



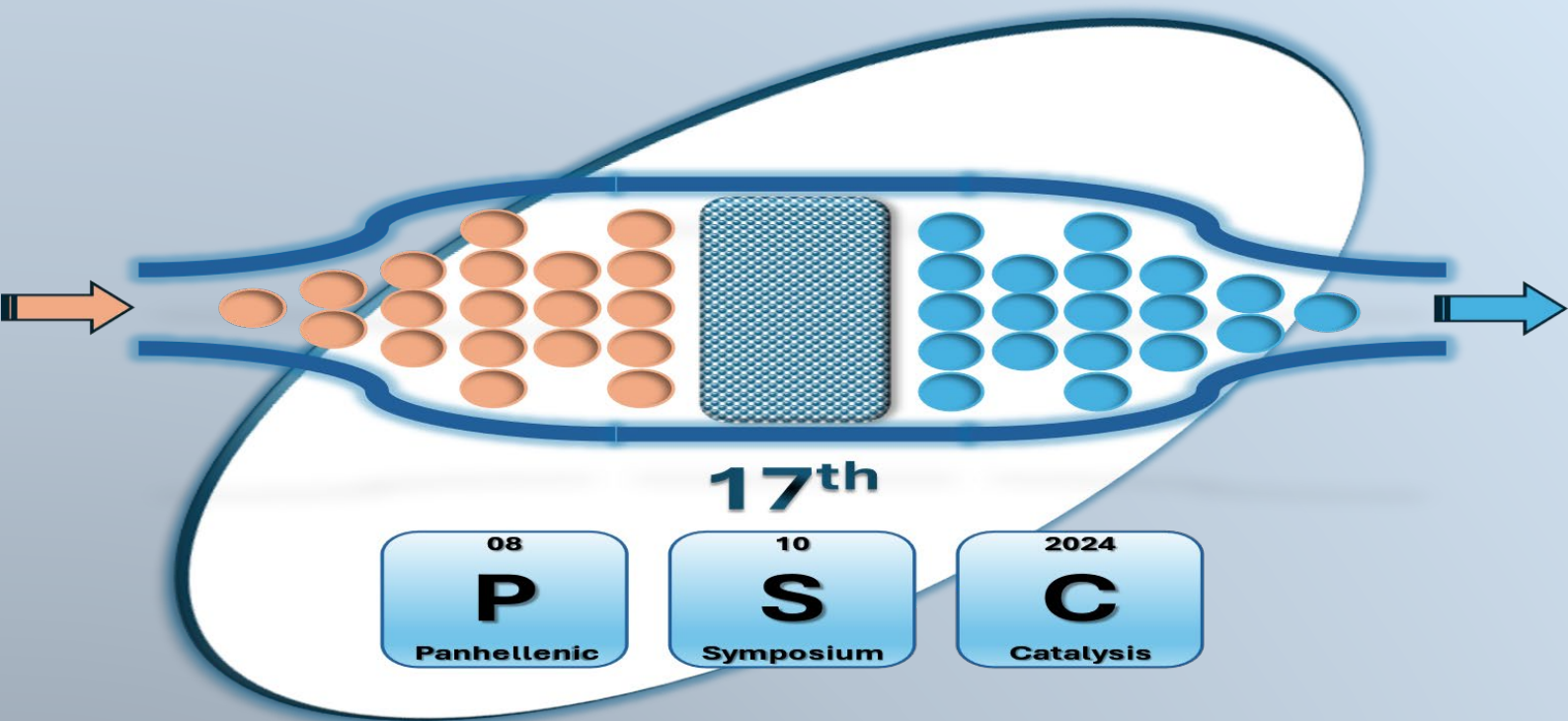
October 8 – 10, 2024

Paphos, Cyprus

# 17PSC

17<sup>th</sup> Panhellenic Symposium on Catalysis

Shaping a Sustainable Future Through Catalysis



Scientific  
Program

Hellenic  
Catalysis  
Society

---

## Symposium Chair

**Prof. Angelos M. Efstathiou**

Heterogeneous Catalysis Laboratory  
Department of Chemistry  
University of Cyprus (Cyprus)

## Organizing Committee

**Prof. Angeliki A. Lemonidou**

Laboratory of Petrochemical Technology  
Department of Chemical Engineering  
Aristotle University of Thessaloniki (Greece)

**Prof. Maria Louloudi**

Research Group of Biomimetic Catalysis & Hybrid Materials  
Department of Chemistry  
University of Ioannina (Greece)

**Prof. Konstantinos Triantafyllidis**

Laboratory of Chemical and Environmental Technology  
Department of Chemistry  
Aristotle University of Thessaloniki (Greece)

**Dr. Michalis A. Vasiliades**

Heterogeneous Catalysis Laboratory  
Department of Chemistry  
University of Cyprus (Cyprus)

## Scientific Committee

Armatas Gerasimos	Katsaounis Alexandros	Papadopoulou Christina
Avgouropoulos George	†Kenou Stella	Papavasiliou Joan
Balomenou Stella	Konsolakis Michalis	Panagiotopoulou Paraskevi
Bebelis Simeon	Kontarides Demetrios	Petrakis Dimitrios
Bourikas Kyriakos	Kordulis Christos	Polychronopoulou Kyriaki
Boghosian Soghomon	Lappas Angelos	Stoukides Michael
Deligiannakis Yiannis	Lemonidou Angeliki	Triantafyllidis Kostas
Efstathiou Angelos	Louloudi Maria	Tsiakaras Panagiotis
Falaras Polycarpos	Lycourghiotis Alexis	Tsiplakides Dimitrios
Goula Maria	Mantzavinos Dionysios	Vasiliades Michalis
Heracleous Eleni	Marnellos George	Vayenas Constantinos
Iliopoulou Eleni	Mitsopoulou Christiana	Verykios Xenophon
Ioannides Theophilos	Neophytides Stylianos	Yentekakis Ioannis

---

## Welcome Message

Greetings from the 17<sup>th</sup> Panhellenic Symposium on Catalysis!

We are very excited to announce the upcoming 17<sup>th</sup> Panhellenic Symposium on Catalysis, on October 8-10, 2024 at the Aliathon Resort in Paphos, Cyprus. This event is proudly hosted by the Hellenic Catalysis Society. Building upon the success of past Panhellenic symposia, this 17<sup>th</sup> edition aims to unite the community's researchers to delve into the fundamental and applied aspects of catalysis. The official language of the Symposium is English.

The 17<sup>th</sup> Panhellenic Symposium on Catalysis will honor Professors Angelos M. Efstathiou (University of Cyprus) and Angeliki Lemonidou (Aristotle University of Thessaloniki) on the occasion of their academic retirement and for their contributions in the field of Catalysis, nationally and internationally.

We warmly invite MSc and PhD students, early-stage and experienced researchers from academia and industry with interests in catalysis and related fields to join us for this event. Renowned expert scientists will grace us with their Plenary and Keynote lectures, sharing latest advancements in catalysis. Participants will have a platform to present their research findings through oral presentations and poster contributions. An integral highlight of the conference is the student paper contest, where Best Poster Awards will be awarded.

Immerse yourself in a dynamic conference program set in an environment that promotes inclusivity and meaningful connections. To ensure an unforgettable experience, there will be no parallel sessions, and accommodation will be provided within the resort premises. Our focus extends beyond academia with a delightful social program, covered by the registration fee, featuring a guided tour of the medieval town of Paphos and a dinner in beautiful local surroundings.

We are looking forward to hosting you in Paphos in October 2024!

Best regards,

The Organizing Committee



## Topics

The 17<sup>th</sup> Panhellenic Symposium on Catalysis will cover a wide range of topics, including:

- Energy and Materials Sustainability
- Biofuels Production and Biomass Conversion
- Catalytic Conversion of CO/CO<sub>2</sub> into Fuels and Chemicals
- Electro- and Photo-Catalysis
- Environmental Catalysis
- Hydrogen Production Technologies
- Nanomaterials for Catalysis

---

## Venue

Paphos, the coastal city in southwest Cyprus, lies on the Mediterranean coast, about 50 km west of Limassol (the biggest port on the island), and 100 km west of Larnaca (the biggest airport on the island). Paphos International Airport is the country's second-largest airport. The city is known for its climatic conditions beneficial to health and well-being, as it has a subtropical-Mediterranean climate, with the mildest temperatures on the island.

The 17<sup>th</sup> Panhellenic Symposium on Catalysis will be held at the luxurious Aliathon Resort, which offers a unique philosophy and ensures a home away from home ([see Hotel Accommodations in Paphos, Cyprus | Aliathon Resort](#)). The resort commits to offer a superior service and a personal touch oriented to the traditional Cypriot culture and green environment. With a wealth of experience and an enviable reputation for quality of service, Aliathon Resort will guarantee customer satisfaction and excellent service ensuring an unforgettable experience. Like every other aspect of the Aliathon, attention to detail is paramount, providing the best state-of-the-art facilities, highly trained professionals and a magnificent, relaxed, self-contained setting. The Aliathon's catering services offers coffee breaks, meals and cocktail receptions.

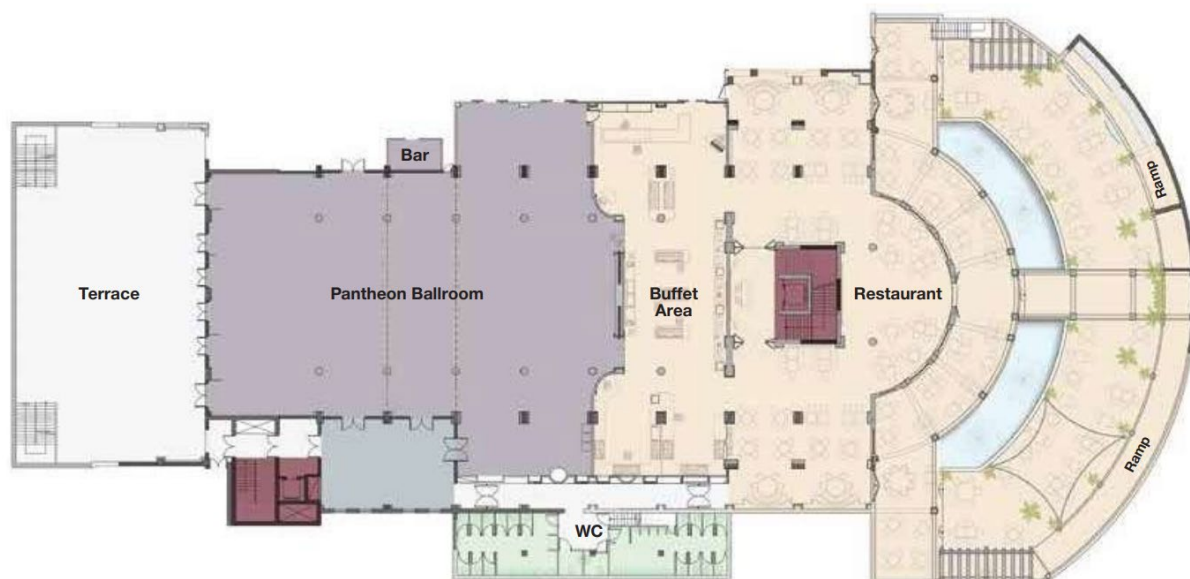




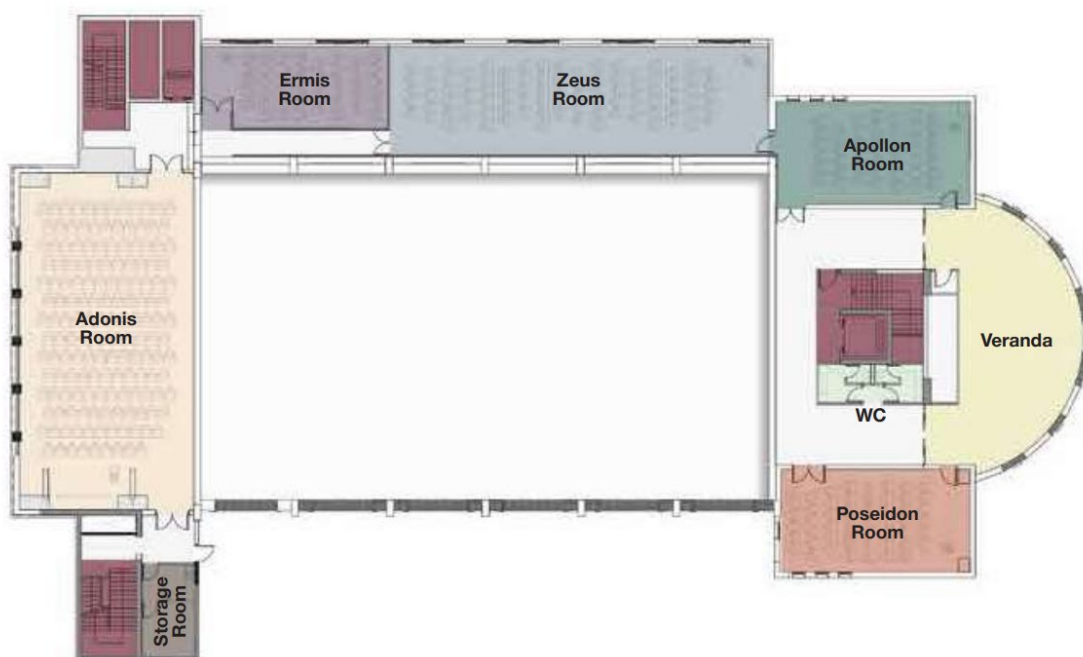
The Adonis room and its surroundings area at the 1<sup>st</sup> floor of the Aliathon Resort Conferences & Events will be exclusive to our symposium for presentations, poster session (Zeus Room, 1<sup>st</sup> floor), coffee breaks and lunches (Buffet area, basement). The Aliathon Aegean Village will accommodate all participants.



# Basement



# 1<sup>st</sup> floor







# Program Overview

	Tuesday 08 October 2024		Wednesday 09 October 2024		Thursday 10 October 2024
07:30-08:30	Registration				
08:30-09:00	Opening Session				
Session 1	Environmental Catalysis	Session 5	Catalytic Conversion of CO/CO <sub>2</sub> into Fuels and Chemicals	Session 7	Fuels Production and Biomass Conversion
09:00-10:00	PL	09:00-10:00	HKN 1	09:00-10:00	HKN 2
10:00-10:20	O 1	10:00-10:20	O 16	10:00-10:20	O 23
10:20-10:40	O 2	10:20-10:40	O 17	10:20-10:40	O 24
10:40-11:00	O 3	10:40-11:00	O 18	10:40-11:00	O 25
11:00-11:25	Coffee break	11:00-11:30	Coffee break	11:00-11:20	O 26
Session 2	Environmental Catalysis / Electro- and Photo-Catalysis	Session 6	Catalytic Conversion of CO/CO <sub>2</sub> into Fuels and Chemicals	11:20-11:50	Coffee break
11:25-12:00	KN 1	11:30-12:05	KN 4	Session 8	Nanomaterials Sustainability
12:00-12:20	O 4	12:05-12:25	O 19	11:50-12:25	KN 5
12:20-12:40	O 5	12:25-12:45	O 20	12:25-12:45	O 27
12:40-13:00	O 6	12:45-13:05	O 21	12:45-13:05	O 28
13:00-13:20	O 7	13:05-13:25	O 22		
13:20-14:10	Lunch break	13:25-14:30	Lunch break	13:05-14:00	Lunch break
Session 3	Hydrogen Production Technologies / Photocatalysis	15:00-22:00	Guided Tour and Gala Dinner	Session 9	Energy and Materials Sustainability
14:10-14:45	KN 2			14:00-14:35	KN 6
14:45-15:05	O 8			14:35-14:55	O 29
15:05-15:25	O 9			14:55-15:15	O 30
15:25-15:45	O 10			15:15-15:35	O 31
15:45-16:05	O 11			15:35-16:05	Coffee break
16:05-16:25	Coffee break			Session 10	Alternative and Sustainable Energy Sources
Session 4	Hydrogen Production Technologies			16:05-16:40	KN 7
16:25-17:00	KN 3			16:40-17:00	O 32
17:00-17:20	O 12			17:00-17:20	O 33
17:20-17:40	O 13	17:20-17:40	O 34		
17:40-18:00	O 14	17:40-18:10	FO 1-3		
18:00-18:20	O 15	18:10-18:30	Closing remarks and Poster Awards		
18:20-19:30	Poster Presentations*				

# Detailed Program

<b>Tuesday 08 October 2024</b>	
07:30-08:30	<b>Registration</b> Aliathon Resort Conferences & Events Adonis Room
08:30-09:00	<b>Opening Session</b> Prof. Ioannis Pashalidis, Chairperson Chemistry Department, UCY Prof. Angelos M. Efstathiou, Chair of the Organizing Committee
<b>Plenary Session</b>	<b>Chairperson: Kyriaki Polychronopoulou, Eleni Heracleous</b>
09:00-10:00	<b>Plenary Lecture (PL)</b> <b>From metal to metal-free heterogeneous catalysts: A journey into more sustainable chemical processes</b> <u>Paolo Fornasiero</u> <i>University of Trieste, Trieste, Italy</i>
<b>Session 1</b>	<b>Environmental Catalysis</b> <b>Chairperson: Kyriaki Polychronopoulou, Eleni Heracleous</b>
10:00-10:20	<b>Oral Presentation (O 1)</b> <b>SO<sub>2</sub> disproportionation studied at 395 K and 12 atm in an in situ Raman batch reactor</b> <u>Theocharis Kentri<sup>1</sup></u> , Loukas Kollias <sup>1</sup> , and Soghomon Boghosian <sup>1,2*</sup> <sup>1</sup> <i>Department of Chemical Engineering, University of Patras, Greece</i> <sup>2</sup> <i>FORTH/ICE-HT, Patras, Greece</i>
10:20-10:40	<b>Oral Presentation (O 2)</b> <b>Novel nanostructured Pd/Co-alumina materials for the catalytic oxidation of methanol</b> <u>E. Pachatouridou<sup>1</sup></u> , A.A. Lappas <sup>1</sup> , and E.F. Iliopoulou <sup>1*</sup> <sup>1</sup> <i>Chemical Process and Energy Resources Institute (CPERI)/ CErTH, GR-57001 Thermi, Thessaloniki, Greece</i>
10:40-11:00	<b>Oral Presentation (O 3)</b> <b>Unraveling the effect of H<sub>2</sub>O on the NH<sub>3</sub>-SCR over LDH-derived Mn<sub>2</sub>Cu<sub>1</sub>Al<sub>1</sub>O<sub>x</sub> by transient kinetics and in situ DRIFTS</b> <u>Rongrong Gui<sup>1</sup></u> , Cheng Zhang <sup>1</sup> , Yanshan Gao <sup>1,*</sup> , Qiang Wang <sup>1</sup> , and Angelos M. Efstathiou <sup>2,*</sup> <sup>1</sup> <i>College of Environmental Science and Engineering, Beijing Forestry University, Beijing 100083, China</i> <sup>2</sup> <i>Chemistry Department, Heterogeneous Catalysis Laboratory, University of Cyprus, 2109 Nicosia, Cyprus</i>
11:00-11:25	<b>Coffee break</b>
<b>Session 2</b>	<b>Environmental Catalysis / Electro- and Photo-Catalysis</b> <b>Chairperson: Maria Goula, Andy Antzaras</b>
11:25-12:00	<b>Keynote Lecture (KN 1)</b> <b>Oxidation of methanol and CO over Fe<sub>x</sub>Co<sub>3-x</sub>O<sub>4</sub> catalysts: is there a common trend?</b> <u>Theophilos Ioannides</u> <i>Foundation for Research and Technology-Hellas, Institute of Chemical Engineering Sciences (FORTH/ICE-HT), Patras, Greece</i>

12:00-12:20	<p align="center"><b>Oral Presentation (O4)</b>  <b>Catalytic VOC oxidation over Mn<sub>2</sub>O<sub>3</sub> oxides</b>  <u>P. Dimitropoulos</u><sup>1,2</sup>, M. Smyrnioti<sup>1</sup>, Y. Georgiou<sup>1</sup>, N. Apostolopoulos<sup>1</sup>, V. Drakopoulos<sup>1</sup> and T. Ioannides<sup>1*</sup></p> <p><sup>1</sup><i>Foundation for Research and Technology-Hellas, Institute of Chemical Engineering Sciences, (FORTH/ICE-HT), Patras, Greece</i>  <sup>2</sup><i>Department of Chemical Engineering, University of Patras, Patras, Greece</i></p>
12:20-12:40	<p align="center"><b>Oral Presentation (O 5)</b>  <b>Substitution of Cr in La<sub>0.75</sub>Sr<sub>0.25</sub>CrO<sub>3-δ</sub> by Fe or Ni: effect on conductivity and electrochemical performance</b>  <u>Argyro Konstantinidou</u><sup>1,2</sup>, Naouma Bimpiri<sup>2</sup>, Kalliopi-Maria Papazisi<sup>2</sup>, Dimitrios Tsiplakides<sup>1,2</sup>, Stella Balomenou<sup>2*</sup></p> <p><sup>1</sup><i>School of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece</i>  <sup>2</sup><i>Laboratory of Process Systems Design and Implementation, Chemical Process Engineering Research Institute, Centre for Research and Technology, Thessaloniki, Greece</i></p>
12:40-13:00	<p align="center"><b>Oral Presentation (O 6)</b>  <b>Dynamic simulation of H<sub>2</sub> oxidation on NiFeAu/GDC for SOFCs</b>  P. I. Giotakos<sup>*</sup>, F. Zaravelis, D. K. Niakolas and S. G. Neophytides  <i>Foundation for Research and Technology Hellas - FORTH/ICEHT, Patras, Greece</i></p>
13:00-13:20	<p align="center"><b>Oral Presentation (O 7)</b>  <b>Precision Nanoengineering of Metal-Oxide Catalysts at Industrial Scale: Examples and Lessons learned from H<sub>2</sub>/CO<sub>2</sub> Photocatalysts</b>  <u>Yiannis Deligiannakis</u>  <i>Laboratory of Physical Chemistry of Materials &amp; Environment, Department of Physics, University of Ioannina, 45100 Ioannina, Greece</i></p>
13:20-14:10	<b>Lunch break</b>
Session 3	<b>Hydrogen Production Technologies / Photo-Catalysis</b> <b>Chairperson: Angelos Lappas, Stylianos Neophytides</b>
14:10-14:45	<p align="center"><b>Keynote Lecture (KN 2)</b>  <b>Plasmon-Assisted Molecular Catalysis (PAMC): an emerging field</b>  <u>Maria Louloudi</u>  <i>Laboratory of Biomimetic Catalysis &amp; Hybrid Materials, Department of Chemistry, University of Ioannina, 45110 Ioannina, Greece</i></p>
14:45-15:05	<p align="center"><b>Oral Presentation (O 8)</b>  <b>Scaling up BiVO<sub>4</sub> Photoanodes on Porous Ti Transport Layers for Solar Hydrogen Production</b>  <u>Pramod Patil Kunturu</u><sup>1*</sup>, Marek Lavorenti<sup>2</sup>, Susanta Bera<sup>2</sup>, Hannah Johnson<sup>2</sup>, Sachin Kinge<sup>2</sup>, Mauritius C. M. van de Sanden<sup>1</sup>, and Mihalis N. Tsampas<sup>1*</sup></p> <p><sup>1</sup><i>Dutch Institute for Fundamental Energy Research (DIFFER) 5612AJ Eindhoven, The Netherlands</i>  <sup>2</sup><i>Toyota Motor Europe NV/SA, Hoge Wei 33, 1930 Zaventem, Belgium</i></p>
15:05-15:25	<p align="center"><b>Oral Presentation (O 9)</b>  <b>SO<sub>3</sub> catalytic splitting for sulfur based thermochemical storage of solar thermal energy</b>  L. Kollias<sup>1</sup>, T. Kentri<sup>1</sup>, G. Skyfta<sup>2</sup>, A. Bakratsa<sup>2</sup>, C. Poravou<sup>2</sup>, V. Zacharopoulou<sup>2</sup>, N. Tsongidis<sup>2</sup>, G. Karagiannakis<sup>2</sup> and S. Boghosian<sup>1,3*</sup></p> <p><sup>1</sup><i>Department of Chemical Engineering, University of Patras, Patras, Greece</i>  <sup>2</sup><i>ARTEMIS Lab, Centre for Research &amp; Technology Hellas (CERTH), Themi-Thessaloniki, Greece,</i>  <sup>3</sup><i>FORTH/ICE-HT, Patras, Greece</i></p>



15:25-15:45	<p align="center"><b>Oral Presentation (O 10)</b></p> <p align="center"><b>Iridium-based OER electrocatalysts supported on Titanium suboxides for PEM Water Electrolysis Systems</b></p> <p align="center">N. Vasileiou<sup>1,2</sup>, N. Strataki<sup>1</sup>, S. Balomenou<sup>1</sup>, D. Tsiplakides<sup>1,2*</sup></p> <p><sup>1</sup>Laboratory of Process Systems Design &amp; Implementation, CPERI/CERTH, Thessaloniki, 57001, Greece</p> <p><sup>2</sup>Department of Chemistry, Aristotle University of Thessaloniki, 54124, Greece</p>
15:45-16:05	<p align="center"><b>Oral Presentation (O 11)</b></p> <p align="center"><b>Engineering of Photocatalytic ZrO<sub>2</sub> Nanocatalysts by Flame Spray Pyrolysis (FSP) technology</b></p> <p align="center">Loukas Belles, Areti Zindrou, Yiannis Deligiannakis*</p> <p align="center">Laboratory of Physicochemical Materials &amp; Environment, Physics Department, University of Ioannina, Greece, Ioannina</p>
16:05-16:25	<b>Coffee break</b>
Session 4	<p><b>Hydrogen Production Technologies</b></p> <p><b>Chairperson: Theophilos Ioannides, Kyriakos Bourikas</b></p>
16:25-17:00	<p align="center"><b>Keynote Lecture (KN 3)</b></p> <p align="center"><b>Size and Shape Effects in Catalysis Exemplified by Ceria-based metal oxides</b></p> <p align="center">Michalis Konsolakis</p> <p align="center">School of Production Engineering and Management, Technical University of Crete, GR-73100, Chania, Greece</p>
17:00-17:20	<p align="center"><b>Oral Presentation (O 12)</b></p> <p align="center"><b>Plasmon-Assisted Dehydrogenation of Formic Acid by a Heterogeneous Molecular Fe-catalyst for H<sub>2</sub> Production</b></p> <p align="center">Foteini Fragou, and Maria Louloudi*</p> <p align="center">Laboratory of Biomimetic Catalysis and Hybrid Materials, University of Ioannina, Ioannina, Greece</p>
17:20-17:40	<p align="center"><b>Oral Presentation (O 13)</b></p> <p align="center"><b>Methane pyrolysis for CO<sub>x</sub>-free Hydrogen Production</b></p> <p align="center">E. Zeza<sup>1</sup>, E. Pachatouridou<sup>1</sup>, A.A. Lappas<sup>1</sup> and E. Iliopoulou<sup>1*</sup></p> <p align="center"><sup>1</sup>Laboratory of Environmental Fuels/Biofuels and Hydrocarbons, CPERI/CERTH, Thessaloniki, 57001, Greece</p>
17:40-18:00	<p align="center"><b>Oral Presentation (O 14)</b></p> <p align="center"><b>Methanol Steam Reforming over Cu-based catalysts: Mechanistic insights via transient isotopic and operando spectroscopic studies</b></p> <p align="center">K.A. Papageorgiou<sup>1</sup>, M.A. Vasiliades<sup>2</sup>, A.M. Efstathiou<sup>2</sup> and J. Papavasiliou<sup>3*</sup></p> <p align="center"><sup>1</sup>Department of Materials Science, University of Patras, GR-26504, Rio-Patras, Greece</p> <p align="center"><sup>2</sup>Department of Chemistry, University of Cyprus, CY-2109, Nicosia, Cyprus</p> <p align="center"><sup>3</sup>Department of Chemical Engineering, University of Patras, GR-26504, Rio-Patras, Greece</p>
18:00-18:20	<p align="center"><b>Oral Presentation (O 15)</b></p> <p align="center"><b>Efficient and Reuseable [Silica@iminophosphine-Fe] Hybrids for H<sub>2</sub>-Production from Formic acid and Formaldehyde</b></p> <p align="center">Konstantina Gravvani, Maria Solakidou, Maria Louloudi*</p> <p align="center">Laboratory of Biomimetic Catalysis &amp; Hybrid Materials, Department of Chemistry, University of Ioannina, 45110 Ioannina, Greece</p>
18:20-19:30	<b>Poster Presentations* (Zeus Room)</b>

<b>Wednesday 09 October 2024</b>	
<b>Session 5</b>	<b>Catalytic Conversion of CO/CO<sub>2</sub> into Fuels and Chemicals</b> <b>Chairperson: Konstantinos Triantafyllidis, Nikolaos Charisiou</b>
<b>09:00-10:00</b>	<p style="text-align: center;"><b>Honorary Keynote Lecture (HKN 1)</b> Introductory – Kyriaki Polychronopoulou</p> <p style="text-align: center;"><b>An Exciting Journey to Unveil Heterogeneous Catalytic Reaction Paths via Transient Kinetics</b> <u>Angelos M. Efstathiou</u> <i>Heterogeneous Catalysis Laboratory, University of Cyprus, Nicosia, Cyprus</i></p>
<b>10:00-10:20</b>	<p style="text-align: center;"><b>Oral Presentation (O 16)</b> <b>From earth material to energy production: Ni-based modified halloysite catalysts for CO<sub>2</sub> methanation</b></p> <p style="text-align: center;"><u>Ayesha A. Alkhoori</u><sup>1</sup>, Aasif A. Dabbawala<sup>1</sup>, Mark A. Baker<sup>2</sup>, Nikolaos Charisiou<sup>3</sup>, Steven S. Hinder<sup>2</sup>, Messaoud Harfouche<sup>4</sup>, Dalaver H. Anjum<sup>5</sup>, Maria A. Goula<sup>3</sup>, Kyriaki Polychronopoulou<sup>1*</sup></p> <p><sup>1</sup><i>Mechanical &amp; Nuclear Engineering Department, Center for Catalysis &amp; Separation (CeCaS), Khalifa University, Abu Dhabi, United Arab Emirates</i> <sup>2</sup><i>The Surface Analysis Laboratory, Engineering and Physical Sciences, University of Surrey, Guildford, United Kingdom</i> <sup>3</sup><i>Laboratory of Alternative Fuels and Environmental Catalysis (LAFEC), Department of Chemical Engineering, University of Western Macedonia, Kozani, Greece</i> <sup>4</sup><i>Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME), Allan, Jordan</i> <sup>5</sup><i>Physics Department, Khalifa University, Abu Dhabi, United Arab Emirates</i></p>
<b>10:20-10:40</b>	<p style="text-align: center;"><b>Oral Presentation (O 17)</b> <b>Multi-cyclic stability of Ru/Na<sub>2</sub>O/Al<sub>2</sub>O<sub>3</sub> dual-function materials for the integrated capture and methanation of CO<sub>2</sub></b></p> <p style="text-align: center;">Anastasios I. Tsiotsias<sup>1,2</sup>, Nikolaos D. Charisiou<sup>1</sup>, Panagiotis Manolopoulos<sup>1</sup>, Aseel G.S. Hussien<sup>2,3</sup>, Aasif A. Dabbawala<sup>2,3</sup>, Victor Sebastian<sup>4</sup>, Kyriaki Polychronopoulou<sup>2,3</sup>, and <u>Maria A. Goula</u><sup>1*</sup></p> <p><sup>1</sup><i>Laboratory of Alternative Fuels and Environmental Catalysis (LAFEC), Department of Chemical Engineering, University of Western Macedonia, Kozani, Greece</i> <sup>2</sup><i>Center for Catalysis and Separation, Khalifa University of Science and Technology, Abu Dhabi, UAE</i> <sup>3</sup><i>Department of Mechanical Engineering, Khalifa University of Science and Technology, Abu Dhabi, UAE</i> <sup>4</sup><i>Department of Chemical Engineering and Environmental Technology, Universidad de Zaragoza, Campus Río Ebro-Edificio I+D, Zaragoza, Spain</i></p>

10:40-11:00	<p style="text-align: center;"><b>Oral Presentation (O 18)</b></p> <p style="text-align: center;"><b>CO<sub>2</sub> hydrogenation over 3d transition metals supported on ceria nanoparticles</b></p> <p style="text-align: center;"><u>Maria Lykaki</u><sup>1*</sup>, Sofia Stefa<sup>1,2</sup>, Georgios Varvoutis<sup>3,4</sup>, Vassilios D. Binas<sup>2,5</sup>, Georgios E. Marnellos<sup>6,7</sup>, and Michalis Konsolakis<sup>1</sup></p> <p><sup>1</sup><i>School of Production Engineering and Management, Technical University of Crete, Chania, Greece</i></p> <p><sup>2</sup><i>Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas (FORTH-IESL), Heraklion, Greece</i></p> <p><sup>3</sup><i>Cluster of Bioeconomy and Environment of Western Macedonia, Kozani, Greece</i></p> <p><sup>4</sup><i>Department of Mechanical Engineering, University of Western Macedonia, Kozani, Greece</i></p> <p><sup>5</sup><i>School of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece</i></p> <p><sup>6</sup><i>School of Chemical Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece</i></p> <p><sup>7</sup><i>Chemical Process and Energy Resources Institute, Centre for Research &amp; Technology Hellas, Themi, Greece</i></p>
11:00-11:30	<b>Coffee break</b>
<b>Session 6</b>	<b>Catalytic Conversion of CO/CO<sub>2</sub> into Fuels and Chemicals</b> <b>Chairperson: Christos Kordulis, Dimitrios Tsiplakides</b>
11:30-12:05	<p style="text-align: center;"><b>Keynote Lecture (KN 4)</b></p> <p style="text-align: center;"><b>PROMETHEUS catalyst: the first ever Copper-based automotive catalyst homologated for Euro6 application</b></p> <p style="text-align: center;"><u>Iakovos Yakoumis</u></p> <p style="text-align: center;"><i>Monolithos Catalysts &amp; Recycling Limited, 11476 Athens, Greece</i></p>
12:05-12:25	<p style="text-align: center;"><b>Oral Presentation (O 19)</b></p> <p style="text-align: center;"><b>Effect of Zeolite Type for Water Removal in Sorption-Enhanced CO<sub>2</sub> Hydrogenation to Methanol</b></p> <p style="text-align: center;"><u>Vasiliki Koidi</u><sup>1,2*</sup>, Eleni Heracleous<sup>1,2</sup>, Angelos Lappas<sup>2</sup></p> <p><sup>1</sup><i>Chemical Process &amp; Energy Resources Institute (CPERI/CERTH), Thessaloniki, Greece</i></p> <p><sup>2</sup><i>International Hellenic University (IHU), Thessaloniki, Greece</i></p>
12:25-12:45	<p style="text-align: center;"><b>Oral Presentation (O 20)</b></p> <p style="text-align: center;"><b>CO<sub>2</sub> hydrogenation to Light Olefins over Iron Oxide Nanoparticles of Distinct Morphology</b></p> <p style="text-align: center;"><u>Evridiki Mandela</u><sup>1*</sup>, Maria Lykaki<sup>2</sup>, Antonia Loufardaki<sup>2,3</sup>, Christina Koutsoukou<sup>4</sup>, Vassilios D. Binas<sup>3,5</sup>, Michalis Konsolakis<sup>2</sup>, and Georgios E. Marnellos<sup>6,7</sup></p> <p><sup>1</sup><i>Department of Mechanical Engineering, University of Western Macedonia, Kozani, Greece</i></p> <p><sup>2</sup><i>School of Production Engineering and Management, Technical University of Crete, Chania, Greece</i></p> <p><sup>3</sup><i>Institute of Electronic Structure and Laser, Foundation for Research and Technology-Hellas (FORTH-IESL), Heraklion, Greece</i></p> <p><sup>4</sup><i>Department of Chemical Engineering, University of Western Macedonia, Kozani, Greece</i></p> <p><sup>5</sup><i>School of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece</i></p> <p><sup>6</sup><i>Department of Chemical Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece</i></p> <p><sup>7</sup><i>Chemical Process and Energy Resources Institute, Centre for Research &amp; Technology Hellas, Themi, Greece</i></p>

12:45-13:05	<p style="text-align: center;"><b>Oral Presentation (O 21)</b>  <b>Kinetic and mechanistic implications of CO<sub>2</sub>-assisted ethane dehydrogenation over Fe-based catalysts</b>  <u>Maria Tasioula<sup>1</sup></u>, Stavros A. Theofanidis<sup>2</sup> and Angeliki A. Lemonidou<sup>1,3*</sup></p> <p><sup>1</sup><i>Department of Chemical Engineering, Aristotle University of Thessaloniki, University Campus, 54124 Thessaloniki, Greece</i></p> <p><sup>2</sup><i>AristEng S.à r.l., 77, Rue de Merl, L-2146, Luxembourg City, Luxembourg</i></p> <p><sup>3</sup><i>Chemical Process &amp; Energy Resource Institute, CPERI/CERTH, 57001 Themi, Thessaloniki, Greece</i></p>
13:05-13:25	<p style="text-align: center;"><b>Oral Presentation (O 22)</b>  <b>Effect of H<sub>2</sub>O in CO methanation reaction over Co/Al<sub>2</sub>O<sub>3</sub> catalyst studied by transient isotopic experiments</b>  <u>Klito C. Petallidou<sup>1,2*</sup></u>, Angelos M. Efstathiou<sup>2*</sup></p> <p><sup>1</sup><i>Climate and Atmosphere Research Centre, The Cyprus Institute, Nicosia, Cyprus</i></p> <p><sup>2</sup><i>Department of Chemistry, Heterogeneous Catalysis Laboratory, University of Cyprus, Nicosia, Cyprus</i></p>
13:25-14:30	<b>Lunch break</b>
15:00-22:00	<b>Guided Tour and Gala Dinner</b>



<b>Thursday 10 October 2024</b>	
<b>Session 7</b>	<b>Fuels Production and Biomass Conversion</b> <b>Chairperson: Michalis Konsolakis, Stella Balomenou</b>
<b>09:00-10:00</b>	<p style="text-align: center;"><b>Honorary Keynote Lecture (HKN 2)</b> Introductory – Angelos Lappas <b>An Endless Trip to the Catalysis Territory</b> <u>Angeliki A. Lemonidou</u> <i>Petrochemical Technology Laboratory, Aristotle University of Thessaloniki, Thessaloniki, Greece</i></p>
<b>10:00-10:20</b>	<p style="text-align: center;"><b>Oral Presentation (O 23)</b> <b>Elaborated rice husk biochar as support of Mo-Ni catalysts used for green diesel production</b> <u>Eleana Kordouli</u><sup>1,2</sup>, Panagiota-Iliana Vourtsani<sup>1</sup>, Nikolaos Mourgkogiannis<sup>1</sup>, John Zafeiropoulos<sup>2</sup>, Kyriakos Bourikas<sup>2</sup>, and Christos Kordulis<sup>1,3*</sup> <sup>1</sup><i>Department of Chemistry, University of Patras, 26504 Patras, Greece</i> <sup>2</sup><i>School of Science and Technology, Hellenic Open University, Parodos Aristotelous 18, GR-26335 Patras, Greece</i> <sup>3</sup><i>Institute of Chemical Engineering Science (FORTH/ICE-HT), GR-26500, Patras, Greece</i></p>
<b>10:20-10:40</b>	<p style="text-align: center;"><b>Oral Presentation (O 24)</b> <b>Optimization and upscale catalytic hydrogenation of biomass-derived glucose rich streams to sugar alcohols</b> <u>K. Rekos</u><sup>1,2*</sup>, A. Margellou<sup>1,2</sup>, L. Matsakas<sup>3</sup>, U. Rova<sup>3</sup>, P. Christakopoulos<sup>3</sup>, K. Triantafyllidis<sup>1,2*</sup> <sup>1</sup><i>Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, 54124, Greece</i> <sup>2</sup><i>Center for Interdisciplinary Research and Innovation (CIRI), Balkan Center, 57001 Thessaloniki, Greece</i> <sup>3</sup><i>Biochemical Process Engineering, Department of Civil, Environmental and Natural Resources Engineering, Luleå University of Technology, SE-971 87 Luleå, Sweden</i></p>
<b>10:40-11:00</b>	<p style="text-align: center;"><b>Oral Presentation (O 25)</b> <b>Green diesel production over promoted nickel catalysts supported on palygorskite</b> <u>Fani K.</u><sup>1</sup>, Lycourghiotis S.<sup>1</sup>, Kordouli E.<sup>1,2</sup>, Kordulis C.<sup>1,2</sup>, Bourikas K.<sup>1,*</sup> <sup>1</sup><i>School of Science and Technology, Hellenic Open University, Patras, Greece</i> <sup>2</sup><i>Department of Chemistry, University of Patras, Patras, Greece</i></p>
<b>11:00-11:20</b>	<p style="text-align: center;"><b>Oral Presentation (O 26)</b> <b>Hydrous hydrazine decomposition over Rh/Al<sub>2</sub>O<sub>3</sub> catalyst: CFD studies</b> <u>Panayiota Adamou</u><sup>1</sup>, Silvio Bellomi<sup>2</sup>, Eleana Harkou<sup>1</sup>, Alberto Villa<sup>2</sup>, Nikolaos Dimitratos<sup>3,4</sup> and Achilleas Konstantinou<sup>1*</sup> <sup>1</sup><i>Department of Chemical Engineering Cyprus University of Technology, 57 Corner of Athinon and Anexartisias, 3036 Limassol, Cyprus</i> <sup>2</sup><i>Dipartimento di Chimica, Università degli Studi di Milano, via Golgi, 20133 Milan, Italy</i> <sup>3</sup><i>Department of Industrial Chemistry “Toso Montanari”, Alma Mater Studiorum University of Bologna, Viale Risorgimento 4, 40136 Bologna, Italy</i> <sup>4</sup><i>Center for Chemical Catalysis-C3, Alma Mater Studiorum University of Bologna, Viale Risorgimento 4, 40136 Bologna, Italy</i></p>
<b>11:20-11:50</b>	<b>Coffee break</b>
<b>Session 8</b>	<b>Nanomaterials Sustainability</b> <b>Chairperson: Yiannis Deligiannakis, Eleni Iliopoulou</b>

11:50-12:25	<p><b>Keynote Lecture (KN 5)</b>  <b>Strategies to overcome challenges in the catalytic hydrogenation of CO<sub>2</sub></b>  <u>Eleni Heracleous</u>  <i>School of Science &amp; Technology, International Hellenic University,  Thessaloniki, Greece</i></p>
12:25-12:45	<p><b>Oral Presentation (O 27)</b>  <b>Digitalization in Catalysis: Accelerating the microkinetic model development by automation tools</b>  Rinu Chacko<sup>1</sup>, Hendrik Gossler<sup>1</sup>, <u>Sofia Angeli</u><sup>2</sup> and Olaf Deutschmann<sup>1,2*</sup>  <sup>1</sup><i>Institute for Chemical Technology and Polymer Chemistry, Karlsruhe Institute of Technology, Karlsruhe, Germany</i>  <sup>2</sup><i>Institute of Catalysis Research and Technology, Karlsruhe Institute of Technology, Karlsruhe, Germany</i></p>
12:45-13:05	<p><b>Oral Presentation (O 28)</b>  <b>Synthesis of Palladium-based nanoparticles with tuneable sizes for catalytic applications</b>  <u>Anastasia Kappelou</u><sup>1*</sup>, Nicoleta Muresan<sup>2</sup>, David Thompsett<sup>2</sup>, Laura Torrente<sup>1</sup>  <sup>1</sup><i>University of Cambridge, Cambridge, United Kingdom.</i>  <sup>2</sup><i>Johnson Matthey Plc, United Kingdom</i></p>
13:05-14:00	<b>Lunch break</b>
Session 9	<p><b>Energy and Materials Sustainability</b>  <b>Chairperson: Maria Louloudi, Joan Papavasiliou</b></p>
14:00-14:35	<p><b>Keynote Lecture (KN 6)</b>  <b>Novel operation modes and architectures of electrocatalytic systems for renewable energy driven chemistry</b>  <u>Mihalis N. Tsampas</u>  <i>Dutch Institute For Fundamental Energy Research, De Zaale 20, 5612AJ Eindhoven, The Netherlands</i></p>
14:35-14:55	<p><b>Oral Presentation (O 29)</b>  <b>Sustainable catalysts for Dry Reforming of Methane obtained from recovered Pt</b>  A. Varotto<sup>1,2</sup>, U. P. Laverdura<sup>1</sup>, L. Freschi<sup>1</sup>, F. Bozza<sup>1</sup>, A. Moschovi<sup>3</sup>, Z. Cherkezova-Zheleva<sup>4</sup>, I. Yakoumis<sup>3</sup>, M. Feroci<sup>2</sup> and <u>M. L. Grilli</u><sup>1,*</sup>  <sup>1</sup><i>ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Energy Technologies and Renewable Sources Department, Rome, Italy</i>  <sup>2</sup><i>Dept. Fundamental and Applied Sciences for Engineering (SBAI), Sapienza University of Rome, Rome, Italy</i>  <sup>3</sup><i>MONOLITHOS Catalysts and Recycling Ltd, Athens, Greece</i>  <sup>4</sup><i>Institute of Catalysis, Bulgarian Academy of Sciences, Sofia, Bulgaria</i></p>
14:55-15:15	<p><b>Oral Presentation (O 30)</b>  <b>Continuous slurry phase hydrotreating of heavy oils with Mo-based dispersed catalysts on pilot-scale</b>  <u>F. Papadopoulou</u><sup>1,2*</sup>, E. Heracleous<sup>1,2</sup>, and A.A Lappas<sup>1</sup>  <sup>1</sup><i>Chemical Process &amp; Energy Resources Institute CPERI/CERTH, Thessaloniki, Greece</i>  <sup>2</sup><i>School of Science &amp; Technology, International Hellenic University, Thessaloniki, Greece</i></p>

15:15-15:35	<p align="center"><b>Oral Presentation (O 31)</b></p> <p align="center"><b>Optimized in-situ catalytic upgrading of plastic waste pyrolysis oils to naphtha-range hydrocarbons</b></p> <p align="center"><u>P. Soldatos</u><sup>1</sup>, A. Margellou<sup>1</sup>, S. Torofias<sup>1</sup>, A. Lemonidou<sup>2</sup>, K. Triantafyllidis<sup>1,3,*</sup></p> <p><sup>1</sup><i>Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece</i></p> <p><sup>2</sup><i>Department of Chemical Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece</i></p> <p><sup>3</sup><i>Center for Interdisciplinary Research and Innovation (C.I.R.I.), AUTH, Themi, Greece</i></p>
15:35-16:05	<p align="center"><b>Coffee break</b></p>
Session 10	<p align="center"><b>Alternative and Sustainable Energy Sources</b></p> <p align="center"><b>Chairperson: Ioannis Yentekakis, George Avgouropoulos</b></p>
16:05-16:40	<p align="center"><b>Keynote Lecture (KN 7)</b></p> <p align="center"><b>The Art of Designing Multifunctional Catalysts for Added-Valued Products: fundamentals and market perspectives</b></p> <p align="center"><u>Kyriaki Polychronopoulou</u></p> <p align="center"><i>Department of Mechanical Engineering and Center for Catalysis and Separations (CeCaS Center), Khalifa University of Science and Technology, Abu Dhabi, UAE</i></p>
16:40-17:00	<p align="center"><b>Oral Presentation (O 32)</b></p> <p align="center"><b>Chemical looping ammonia production: Investigating nitrogen carriers promoted with transition metal catalysts</b></p> <p align="center"><u>Theodoros Papalas</u><sup>1</sup>, Alexander R.P. Harrison<sup>1</sup>, Reinaldo J. Lee Pereira<sup>2</sup>, Wenting Hu<sup>2</sup> and Ewa J. Marek<sup>1*</sup></p> <p><sup>1</sup><i>Department of Chemical Engineering and Biotechnology, University of Cambridge, Cambridge, UK</i></p> <p><sup>2</sup><i>School of Engineering, Newcastle University, Newcastle Upon Tyne, UK</i></p>
17:00-17:20	<p align="center"><b>Oral Presentation (O 33)</b></p> <p align="center"><b>Valorizing pyrolysis gases back to monomers</b></p> <p align="center"><u>Ehsan Mahmoudi</u><sup>1,2</sup>, Stavros A. Theofanidis<sup>3</sup>, Stamatia A. Karakoulia<sup>4</sup>, Alessandro Longo<sup>5</sup>, Christoph Sahle<sup>5</sup>, Dirk E. De Vos<sup>2</sup>, Angeliki A. Lemonidou<sup>1,4,*</sup></p> <p><sup>1</sup><i>Department of Chemical Engineering, Aristotle University of Thessaloniki, University Campus, 54124 Thessaloniki, Greece;</i></p> <p><sup>2</sup><i>Centre for Membrane Separations, Adsorption, Catalysis and Spectroscopy for Sustainable Solutions, KU Leuven, Celestijnenlaan 200F, 3001, Leuven, Belgium;</i></p> <p><sup>3</sup><i>AristEng S.à r.l., 77, Rue de Merl, L-2146, Luxembourg City, Luxembourg;</i></p> <p><sup>4</sup><i>Chemical Process &amp; Energy Resource Institute, CPERI/CERTH, 57001 Themi, Thessaloniki, Greece;</i></p> <p><sup>5</sup><i>European Synchrotron Radiation Facility, 71 Avenue des Martyrs, 38000Grenoble, France</i></p>

<b>17:20-17:40</b>	<b>Oral Presentation (O 34)</b> <b>Application of mechanochemistry toward sustainable recycling of spent automotive catalysts</b> <i>Zara Cherkezova-Zheleva<sup>1*</sup>, Daniela Paneva<sup>1</sup>, Maria Luisa Grilli<sup>2</sup>, Anastasia M. Moschovi<sup>3</sup>, Stylianos Spathariotis<sup>4</sup>, and Iakovos Yakoumis<sup>3</sup></i> <i><sup>1</sup>Institute of Catalysis, Bulgarian Academy of Sciences, Sofia, Bulgaria,</i> <i><sup>2</sup>ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Energy Technologies and Renewable Sources Department, Casaccia Research Centre, Rome, Italy</i> <i><sup>3</sup>MONOLITHOS Catalysts and Recycling Ltd, Athens, Greece</i> <i><sup>4</sup>YS Cypriot Catalysts Ltd., Psevdas, Cyprus</i>
<b>17:40-18:10</b>	<b>Flash Oral Presentations (FO 1-3)</b>
<b>18:10-18:30</b>	<b>Closing remarks and Poster Awards</b>



## Poster Session

Tuesday, 8 October 2024, 18:20 – 19:30

Abbreviation	Details
<b>P 01</b>	<p><b>Production of liquid fuel precursors via aldol condensation of bio-derived compounds using solid Lewis acids</b>  <u>Soultana Ioannidou</u><sup>1</sup>, Philipp Treu<sup>2</sup>, Foteini Zormpa<sup>2</sup>, Dominik Neukum<sup>2</sup>, Jörg Sauer<sup>2</sup>, Erisa Saraçi<sup>2*</sup> and Konstantinos Triantafyllidis<sup>1*</sup>  <sup>1</sup><i>Department of Chemistry, Aristotle University of Thessaloniki, Greece</i>  <sup>2</sup><i>Institute of Catalysis Research and Technology, Karlsruhe Institute of Technology, Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany</i></p>
<b>P 02</b>	<p><b>Catalytic hydrogenolysis of plastic wastes towards sustainable chemical recycling</b>  <u>Antigoni Margellou</u><sup>1,*</sup>, Stylianos Torofias<sup>1</sup> and Konstantinos Triantafyllidis<sup>1</sup>  <sup>1</sup><i>Department of Chemistry, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</i></p>
<b>P 03</b>	<p><b>Catalytic processes for production of alternative marine fuels with low carbon footprint</b>  <u>Evangelia Koliamitra</u><sup>1</sup>, <u>Andy N. Antzaras</u><sup>1</sup> and Angeliki A. Lemonidou<sup>1*</sup>  <sup>1</sup><i>Department of Chemical Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece</i></p>
<b>P 04</b>	<p><b>Experimental investigation of reactor type and operating variables in the catalytic upgrading of plastic pyrolysis oil</b>  <u>S-A. Andrianos</u>, P. Soldatos, K. Triantafyllidis, A.A. Lemonidou*  <i>Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</i></p>
<b>P 05</b>	<p><b>Boron promoted Ni-Al<sub>2</sub>O<sub>3</sub> catalysts for green diesel production</b>  <u>Eleana Kordouli</u><sup>1,2*</sup> and Christina Papadopoulou<sup>2</sup>  <sup>1</sup><i>Department of Chemistry, University of Patras, 26504 Patras, Greece</i>  <sup>2</sup><i>School of Science and Technology, Hellenic Open University, Parodos Aristotelous 18, GR-26335 Patras, Greece</i></p>
<b>P 06</b>	<p><b>CeO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> supported Mo-Ni catalysts for green diesel production</b>            Fotis Passas<sup>1</sup> and <u>Eleana Kordouli</u><sup>1,2*</sup>  <sup>1</sup><i>Department of Chemistry, University of Patras, 26504 Patras, Greece</i>  <sup>2</sup><i>School of Science and Technology, Hellenic Open University, Parodos Aristotelous 18, GR-26335 Patras, Greece</i></p>
<b>P 07</b>	<p><b>Catalytic hydrodeoxygenation of erythritol towards green butadiene production</b>  <u>Georgia Ioannidou</u><sup>1</sup>, Marius Drexler<sup>2</sup>, Ulrich Arnold<sup>2</sup>, Jörg Sauer<sup>2</sup>, Angeliki Lemonidou<sup>1*</sup>  <sup>1</sup><i>Laboratory of Petrochemical Technology, Chemical Engineering Department, Aristotle University of Thessaloniki, University Campus, Thessaloniki, 54124, Greece</i>  <sup>2</sup><i>Karlsruhe Institute of Technology (KIT), Institute of Catalysis Research and Technology (IKFT), Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany</i></p>

<b>P 08</b>	<b>Zeolite-catalyzed organosolv fractionation of lignocellulosic biomass</b> <u>S.D. Stefanidis</u> <sup>1*</sup> , S. Karakoulia <sup>1</sup> , A.M. Tzika <sup>1</sup> , A. Karnaouri <sup>2,3</sup> , E. Topakas <sup>3</sup> , K.G. Kalogiannis <sup>1,4</sup> , A.A. Lappas <sup>1</sup> <sup>1</sup> <i>Chemical Process and Energy Resources Institute, Centre for Research and Technology Hellas, Thessaloniki, Greece</i> <sup>2</sup> <i>Department of Crop Science, Agricultural University of Athens, Athens, Greece</i> <sup>3</sup> <i>School of Chemical Engineering, National Technical University of Athens, Athens, Greece</i> <sup>4</sup> <i>Department of Chemical Engineering, University of Western Macedonia, Kozani, Greece</i>
<b>P 09</b>	<b>Organosolv fractionation of lignocellulosic biomass catalyzed by supported and non-supported heteropoly acids</b> <u>S.A. Karakoulia</u> <sup>1*</sup> , S.D. Stefanidis <sup>1</sup> , A.M. Tzika <sup>1</sup> , A. Karnaouri <sup>2,3</sup> , E. Topakas <sup>3</sup> , K.G. Kalogiannis <sup>1,4</sup> , A.A. Lappas <sup>1</sup> <sup>1</sup> <i>Chemical Process and Energy Resources Institute, Centre for Research and Technology Hellas, Thessaloniki, Greece</i> <sup>2</sup> <i>Department of Crop Science, Agricultural University of Athens, Athens, Greece</i> <sup>3</sup> <i>School of Chemical Engineering, National Technical University of Athens, Athens, Greece</i> <sup>4</sup> <i>Department of Chemical Engineering, University of Western Macedonia, Kozani, Greece</i>
<b>P 10</b>	<b>Hydrodeoxygenation of lignin model compounds and bio-oils</b> <u>Antigoni Margellou</u> <sup>1</sup> , A. Correa de Araujo <sup>2</sup> , A. Funke <sup>2</sup> and Konstantinos Triantafyllidis <sup>1,*</sup> <sup>1</sup> <i>Department of Chemistry, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece</i> <sup>2</sup> <i>Karlsruhe Institute of Technology, Institute of Catalysis Research &amp; Technology, Eggenstein - Leopoldshafen, Germany</i>
<b>P 11</b>	<b>Chemo-catalytic hydrogenation of bio-succinic acid to value-added diols</b> K. Rekos <sup>1,2</sup> , A. Margellou <sup>1,2</sup> , A. Olszewska-Widdrat <sup>3</sup> , J. Venus <sup>3</sup> , <u>K. Triantafyllidis</u> <sup>1,2*</sup> <sup>1</sup> <i>Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece</i> <sup>2</sup> <i>Center for Interdisciplinary Research and Innovation (CIRI), Balkan Center, Thessaloniki, Greece</i> <sup>3</sup> <i>Department Microbiome Biotechnology, Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB), Potsdam, Germany</i>

<b>P 12</b>	<b>Controlling CH<sub>4</sub> and CO products distribution of CO<sub>2</sub> hydrogenation reaction over Ni/MCM-41 catalysts via the preparation method</b> <u>A. Rontogianni</u> <sup>1</sup> , S. Fanourgiakis <sup>1</sup> , E. Nikolaraki <sup>1</sup> , G. Botzolaki <sup>1</sup> , N. Chalmpes <sup>2</sup> , P. Zygouri <sup>2</sup> , M.A. Karakassides <sup>2</sup> , G. Kyriakou <sup>3</sup> , N.K. Boukos <sup>4</sup> , P. Panagiotopoulou <sup>1,5</sup> , D.P. Gournis <sup>1,5</sup> and I. V. Yentekakis <sup>1,5,*</sup> <sup>1</sup> Laboratory of Physical Chemistry & Chemical Processes, School of Chemical and Environmental Engineering, Technical University of Crete, 73100 Chania, Crete, Hellas <sup>2</sup> Dept of Materials Science and Engineering, University of Ioannina, 45110 Ioannina, Hellas <sup>3</sup> Dept of Chemical Engineering, University of Patras, GR-26500 Rion, Hellas <sup>4</sup> Institute of Nanoscience and Nanotechnology (INN), NCSR Demokritos, Athens 15310, Hellas <sup>5</sup> Institute of GeoEnergy, Foundation for Research and Technology-Hellas (FORTH/IG), 73100 Chania, Greece
<b>P 13</b>	<b>The effect of Ni particle size on CO<sub>2</sub> methanation over Ni/Ce-Ti-O: Operando transient isotopic studies</b> <u>Georgia-Maria Zarkou</u> <sup>1</sup> , Michalis A. Vasiliades <sup>1</sup> , and Angelos M. Efstathiou <sup>1*</sup> <sup>1</sup> Heterogeneous Catalysis Laboratory, University of Cyprus, 2109 Nicosia, Cyprus
<b>P 14</b>	<b>Impact of the support on the activity and stability of Ir catalysts under the Dry Reforming of Methane conditions.</b> <u>E. Nikolaraki</u> <sup>1</sup> , P. Panagiotopoulou <sup>1</sup> , G. Kyriakou <sup>2</sup> , D.I. Kondarides <sup>2</sup> , D.I. Gournis <sup>1,3</sup> and I.V. Yentekakis <sup>1,3*</sup> <sup>1</sup> School of Chemical and Environmental Engineering, Technical University of Crete, Chania, Hellas <sup>2</sup> Department of Chemical Engineering, University of Patras, Patra, Hellas <sup>3</sup> Institute of Geoenergy / Foundation for Research and Technology-Hellas (IG/FORTH), 73100 Chania, Crete, Hellas
<b>P 15</b>	<b>Effect of Ni particle size on the CO<sub>2</sub> methanation performance of Ni/CeO<sub>2</sub> catalysts</b> <u>E.Mandela</u> <sup>1</sup> , G.Varvoutis <sup>1</sup> , A.Lampropoulos <sup>1</sup> , A.G.S.Hussien <sup>2,3</sup> , A.A.Dabbawala <sup>2,3</sup> , K. Polychronopoulou <sup>2,3</sup> , G.E.Marnellos <sup>5,6</sup> , M. Konsolakis <sup>4*</sup> <sup>1</sup> Department of Mechanical Engineering, University of Western Macedonia, Kozani, Greece <sup>2</sup> Department of Chemical Engineering, University College London, London, United Kingdom <sup>3</sup> Department of Mechanical Engineering, Khalifa University of Science and Technology, Abu Dhabi, United Arab Emirates <sup>4</sup> School of Production Engineering and Management, Technical University of Crete, Chania, Greece <sup>5</sup> Department of Chemical Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece <sup>6</sup> Chemical Process and Energy Resources Institute, CERTH, Thessaloniki, Greece

- P 16**      **Effect of alkali promotion on a LaCuFeO<sub>3</sub> catalyst for the CO<sub>2</sub> hydrogenation reaction**  
Angeliki I. Latsiou<sup>1</sup>, Evangelos Tachmatzidis<sup>1</sup>, Nikolaos D. Charisiou<sup>1</sup>, and Maria A. Goula<sup>1\*</sup>  
<sup>1</sup>Laboratory of Alternative Fuels and Environmental Catalysis (LAFEC), Department of Chemical Engineering, University of Western Macedonia, GR-50100, Greece
- P 17**      **CFD Simulations for the CO<sub>2</sub> Hydrogenation in Packed Bed Reactor**  
Eleana Harkou<sup>1</sup>, Anastasios I. Tsiotsias<sup>2</sup>, Angeliki I. Latsiou<sup>2</sup>, Nikolaos D. Charisiou<sup>2</sup>, Maria A. Goula<sup>2</sup>, George Manos<sup>3</sup> and Achilleas Constantinou<sup>1\*</sup>  
<sup>1</sup>Department of Chemical Engineering, Cyprus University of Technology, 57 Corner of Athinon and Anexartisias, Limassol 3036, Cyprus  
<sup>2</sup>Laboratory of Alternative Fuels and Environmental Catalysis (LAFEC), Department of Chemical Engineering, University of Western Macedonia, GR-50100, Greece  
<sup>3</sup>Department of Chemical Engineering, University College London, WC1E 7JE, London, United Kingdom
- P 18**      **Molten proton conductor fuel cell modules with internal reforming of methanol**  
Konstantinos Kappis<sup>1</sup>, Zhiyong Fu<sup>2</sup>, Yifan Li<sup>2</sup>, Konstantinos Papageorgiou<sup>1</sup>, Dimitrios E. Vlachos<sup>3</sup>, Joan Papavasiliou<sup>4</sup>, Haibin Li<sup>2</sup> and George Avgouropoulos<sup>1\*</sup>  
<sup>1</sup>Department of Materials Science, University of Patras, Patras 26504, Greece  
<sup>2</sup>State Key Laboratory of Ocean Engineering, School of Naval Architecture, Ocean & Civil Engineering, Shanghai Jiao Tong University, Shanghai 200240, China  
<sup>3</sup>Pleione Energy S.A., Patriarchou Grigoriou & Neapoleos Str., Ag.Paraskevi, 15310, Greece  
<sup>4</sup>Chemical Engineering Department, University of Patras, Patras 26504, Greece
- P 19**      **Performance and stability of La<sub>0.75</sub>Sr<sub>0.25</sub>Cr<sub>0.9</sub>Fe<sub>0.1</sub>O<sub>3-δ</sub> as anode electrode in SOFCs fueled with methane mixtures**  
K.M. Papazisi<sup>1\*</sup>, M.E. Farmaki<sup>1</sup>, D. Tsiplakides<sup>1,2</sup> and S. Balomenou<sup>1</sup>  
<sup>1</sup>Laboratory of Process Systems Design & Implementation, CPERI/CERTH, Thessaloniki, 57001, Greece  
<sup>2</sup>School of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, 54124, Greece
- P 20**      **Engineering of photocatalytic Cu<sub>2</sub>O/Cu<sup>0</sup>-TiO<sub>2</sub> nanohybrids by Flame Spray Pyrolysis (F.S.P.): The role of Cu-atoms versus Cu-nanophases**  
Areti Zindrou and Yiannis Deligiannakis\*  
Laboratory of Physical Chemistry of Materials & Environment, Department of Physics, University of Ioannina, 45110 Ioannina, Greece

<b>P 21</b>	<b>Engineering of Single- Bismuth-Atom Decorated NaTaO<sub>3</sub> Nanoparticles by One-Step Flame Spray Pyrolysis for Enhanced Photocatalytic Hydrogen Production</b> <u>A. V. Spyrou</u> and Y. Deligiannakis* <i>Laboratory of Physical Chemistry of Materials &amp; Environment, Department of Physics, University of Ioannina, 45100 Ioannina, Greece</i>
<b>P 22</b>	<b>Enhancing Public Health Through Nano-photocatalytic Materials with Antibacterial and IR Reflectance Properties</b> M. Kourtelesis <sup>1</sup> , <u>S. Spathariotis</u> <sup>2</sup> , A.-M. Moschovi <sup>1,2</sup> , and I. Yakoumis <sup>1,2*</sup> <sup>1</sup> MONOLITHOS Catalysts & Recycling Ltd., Vrillissou 83, 11476 Athens, Greece <sup>2</sup> YS Cypriot Catalysts Ltd., Lefkosias Avenue 50, Psevdas 7649, Cyprus
<b>P 23</b>	<b>Evaluation of biogenic CO<sub>2</sub> off-gases impurities as methanol synthesis catalyst poisons</b> <u>Vasiliki Koidi</u> <sup>1,2*</sup> , Eleni Heracleous <sup>1,2</sup> , Angelos Lappas <sup>2</sup> <sup>1</sup> Chemical Process & Energy Resources Institute (CPERI), Centre for Research and Technology Hellas (CERTH), Thessaloniki, Greece <sup>2</sup> International Hellenic University (IHU), Thessaloniki, Greece
<b>P 24</b>	<b>Evaluation of total catalytic oxidation of light hydrocarbons under lean conditions over La<sub>1-x</sub>Sr<sub>x</sub>MnO<sub>3</sub> perovskites</b> <u>K. Drosou</u> <sup>1</sup> , E. Nikolaraki <sup>1</sup> , S. Fanourgiakis <sup>1</sup> , T. Georgakopoulou <sup>1</sup> , V. Zaspalis <sup>2,3</sup> , D.P. Gournis <sup>1,4</sup> and I. V. Yentekakis <sup>1,4,*</sup> <sup>1</sup> Laboratory of Physical Chemistry and Chemical Processes, School of Chemical and Environmental Engineering, Technical University of Crete, 731 00 Chania, Crete, Hellas <sup>2</sup> Department of Chemical Engineering, Aristotle University of Thessaloniki, 541 24 Thessaloniki, Hellas <sup>3</sup> Chemical Process and Energy Resources Institute, Center for Research and Technology Hellas (CPERI/CERTH), 570 01 Themi, Thessaloniki, Hellas <sup>4</sup> Institute of GeoEnergy /Foundation for Research and Technology-Hellas (IG/FORTH), 731 00 Chania, Crete, Hellas
<b>P 25</b>	<b>CO<sub>2</sub>-assisted oxidative dehydrogenation of propane over Ga<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, Ga<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> and Ga<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub> catalysts</b> <u>Alexandra Florou</u> <sup>1</sup> , Georgios Bampos <sup>2</sup> , Panagiota D. Natsi <sup>2</sup> , Aliko Kokka <sup>1</sup> and Paraskevi Panagiotopoulou <sup>1*</sup> <sup>1</sup> School of Chemical and Environmental Engineering, Technical University of Crete, Chania, Greece <sup>2</sup> Department of Chemical Engineering, University of Patras, Patras, Greece
<b>P 26</b>	<b>Fe-Molecular Catalyst on Activated Carbon Matrix for H<sub>2</sub>-Production from Formic Acid: a Self-Reconstructed Catalyst during Process</b> <u>Christos Gkatzouras</u> , Maria Solakidou and Maria Louloudi* <i>Laboratory of Biomimetic Catalysis and Hybrid Materials, Department of Chemistry, University of Ioannina, GR45110, Ioannina, Greece</i>



<b>P 27</b>	<b>H<sub>2</sub>-Production from FADH Catalysis by SiO<sub>2</sub>@NP(Ph)<sub>2</sub>-Fe using Formic Acid pretreated by silk fiber</b> <u>A. Sotiriou</u> , M. Louloudi* <i>Laboratory of Biomimetic Catalysis &amp; Hybrid Materials, Department of Chemistry, University of Ioannina, GR-45110 Ioannina, Greece</i>
<b>P 28</b>	<b>Engineering of Ag@SiO<sub>2</sub> Films via Flame Spray Pyrolysis as Plasmonic Boosters of Catalytic H<sub>2</sub> Production from HCOOH</b> <u>C. Dimitriou</u> <sup>1</sup> , F. Fragou <sup>2</sup> , M. Louloudi <sup>2</sup> , Y. Deligiannakis <sup>1*</sup> <sup>1</sup> <i>Laboratory of Physical Chemistry of Materials &amp; Environment, Department of Physics, University of Ioannina, 45100 Ioannina, Greece</i> <sup>2</sup> <i>Laboratory of Biomimetic Catalysis &amp; Hybrid Materials, Department of Chemistry, University of Ioannina, GR-45110 Ioannina, Greece</i>
<b>P 29</b>	<b>Evaluation of the performance of Ni-Co bimetallic oxygen carriers in sorption enhanced chemical looping steam CH<sub>4</sub> reforming</b> <u>Theodoros Papalas</u> <sup>1</sup> , Andy N. Antzaras <sup>1</sup> and Angeliki A. Lemonidou <sup>1*</sup> <sup>1</sup> <i>Department of Chemical Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece</i>
<b>P 30</b>	<b>Water-Gas Shift reaction over Pt catalysts supported on CeO<sub>2</sub> and GDC of different nano-configurations</b> <u>A. Androulakis</u> <sup>1</sup> , I. Yentekakis <sup>1,2*</sup> , P. Panagiotopoulou <sup>1,2*</sup> <sup>1</sup> <i>Technical University of Crete, Chania 73100, Greece;</i> <sup>2</sup> <i>Institute of Geoenergy/FORTH, Chania 73100, Greece</i>
<b>P 31</b>	<b>Low temperature steam reforming of methanol over CuZn oxide catalysts</b> <u>K.A. Papageorgiou</u> <sup>1</sup> , A. Zindrou <sup>2</sup> , Y. Deligiannakis <sup>2</sup> , M. Kuśmierz <sup>3</sup> , G. Słowik <sup>3</sup> , W. Gac <sup>3</sup> and J. Papavasiliou <sup>4*</sup> <sup>1</sup> <i>Department of Materials Science, University of Patras, GR-26504, Rio-Patras, Greece</i> <sup>2</sup> <i>Department of Physics, University of Ioannina, Ioannina 45110, Greece</i> <sup>3</sup> <i>Faculty of Chemistry, Maria-Curie Skłodowska University, Lublin 20-031, Poland</i> <sup>4</sup> <i>Department of Chemical Engineering, University of Patras, GR-26504, Rio-Patras, Greece</i>
<b>P 32</b>	<b>Gas-phase synthesis of metal nitrides via atmospheric spark ablation</b> <u>Klito C. Petallidou</u> <sup>1*</sup> , Dimitris Gounaris <sup>1</sup> , George Biskos <sup>1</sup> <sup>1</sup> <i>Climate and Atmosphere Research Centre, The Cyprus Institute, Nicosia, Cyprus</i>
<b>P 33</b>	<b>Synthesis of a hybrid SiO<sub>2</sub>@NP(t-Bu)<sub>2</sub>-Fe catalyst for H<sub>2</sub> production from formic acid: a polymeric-sponge as low-cost cocatalytic agent</b> <u>E. Aspri</u> , M. Louloudi* <i>Laboratory of Biomimetic Catalysis &amp; Hybrid Materials, Department of chemistry, University of Ioannina, GR-45110 Ioannina, Greece</i>
<b>P 34</b>	<b>Nanosize Effects on Catalytic OH-Radical Production by Fe-Oxide Nanoparticles</b> <u>C. Zodiatis</u> <sup>1</sup> , C. Dimitriou <sup>1</sup> , Y. Deligiannakis <sup>1*</sup> <sup>1</sup> <i>Lab of Physical Chemistry of Materials and Environment, Department of Physics, University of Ioannina, 45100 Ioannina, Greece</i>

**P 35 Biosolids derived biochars for CO<sub>2</sub> sorption**

Marinos Stylianou<sup>1\*</sup>, Michalis A. Vasiliades<sup>2</sup>, Agapios Agapiou<sup>3</sup>,  
Angelos M. Efstathiou<sup>2\*</sup>

<sup>1</sup>*Laboratory of Chemical Engineering and Engineering Sustainability,  
Faculty of Pure and Applied Sciences, Open University of Cyprus,  
Nicosia 2231, Cyprus*

<sup>2</sup>*Heterogeneous Catalysis Laboratory, Department of Chemistry,  
University of Cyprus, Nicosia 2109, Cyprus*

<sup>3</sup>*Volatolomics Research Laboratory, Department of Chemistry,  
University of Cyprus, Nicosia 2109, Cyprus*

---

## Social Event

As part of the social events for the 17<sup>th</sup> Panhellenic Symposium on Catalysis, we are pleased to announce an exciting excursion scheduled for **Wednesday, 9<sup>th</sup> October 2024**. At 15:00, **coaches will depart** for a scenic tour of the Paphos region, culminating in the picturesque coastal village of Latchi.

A highlight of the afternoon will be a **boat trip to the renowned Blue Lagoon**, offering attendees an unforgettable experience amidst the crystal-clear waters. For the adventurous among you, don't forget to bring your swimsuits—this is the perfect opportunity to take a refreshing dip in one of Cyprus's most stunning natural settings.

Following the excursion, the **conference gala dinner** will be held at the Yiangos & Peter Latchi Hotel's Fish Tavern Restaurant. This delightful evening, included in the registration fee, will feature a traditional Cypriot Fish meze, accompanied by a selection of local drinks. It promises to be an evening of excellent food, great company, and the warm hospitality that Cyprus is known for.

We look forward to sharing this memorable experience with you!



---

## General Information

All sessions will be conducted in English. The official language of Cyprus is Modern Greek. In addition to their native language, most Cypriots are also proficient in English, making communication easy for international visitors.

In early October, temperatures typically range from 16°C at night to around 26°C during the day, with the sea temperature expected to be around 25°C—perfect for a swim.

Cyprus uses the Euro (€) as its official currency. Credit cards are widely accepted at all businesses, as required by law, and ATMs are readily available. While taxis are plentiful and easy to find, they can be expensive. The public bus system is not highly recommended due to its limitations, but if you choose to use it, tickets can be purchased directly from the bus driver.

The power supply in Cyprus is 230 V. If you're coming from Europe, you'll need an appropriate adapter for UK-style plugs.

Conference participants will have access to free outdoor parking, both covered and uncovered, at the venue. Wi-Fi will be available throughout the Aliathon Resort.

Coffee, tea, and refreshments will be provided in the exhibition and poster areas. Participants are also invited to enjoy a buffet-style business lunch at the restaurant outside the Pantheon Ballroom, located in the basement of the Aliathon Resort Conferences & Events Center. These amenities are included in the registration fee.

## **Sponsors/Exhibitors**

**C & V Kriticos Suppliers Ltd**

**Mega Lab S.A.**

**Khalifa University**

**Analytical Instruments S.A.**

**YS Cypriot Catalysts Ltd**

**University of Cyprus**

**CNP Cyprialife**

**Cablenet Communication Systems PLC**

**Linde - Hadjikyriakos Gas Ltd**

**ActiveLab**

**Biotronics Ltd**

**Tziola Publications**