



Short-term Training for technical staff and scientists

Hydrogen production by solar photocatalysis in presence of organic electrons donors.

Location: Spain – PSA (CIEMAT)

Date: 28th and 29th of March 2023

Target group: The course is designed for technicians, PhD-students and postdoctoral researchers from European Research Centres/ Universities and companies who want to be trained on technologies for hydrogen production by solar photocatalysis.

Objective: This course focuses on the application of solar technologies for hydrogen production in presence of organic electrons donors. The training consists of both theoretical and practical modules.

Trainers: Scientists and Specialists from the Solar Treatment of Water Research Unit at PSA

The training will include visits, procedures, standards and best practices theoretical, experimental 'hands-on' experience, and cover the following topics:

- Water-energy nexus
- Solar heterogeneous photocatalysis fundamentals. Application to hydrogen production.
- Solar reactors for hydrogen production.
- Practical sessions to reinforce the theoretical work covered in the course.

This short-term training course will be developed totally in person.

Deadline for submission of application form: 13th of March 2023. Communication to selected applicants: 15th of March 2023.

Agenda

First day

09:00 - 09:15	Arrival-Registration and delivery of documentation		15 min
09:15 – 10:00	Introduction and Goals: Water-energy nexus, challenges in recent years, solar energy and hydrogen, solar heterogeneous photocatalysis fundamentals, solar photoreactors, application to hydrogen production.	Prof. Sixto Malato	45 min
10:00–11:00	Visit to the outdoor and indoor facilities of the Solar Treatment Water Unit of the PSA.	Dr. Isabel Oller	60 min
11:00- 11:15	Coffee break		15 min
11:15- 12:00	Practice 1. Solar pilot plant for hydrogen production. Operation.	Dr. Alba Ruiz	45 min
12:15- 13:00	Practice 2. Solar pilot plant for hydrogen production. Hydrogen determination by Gas Chromatography with Thermal Conductivity Detector (GC/TCD).	Dr. Alba Ruiz	45 min
13:00 – 14:00	Lunch		60 min
14:00-16:00	Practice 3. Hydrogen production by naked TiO ₂ P25 in solar pilot plant. Low efficiency case.	Joyce Villachica/ Dr. Alba Ruiz	120 min
16:00	End of meeting		

Agenda

Second day

09:00 - 09:15	Arrival- welcome coffee		15 min
09:15 – 11:00	Practice 4. Hydrogen production by CuO + TiO ₂ P25 in solar pilot plant.	Joyce Villachica/Dr. Alba Ruiz	105 min
11:00- 11:15	Coffee break		15 min
11:15- 13:00	Practice 5. Hydrogen production by CuO + TiO ₂ P25 in solar pilot plant using organic contaminants.	Joyce Villachica/ Prof. Sixto Malato	105 min
13:00 – 14:00	Lunch		
14:00-16:00	Practice 6. Hydrogen production by NiO + TiO ₂ P25 in solar pilot plant using organic contaminants.	Joyce Villachica/ Prof. Sixto Malato	120 min
16:00	End of meeting		

MEETING PLACE & ACCOMMODATION

Training place	Solar Treatment Water Unit. Plataforma Solar de Almería (CIEMAT)
Address Training Location:	Ctra. de Senés km. 4,5 Tabernas (04200) Almería
How to get to the Training place from the airport	A transport will be organized from Almería downtown
Restaurant place	To be decided
Accommodation	Hotel in Almería downtown. Hotel contact and special rates will be provided to participants.
Contacts for the Training	Prof. Sixto Malato (sixto.malato@psa.es)
Participation confirmation for the Training	SFERA III website : https://sfera3.sollab.eu/events/list/



Application Form for Short-term Training for technical staff and scientists
Hydrogen production by solar photocatalysis in presence of organic electrons donors.

28th – 29th March 2023

CIEMAT-PSA, Crta. Senés Km 4.5, 04200 Tabernas, Almería, SPAIN

Please send the filled-out form and a brief curriculum vitae to sixto.malato@psa.es,
isabel.oller@psa.es, and ricardo.sanchez@psa.es.

First Name:

Last Name:

Passport/DNI number :

Company:

Position in Company:

Address

E-Mail:

Telephone:

Which topic are you most interested in?