



ASCOS 2025

ADVANCED STUDY COURSE ON
OPTICAL CHEMICAL SENSORS

20 - 27 July 2025
León (Spain)

ASCOS XIII - General Information

The **Advanced Study Course on Optical Sensors** is a European initiative to establish education, discussion, and a contact platform for young researchers working in the growing field of optical chemical sensors and biosensors. ASCOS is a biennial event, held each time in a different European country, and receives students and tutors from around the world. In 2025, we are celebrating the **13th edition of the ASCOS Series** in León (Spain).

The aim of ASCOS is to bring together bright young scientists (from Master level upwards), coming from all fields of expertise related to optical (bio)chemical sensors, to learn from selected tutors and each other in a relaxed atmosphere.

ASCOS follows a model that strongly stimulates interaction among the students and the expert tutors:

- **Tutorial Lectures:** covering fundamental theory and basics at a level accessible for every participant, and the exciting latest developments and applications of optical sensor technologies. The lecturers are established and renowned scientists in their respective fields, carefully selected by the ASCOS advisory board to ensure a high scientific level.
- **Project Group Work:** the students are challenged to apply their knowledge in solving specific real-life problems using optical sensor systems. Aided by the expert tutors, small and mixed groups of 5 – 6 students will work together during the course and present their solution to a given problem to an audience representing the international scientific community.

Furthermore, ASCOS 2025 also includes **complementary sessions** on Intellectual Property, Scientific Publications, and a Round Table on Career Opportunities, with invited experts on optical sensors currently working in academia, industry, and other exciting professional options.

Together with the scientific program, there will be ample opportunity for socializing and networking, thus facilitating the other major aim of ASCOS: to form a network of interdisciplinary and international contacts and cooperation.



ASCOS previous editions

ASCOS XIII – Registration & Schedule

Registration

The **registration fee** covers the admission to the course, accommodation (seven nights) with full board, school materials, coffee breaks, welcome reception, gala dinner, and social program.

The registration fee is **900€**.

Due to the high demand for participation and to ensure the proper functioning of the school according to its principles (interactive sessions, limited number of students), a pre-selection process will be conducted:

Pre-registration form: <https://forms.office.com/e/PGuLR7WxNW>

Deadline for pre-registration: 31st January 2025

Admission to the course will be communicated before the end of **February 2025**.

Deadline for registration and fee payment: 31st March 2025

Venue

León is a pleasant and welcoming city that offers visitors a perfect balance between its old medieval core and modern areas, with a great historical and artistic heritage. The city is easily crossed on foot and the incredible natural landscape of the province makes it ideal for an enjoyable and refreshing summer stay.

School' Schedule

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
7.30h	Arrival	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast
8h		Welcome	TUTORIAL	TUTORIAL	TUTORIAL	TUTORIAL	Presentations	Check out
8.30h								
9h		OPENING	TUTORIAL	TUTORIAL	TUTORIAL	TUTORIAL		
9.30h								
10h		Logistics	Break	Break	Break	Break		
10.30h								
11h		TUTORIAL	TUTORIAL	TUTORIAL	Complementary Session	TUTORIAL	Presentations	
11.30h								
12h		TUTORIAL	Lunch	Lunch	Lunch	Lunch	Lunch	
12.30h								
13h	Check in	Group distribution	TEAM WORK	SOCIAL EVENT	TEAM WORK	TEAM WORK	Complementary Session	Departure
13.30h								
14h		ACTIVITY	TEAM WORK	SOCIAL EVENT	TEAM WORK	TEAM WORK	CLOSING	
15h								
15.30h								
16h								
16.30h		FREE TIME	Dinner	Dinner	Dinner	Dinner	Gala Dinner	
17h								
17.30h		Cocktail / Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	
18h								
18.30h	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner		
19h								
19.30h	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner		
20h								

Preliminary program

Day 1 Introduction & Overview	Prof. Laura M. Lechuga (ICN2, Spain)	Introduction to Optical Sensors and Biosensors
	Prof. Francesco Baldini (IFAC-CNR, Italy)	Optical (Bio)sensors for Medical Applications
	Prof. Klaus Koren (Aarhus Uni, Denmark)	Optical Sensors for Environmental Applications
Day 2 Label-free Optical Biosensors	Prof. Jiri Homola (CAS, Czech Republic)	Plasmonic Biosensors
	Dr. Maria Soler (ICN2, Spain)	Silicon Photonics Biosensors
	Prof. Pedro Jorge (INESC, Portugal)	Photonic Resonators
	Prof. Artur Dybko (Warsaw Uni., Poland)	Optoelectronics
Day 3 Labelled Optical (Bio)sensors	Prof. Guillermo Orellana (UCM, Madrid)	Luminescence-based Sensors
	Dr. Maria J. Marín (UEA, UK)	Fluorescence-based Intracellular Sensing
	Dr. Elba Mauriz (León Uni., Spain)	Molecular Recognition and Sensor Biofunctionalization
	Prof. Gerhard Mohr (Janneum GmbH, Austria)	Fluorescent Nanomaterials
Day 4 Spectroscopy Sensors	Prof. Boris Mizaikoff (Ulm Uni., Germany)	Infrared Spectroscopy
	Prof. Martin Kraft (CHASE GmbH, Austria)	Raman Spectroscopy
Complementary Sessions	Prof. Boris Mizaikoff & Prof. Francis Ligler (ACS Publications)	Scientific Publications
	Prof. George Ligler (Texas A&M Uni., USA)	Intellectual Property Protection
Day 5 System Integration	Prof. Francis Ligler (Texas A&M Uni., USA)	Systems Integration
	Prof. Sabeth Verpoorte (Groningen Uni., NL)	Microfluidics
	Prof. Romeo Bernini (IREA-CNR, Italy)	Optofluidics
	Prof. Eden Morales (UNAM, Mexico)	Data Analysis and Artificial Intelligence
Day 6 Complementary Session	<i>to be determined</i>	Round Table on Career Opportunities

ASCOS XIII – Executive Committees

Organising Committee



Dr. Maria J. Marín
University of East Anglia (UEA, UK)



Dr. Elba Mauriz
University of León (Spain)



Dr. Maria Soler
Catalan Institute of Nanoscience
and Nanotechnology (Spain)



Prof. Laura M. Lechuga
Catalan Institute of Nanoscience
and Nanotechnology (Spain)

Executive Committee



Dr. Francesco Baldini
Institute of Applied Physics
CRN – Consiglio Nazionale delle Ricerche
Italy



Prof. Dr. Jiri Homola
Institute of Photonics and Electronics
Academy of Sciences of the Czech Republic
Czech Republic



Dr. Martin Kraft
Competence Center CHASE GmbH
Austria

Scientific Advisory Board

- Prof. Hatice Altug (EPFL, Switzerland)
- Dr. Francesco Baldini (IFAC-CNR, Italy)
- Dr. Romeo Bernini (IREA-CNR, Italy)
- Prof. Sergej Borisov (Graz Univ., Austria)
- Prof. Artur Dybko (Warsaw Univ. Poland)
- Dr. Ambra Giannetti (IFAC-CNR, Italy)
- Prof. Jiri Homola (CAS, Czech Republic)
- Dr. Pedro Jorge (INESC-TEC, Portugal)
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- Prof. Boris Mizaikoff (Ulm Univ., Germany)
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- Prof. Dimitri Papkovsky (Cork Univ., Ireland)
- Dr. Tero Soukka (Turku Univ., Finland)
- Prof. Sabeth Verpoorte (Groningen Univ., The Netherlands)

Contact Details



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www.ascos.org

Important Dates:

Pre-registration & Grant Application:
January 31st, 2025

Notification of Acceptance:
February 28th, 2025

Final Registration:
March 31st, 2025

Payment due:
March 31st, 2025