



XIII ENCMP

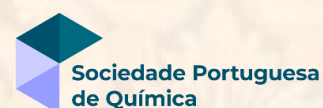
IV RGC

XIII Encontro Nacional de
Catálise e Materiais Porosos

IV Reunião do Grupo do Carbono

BOOKLET

15-17 June 2026
ISEL, Lisboa, Portugal



Chairs

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Ana Paula Carvalho (Ciências|ULisboa)

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Secretariat

Cristina Campos (SPQ)
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General Information

Venue

XIII Encontro Nacional de Catálise e Materiais Porosos e IV Reunião do Grupo do Carbono will take place at the Instituto Superior de Engenharia de Lisboa (ISEL), in Lisboa.

Registration

Participant registration will take place at the entrance hall of Building C of the Instituto Superior de Engenharia de Lisboa (ISEL), at the time indicated in the program.

Oral Communications

Plenary lectures will have a duration of 1 hour. Keynote presentations will last 30 minutes, and oral communications will have a duration of 15 minutes, including the discussion period in all cases.

Poster Communications

Poster dimensions should not exceed 90 cm in width and 120 cm in height, in accordance with the space allocated for each poster. Authors are requested to be present beside their posters during the discussion session. Posters must be removed by the authors at the end of the conference.

ExpliC₂a-Me

The participants will have 6 minutes to present their work in a simple and engaging way. The presentations will be evaluated by a jury with no research experience.

Projection Equipment

The room for oral presentations is equipped with a computer (Microsoft Office) and a projection system. Each speaker must upload the presentation file (PowerPoint format or PDF) to the room computer at least in the break before the session.

Sunset Gathering

The sunset gathering will take place on June 15th at Capricciosa (Parque das Nações, Passeio das Tágides 2.26.01, 1990-280 Lisboa) from 19:30 to 22:00.

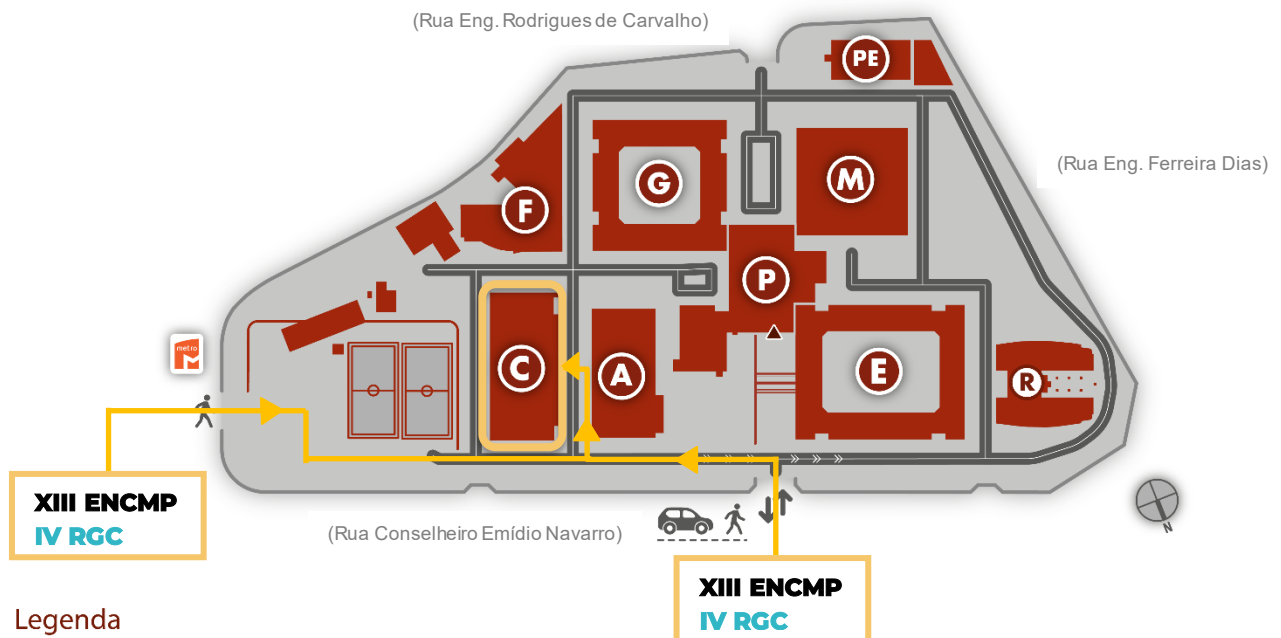
Gala Dinner

The conference dinner will take place on June 16th at 19:30 at Café Império (Av. Almirante Reis 205 A, 1000-048 Lisboa (Metro Alameda)).

Venue



- | Registration **Building C** Atrium Floor 0
- | Sponsor Exhibitions: **Building C** Floor 3
- | Opening and Closing Sessions **Building C** Floor 3 – Auditorium C
- | Plenary Lectures and Keynotes: **Building C** Floor 3 – Auditorium C
- | Oral communications: **Building C** Floor 3 – Auditorium C & Room C.3.16
- | Poster Sessions: **Building C** Atrium Floor 3
- | Coffee Breaks: **Building C** Atrium Floor 3
- | Lunch: **Building C** Atrium Floor 3



Legenda

- | | |
|---|---|
| <p>A Edifício A - Gestão Académica e Apoio ao Estudante Tesouraria
Biblioteca Relações Externas e Internacionalização
Informática Presidente Auditório A Restauração</p> <p>C Edifício C - Salas de Aula Laboratórios Auditório C
Espaço de Apoio ao Aluno</p> <p>E Edifício E - Salas de Aula Laboratórios Auditório E Incubadora</p> <p>F Edifício F - Laboratórios Auditório F</p> | <p>G Edifício G - Laboratórios Salas de Aula</p> <p>M Edifício M - Salas de Aula Laboratórios ISEL Fórmula Student</p> <p>P Edifício P - Átrio Principal Auditório P Cantina SASIPL Sala Comida de Casa</p> <p>PE Pavilhão do Estudante - Associação de Estudantes Estudantina Tuna Feminina
Reprografia e Papelaria Restauração</p> <p>R Residência Maria Beatriz</p> |
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Program overview

	June 15 th	June 16 th	June 17 th
9:00-10:00	Registration	Plenary 2 - Conchi Ania "Carbon materials for the sustainable electrochemical and photocatalytic transformation of strategic molecules: H ₂ O, CO ₂ and N-compounds"	
10:00-10:30	Opening session	Coffee break	
10:30-10:45		O21 - Gabriela Corrêa	Plenary 3 - Elodie Devers "Catalysis for energy transition: IFPEN's journey from research to innovation"
10:45-11:00	Plenary 1 - Francisco J. Maldonado Hódar "Catalysts activation by carbons"	O22 - Ana Regadera-Macías	
11:00-11:15		O23 - Valentina Silva	O41 - Cristian Castillo
11:15-11:30		O24 - Sergio Morales-Torres	O42 - Madalena Wu
11:30-11:45	Keynote 1 - Inês Graça "From CO ₂ and Biomass to Plastic Valorisation: Zeolite-Driven Catalysis for a Low-Carbon Future"	Keynote 4 - Antonio Leyva Pérez "Sustainable synthesis of industrial organic products with catalytic porous materials"	O43 - Rita Assis dos Santos
11:45-12:00		Lunch break	O44 - Thais Berberich
12:00-13:30			
13:30-13:45	Keynote 2 - Maria João Rosa "Activated carbon adsorption in watertreatment - an expanding application"	Keynote 5 - Cláudia Gomes Silva "Engineering Carbon Nitride Nanomaterials for Photo- and Biocatalysis"	Keynote 7 - Ramôa Ribeiro Prize
13:45-14:00		O29 - Mariana Felgueiras	
14:00-14:15	O1 - Catarina Lopes	O30 - Clara Rodrigues Pereira	ExpliC₂a-Me como se nem tivesse 18 anos: Desafio de divulgação científica sobre Carbono, Catálise e Materiais Porosos
14:15-14:30	O2 - Bárbara Sequeira	O31 - José Barbosa	
14:30-14:45	O3 - Diogo Nascimento	O32 - Ângelo Alves	
14:45-15:00	O4 - Dinis Silva	O33 - Fátima Mirante	
15:00-15:15	O5 - Cátia Graça	O34 - Hugo Lapa	
15:15-15:30		Coffee break + Poster session	
15:30-15:45			
15:45-16:00			
16:00-16:15	Coffee break + Group photo		Coffee break
16:15-16:30	Keynote 3 - Rui Martins "Catalytic processes for the wastewater treatment: from the lab to the full scale application"	Keynote 6 - Manuel Souto Salom "Electroactive porous framework materials for energy storage applications"	Ramôa Ribeiro Prize for Best PhD thesis in Catalysis
16:30-16:45	O11 - João Lemos	O35 - João Silva	Prize for Best PhD thesis in the area of Carbons
16:45-17:00	O12 - Carmen Bacariza	O36 - Ana Amaral Dias	
17:00-17:15	O13 - Katarzyna Eblagon	O37 - Marta Nunes	Closing session + Prizes
17:15-17:30	O14 - Luís C. Branco	Meeting of the Carbon Group	
17:30-17:45	O15 - Daniel Costa		
17:45-18:00	Meeting of the Division of Catalysis and Porous Materials		
	Sunset Gathering	Gala dinner	

PROGRAM

Monday, June 15th 2026

9:00 - 10:00 Registration

Auditorium C*Ana Paula Carvalho | Filipa Ribeiro | Joaquim Faria | José Nascimento | Manuel Matos*

10:00 - 10:30 Opening Session

Auditorium C

10:30 - 11:30 **Plenary Lecture 1** *Chairs: Filipa Ribeiro | Fernando Pereira*
Catalysts activation by carbons
Francisco J. Maldonado Hódar

10:15 - 10:30 **Keynote 1** *Chair: Filipa Ribeiro*
From CO₂ and Biomass to Plastic Valorisation: Zeolite-Driven
Catalysis for a Low-Carbon Future
Inês Graça

12:00 - 13:30 LUNCH

Auditorium C

13:30 - 14:00 **Keynote 2** *Chair: Ana Paula Carvalho*
Activated carbon adsorption in water treatment
- an expanding application
Maria João Rosa

Auditorium C*Chair: Luís Miguel Madeira*

14:00 - 14:15 **O1 – Catarina Lopes**
Degradation of PFOA using carbon-based materials

14:15 - 14:30 **O2 – Bárbara Sequeira**
Causal discovery in heterogeneous catalysis: bridging
causality and data-driven catalyst development

14:30 - 14:45 **O3 – Diogo Nascimento**
Structure composition effect on methane oxidation by
thermal- and plasma-assisted DBD catalysis

14:45 - 15:00 **O4 – Dinis Silva**
A strategy to improve porous MOF structural stability for the
effective removal of S/N pollutants from fuels

15:00 - 15:15 **O5 – Cátia Graça**
Transforming spent coffee capsules into advanced carbon
materials for catalytic ozonation of refractory water pollutants

Room C.3.16*Chair: Vânia Calisto*

- 14:00 - 14:15** **O6 – Alexandre Alves**
A combined gravimetric-calorimetric approach for CO₂ adsorption: system design and validation
- 14:15 - 14:30** **O7 – Albertina Rios**
Competitive adsorption of vanillin, vanillic acid, and acetovanillone onto SP700 resin
- 14:30 - 14:45** **O8 – Raquel Fernandes**
Microporous titanasilicate ETS-4 for the efficient removal of neodymium from aqueous systems
- 14:45 - 15:00** **O9 – Rafael Dias**
Methane and nitrogen separation by gas-phase simulated moving bed in 3D-printed activated carbon monoliths
- 15:00 - 15:15** **O10 – Henry Ortega-Ortiz**
3D-printed ZIF-8 monoliths for selective ethane adsorption in ethane/ethylene separation

15:15 - 16:15 **COFFEE BREAK & GROUP PICTURE**

Auditorium C

- 16:15 - 16:15** **Keynote 3** *Chair: Cristina Freire*
Catalytic processes for the wastewater treatment: from the lab to the full scale application
Rui Martins

Auditorium C*Chair: Helder Gomes*

- 16:45 - 17:00** **O11 – João Lemos**
Heterogeneous Fenton treatment of wine distillery effluents for water reuse using bio residue-derived materials
- 17:00 - 17:15** **O12 – Carmen Bacariza**
Metal-supported zeolites for plasma-assisted catalysis: Challenges and opportunities in CO₂ and CH₄ conversion
- 17:15 - 17:30** **O13 – Katarzyna Eblagon**
Transforming molasses into catalysts for sustainable chemical production
- 17:30 - 17:45** **O14 – Luís C. Branco**
CO₂ methanation using ruthenium nanoparticles in green reaction media
- 17:45 - 18:00** **O15 – Daniel Costa**
Reusing past data to design heterogeneous catalysts: a machine learning approach
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Room C.3.16*Chair: Rui Ribeiro*

- 16:45 - 17:00** **O16 – Ana Pereira**
3D-printed conductive MOF monoliths for atmospheric water harvesting via electric swing adsorption
- 17:00 - 17:15** **O17 – Sónia Chimuco**
Humic-acid functionalization on a magnetic exfoliated graphite nanocomposite: effect on Pb^{2+} sorption at different pH values
- 17:15 - 17:30** **O18 – Brandon Costa**
Development of a 3D-printed hybrid monolith for water harvesting with CAU-10-H as adsorbent
- 17:30 - 17:45** **O19 – Thiago Carvalho**
Engineering ZIF-8/chitosan composites: comparing in-situ growth and powder incorporation for CO_2 separation
- 17:45 - 18:00** **O20 – Diogo Sousa**
Reuse of drinking water treatment sludge as a low-cost adsorbent for the removal of antibiotics
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18:15 **Meeting of the Division of Catalysis and Porous Materials**

19:30 **Sunset Gathering**

Tuesday, June 16th 2026

Auditorium C

9:00 - 10:00

Plenary Lecture 2

Chairs: Ana P Carvalho | José Luís Figueiredo

Carbon materials for the sustainable electrochemical and photocatalytic transformation of strategic molecules: H₂O, CO₂ and N-compounds

Conchi Ania

10:00 - 10:30

COFFEE BREAK

Auditorium C

Chair: Joaquim Faria

10:30 - 10:45

O21 – Gabriela Corrêa

Wood fibers-iron complex for (photo)catalytic removal of pollutants from water

10:45 - 11:00

O22 – Ana Regadeira-Macías

Nanostructure tuning and metal doping of biocarbon-TiO₂ composites for the ethylene removal from air flow

11:00 - 11:15

O23 – Valentina Silva

Tailoring magnetic TiO₂/CQD photocatalysts for solar-driven antibiotics removal from wastewater

11:15 - 11:30

O24 – Sergio Morales-Torres

Carbon-MnxOy photocatalysts for ethylene removal under dynamic conditions

Room C.3.16

Chair: Clara Pereira

10:30 - 10:45

O25 – Luís Cunha-Silva

Development of functional porous MOF-based membranes: from CO₂ separation to energy-related processes

10:45 - 11:00

O26 – Joana S. Teixeira

Engineering hybrid quantum dots for all-in-one textile photo-supercapacitors: toward self-powered wearable systems

11:00 - 11:15

O27 – Fernanda Roman

Carbon nanotubes derived from polymeric waste: synthesis, characterization, and application in fuel purification

11:15 - 11:30

O28 – Matilde Viegas

A robust and efficient CO₂-to-methanol process model as a basis for integrated CCU system design

Auditorium C

11:30 - 12:00 **Keynote 4** *Chair: Carlos Baleizão*
Sustainable synthesis of industrial organic products with catalytic porous materials
António Leyva Pérez

12:00 - 13:30 **LUNCH**

Auditorium C

13:30 - 14:00 **Keynote 5** *Chair: Sergio Morales*
Engineering carbon nitride nanomaterials for photo- and biocatalysis
Cláudia Gomes Silva

Auditorium C

Chair: Andreia Peixoto

14:00 - 14:15 **O29 – Mariana Felgueiras**
Carbon xerogels as catalytic support in the hydrogenation reaction of CO₂

14:15 - 14:30 **O30 – Clara Rodrigues Pereira**
Tuning the photochromic response of WO₃-based hybrid nanomaterials for smart textile applications

14:30 - 14:45 **O31 – José Barbosa**
The role of MWCNT modifications in developing inks for 3D printing carbon-based catalysts

Room C.3.16

Chair: José Eduardo Castanheiro

14:00 - 14:15 **O32 – Ângelo Alves**
Sustainable bimetallic catalysis for the synthesis of indolines and azaindolines

14:15 - 14:30 **O33 – Fátima Mirante**
Turning glycerol into solketal using magnetic porous biochar catalysts

14:30 - 14:45 **O34 – Hugo Lapa**
New C-scorpionate Cu(II) and Fe(III) complexes as high-performance catalysts for selective alcohol and hydrocarbon oxidation: synthesis, activity, and mechanistic insights

14:45 - 16:15 **COFFEE BREAK & POSTER SESSION**

Auditorium C

- 16:15 - 16:45** **Keynote 6** *Chair: João Pires*
Electroactive porous framework materials for energy storage applications
Manuel Souto Salom
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Auditorium C

Chair: Luís Cunha Silva

- 16:45 - 17:00** **O35 – João Silva**
Influence of superficial charge chemistry on the optical properties of carbon quantum dots
- 17:00 - 17:15** **O36 – Ana Amaral Dias**
Plasma-assisted assembly of carbon-based composites with enhanced catalytic properties
- 17:15 - 17:30** **O37 – Marta Nunes**
Advanced smart security labels for anti-counterfeiting textiles

Room C.3.16

Chair: Salomé Soares

- 16:45 - 17:00** **O38 – Susana Rebelo**
Advancements in Raman spectral interpretation of graphitic materials: from structural disorder to functional insights
- 17:00 - 17:15** **O39 – Dominik Jammal**
Transition metal macrocyclic catalysts for electrochemical NO_x-to-NH₃ conversion
- 17:15 - 17:30** **O40 – Milana Barata**
Impact of NetMIX technology on electrolyser systems for electrochemical CO₂ reduction towards e-fuel production
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- 17:45** **Meeting of the Carbon Group**
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- 19:30** **Gala Dinner**
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Wednesday, June 17th 2026**Auditorium C**

10:00 - 11:00 **Plenary Lecture 3** *Chair: Filipa Ribeiro | João Miguel Silva*
*Catalysis for energy transition:
IFPEN's journey from research to innovation*
Elodie Devers

Auditorium C

Chair: Anabela Valente

11:00 - 11:15 **O41 – Cristiano Castillo**
*Ni-zeolite catalysts for fatty acids hydroprocessing towards
sustainable aviation fuels*

11:15 - 11:30 **O42 – Madalena Wu**
*Integrated condensation-hydrodeoxygenation route from
levulinic acid and furfural to aviation fuel precursors*

11:30 - 11:45 **O43 – Rita Assis dos Santos**
*Hydroprocessing of oleic acid and guaiacol towards SAF:
reaction pathways and mixture effects*

11:45 - 12:00 **O44 – Thais Berberich**
*Fischer-Tropsch synthesis as an effective pathway for
synthetic fuel production from CO₂*

Room C.3.16

Chair: Beatriz Royo

11:00 - 11:15 **O45 – Rúben Feiteira**
*Two-in-one thermally-chargeable textile supercapacitors: the
role of multi-metallic oxide@carbon-based electrodes*

11:15 - 11:30 **O46 – Tiago Morais**
*Silica-based porous adsorbents for 17 α -ethinylestradiol
removal: role of functionalization and water matrices*

11:30 - 11:45 **O47 – Arij Ben Hassine**
*Hydroconversion of advanced non-conventional feedstocks:
impact of co-processing*

11:45 - 12:00 **O48 – Rui Viegas**
Modelling micropollutant adsorption in water treatment

12:00 - 13:30 **LUNCH**

Auditorium C

13:30 - 14:00

Keynote 7 – Ramôa Ribeiro Prize

Chair: Filipa Ribeiro

Rethinking catalyst design: from literature data to multi-scale process optimization

Pedro Mendes

Auditorium C

14:00 - 15:30

ExpliC₂a-Me como se nem tivesse 18 anos

Desafio de divulgação científica sobre Carbono, Catálise e Materiais Porosos

15:30 - 16:00

COFFEE BREAK

Auditorium C

Chair: Filipa Ribeiro

16:00 - 16:15

Ramôa Ribeiro Prize for the Best PhD thesis in Catalysis

Visible-light photocatalysis as a sustainable strategy for organic synthesis

Joana C. Lopes

Auditorium C

Chair: Ana Paula Carvalho

16:15 - 16:30

Prize for the Best PhD thesis in the area of Carbons

Removal of organic and inorganic pollutants from water in continuous catalytic systems

A. Sofia G. G. Santos

Auditorium C

Chairs: Ana Paula Carvalho | Filipa Ribeiro

16:30 - 17:00

Closing Session & Prizes

Institutional Support



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