oxidative biomarker using MIP-based electrochemical sensing”. Jeniffer de la Caridad Martínez González. Química Analítica.
- “Galium (III) catalysts for the synthesis of biodegradable polyesters”. Alberto Moreno Fernández. Química Inorgánica
- "Enhanced Combination Therapy for Triple Negative Breast Cancer Using Nanocarriers". Cristina Blasco Navarro. Química Física.
- “From Agro-Industrial Waste to Functional Ingredients: A Scientific Strategy for Cosmeceutical Development”. Abigail García Villegas. Tecnología de Alimentos.

21:00- Gala Dinner

Friday 18th of July 2025

SALÓN DE ACTOS, EDIFICIO SAN ALBERTO MAGNO, FACULTAD DE CIENCIAS Y TECNOLOGÍAS QUÍMICAS

9:00- Invited Lecturer **Koldo Artola**: “Aplicaciones de fabricación aditiva en el sector SALUD”. (Chair: Cristina Martín)

9:45- Invited Lecturer **José María Arcos**: “Del laboratorio a la sociedad: el impacto de la divulgación”. (Chair: Diego J. González)

10:30- Coffee Break

11:00- Invited Lecturer **Francisco Javier Moreno Pérez**: “No permitirte aceptar que eres suficiente en aquello que eres más que suficiente: el fenómeno del impostor”. (Chair: Claudia López)

11:45- Presentation of the Territorial Section of the Royal Spanish Society of Chemistry (**STCLM-RSEQ**), **Dra. María Antonia Herrero Chamorro**

12:00- Presentation of the Asociación Castellano Manchega de Ingenieros Químicos y Colegio Oficial de Profesionales en Ingeniería Química de Castilla-La Mancha (**ACMIQ/COPIQCLM**), **Alba Villardón / Celia Gómez**.

12:15- Presentation of **Incarlopsa**, **Montserrat García García**.

12:30- Presentation of **AGROVIN**, **Ricardo Jurado Fuentes**.

12:45- Awards and Closing Ceremony: **Dr. Ricardo Cuevas (Vice-rector UCLM)**, **Dra. Rosario Serrano (Director INNOCAM-JCCM)**, and **Dr. Manuel Rodrigo (Dean FCTQ)**.

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