EUROPACAT

2025 / TRONDHEIM, NORWAY

Mastering the Force of Catalysis

THE PROGRAM

16th European Congress on Catalysis

August 31th - September 5th, 2025

Knowledge grows

Yara's mission is to responsibly feed the world and protect the planet. We pursue a strategy of sustainable value growth through reducing emissions from crop nutrition production and developing low-emission energy solutions. Yara's ambition is focused on growing a nature-positive food future that creates value for our customers, shareholders and society at large and delivers a more sustainable food value chain.

To drive the green shift in fertilizer production, shipping, and other energy intensive industries, Yara will produce ammonia with significantly lower emissions. We provide digital tools for precision farming and work closely with partners at all levels of the food value chain to share knowledge and promote more efficient and sustainable solutions.

Founded in 1905 to solve the emerging famine in Europe, Yara has established a unique position as the industry's only global crop nutrition company. With 17,000 employees and operations in more than 60 countries, sustainability is an integral part of our business model. In 2024, Yara reported revenues of USD 13.9 billion.

Contents

Innovative Precious Metal Catalysts
Precisely Tailored to Your Needs

Meet us at **booth 25/26** and **win a gold or a silver bar!**

Visit our company symposium: **Sept 2nd, 2025 13:30 – 13:50**

- High quality homogeneous and heterogeneous catalysts
- Unique catalysts from inhouse precursors with diverse support materials and shapes
- Customized and value engineered catalyst solutions to your application needs
- High expertise in custom and toll manufacturing solutions
- Perfect combination of activity, selectivity and reusability for highest performance
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chemicals@heraeus.com

Welcome address

Hilde Johnsen Venvik, Chair of EuropaCat 2025

Welcome to the *16th European Congress on Catalysis* in Trondheim, Norway, organized under the auspices of the *European Federation of Catalysis Societies*, EFCATS. We very much look forward to hosting about 1200 scientists and professionals. Please find on the following pages an exciting program on various fundamental and applied topics in catalysis. It shows that our community works hard to advance chemical insight and chemical reaction engineering through "*Mastering the Force of Catalysis*". The development of the scientific program has been a joint effort between the *Nordic (Denmark, Finland, Sweden, Norway) Catalysis organizations*, with the help of special session chairs, the EFCATS Council, and many more in the abstract reviewing.

EuropaCat 2025 are thrilled to have seven distinguished plenary speakers and sixteen exciting Keynote Lecturers, of which several are EFCATS Award recipients. After receiving 1500 abstracts, the program now contains about 400 standard and short oral presentation and 700 posters. Altogether, these contributions will establish the present state-of-the-art in catalysis. Swedish scientist Jöns Jacob Berzelius is known to have coined the term "catalysis" yet without fully understanding is underlying driving forces. This we do better today, but our slogan also points to our field still sitting somewhere between empiricism and prediction by laws of nature.

Early career scientists have always been particularly welcome at the biannual EuropaCat, and we therefore host several special YEuCat events at the 2025 edition. We are extremely grateful to our sponsors and would like to point out that a significant part of their contribution has been used to defray participant costs for PhD students. The industry's contribution to the program is also of great value, and we hope that the participants can appreciate their perspectives, suggestions and efforts, as well as the plethora of technologies, equipment and services on display in the exhibition.

We hope that you will engage deeply in the program by presenting, listening, discussing and commenting. Disagreement is sometimes necessary, and even fruitful, but remember to be *respectful of your peers*! Please also be on time, finish on time and adhere to the schedules and instructions given by our Conference Crew. They are committed to ensure that you are comfortable and safe. In times when global politics and war threatens sustainable development, democracy and trust in societies, we hope that the special type of *friendship* built on sharing facts, knowledge, and ideas will endure. It is reassuring to experience that most in the catalysis community shares NTNU's vision *Knowledge for a better world*.

Lastly, and despite the somewhat overwhelming program, we hope that you get the chance to appreciate our vibrant little city Trondheim and its outdoors. Several sights and nice places are within short reach of the Clarion venue, with *Nidarosdomen* itself included to the welcome event. Enjoy some local food and drinks, a walk along the river or the seaside, or even a dip in the ocean if you need to refresh - and have a good time with old and new catalysis friends!

Johnson Matthey are catalysing the net zero transition by helping to decarbonise the chemical industry and enabling sustainable energy production. Through their expertise in process technology and catalysis, they enable the efficient creation of chemicals and fuels that benefit millions of people every day. As the world is looking for more sustainable feedstocks, their technologies are largely feedstock agnostic, opening up enormous growth potential.

JM Johnson Matthey

Organizers

EFCATS (European federation of Catalysis Societies)

The Nordic Catalysis Societies:

The Catalysis Group of the Norwegian Chemical Society

The Swedish Catalysis Society

The Finnish Catalysis Society

The Danish Catalysis Society

KinCat Gemini Centre - Kinetics and Catalysis at NTNU and SINTEF

Chairs and Committees

EuropaCat 2025 is an event made possible through joint effort from the Nordic catalysis societies

Congress Chair:
Professor Hilde Johnsen Venvik,
Department of Chemical Engineering, NTNU, Norway

Congress Vice-chairs:

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Department of Chemical Engineering, NTNU, Norway

Professor Magnus Rønning,
Department of Chemical Engineering, NTNU, Norway

Professor Unni Olsbye,
Department of Chemistry, University of Oslo, Norway

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Prof. Dmitry Murzin, *Industrial Chemistry and Reaction Engineering, Åbo Akademi University, Finland*
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Prof. Stian Svelle, *Department of Chemistry, University of Oslo, Norway*
Ass. Prof. Erwan Le Roux, *Department of Chemistry, University of Bergen, Norway*
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Prof. Christian Hulteberg, *Department of Chemical Engineering, Lund University, Sweden*

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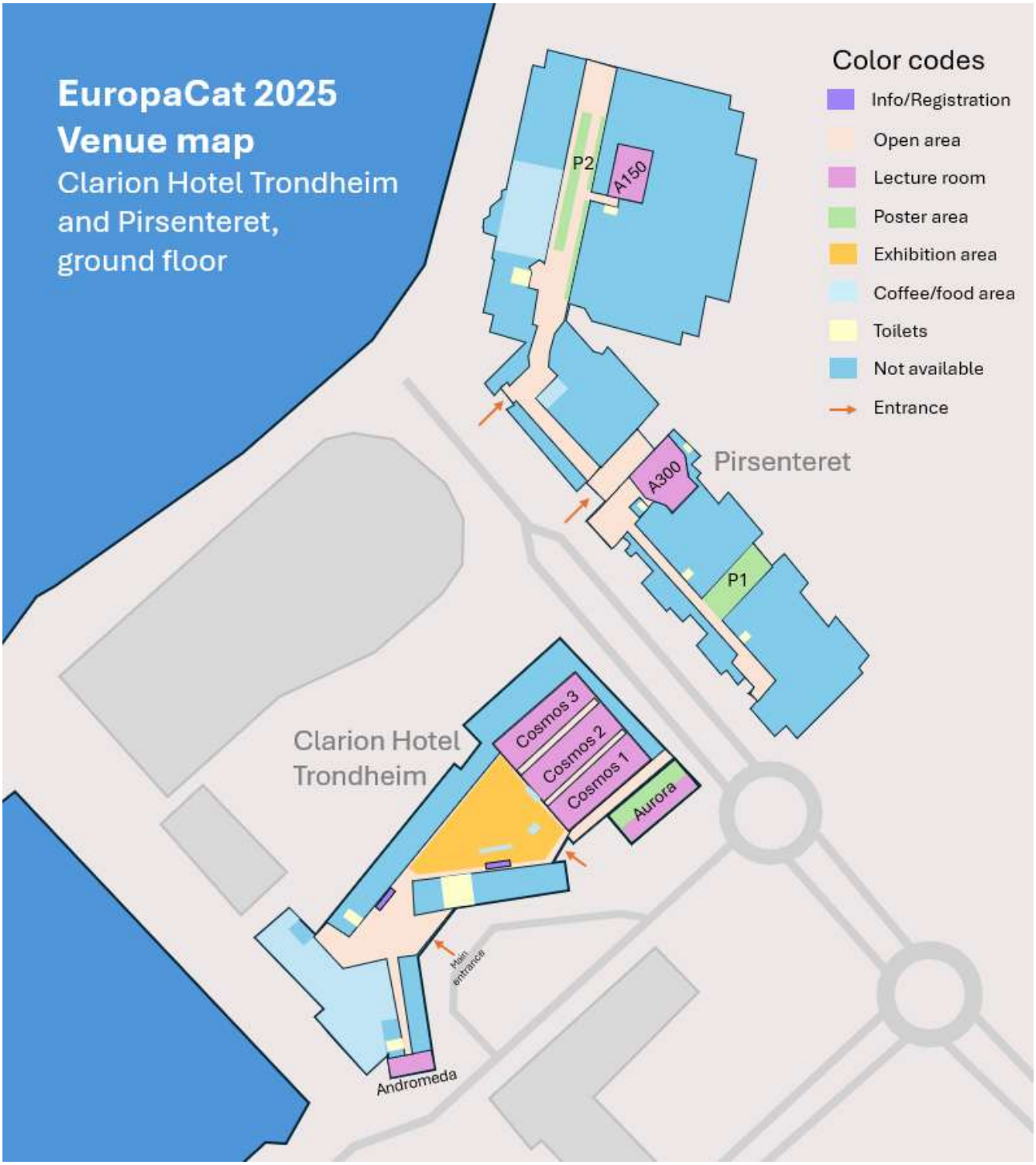
Hilde Johnsen Venvik, *NTNU*
Magnus Rønning, *NTNU*
Rune Lødeng, *SINTEF*

International Scientific Committee
EFCATS Council

Congress secretariat
NTNU Conferences

Congress area map



Plenary speakers

Sunday August 31, 16:00 -17:00

Francois Jérôme

Research director at National Centre for Scientific Research (CNRS), Poitiers, France
Recipient of 2023 Francois-Gault-Lectureship

Catalysis in biomass conversion: Between promise and feasibility

Sunday August 31, 17:00 -18:00

Andrzej Kotarba

Professor of Chemistry, founder of Materials and Surface Chemistry Group, Jagiellonian University, Krakow, Poland
Recipient of 2023 Francois-Gault-Lectureship

Beyond conventional routes in catalyst development: Turning weaknesses into strengths

Monday September 1, 08:45 – 09:45

Bert M. Weckhuysen

Distinguished University Professor of Utrecht University, The Netherlands
Recipient of the 2025 Michel Boudart Award for the Advancement of Catalysis

Spatial and Temporal Exploration of Heterogeneous Catalysts with Operando Spectroscopy

Tuesday September 2, 08:45 – 09:45

George Willis Huber

Richard Antoine Professor of Chemical Engineering,
University of Wisconsin-Madison. USA

Inorganics and catalytic conversion of biomass and plastics

Wednesday September 3, 08:45 – 09:45

Núria López

Professor of Chemistry at Institute of Chemical Research of Catalonia (ICIQ), Tarragona, Spain

Dynamics in catalytic materials

Thursday September 4, 08:45 – 09:45

Jan-Dierk Grunwaldt

Professor and director at the Institute for Chemical Technology and Polymer Chemistry, Karlsruher Institute of Technology (KIT), Karlsruhe, Germany

Dynamics in catalysis: From the atomic structure to the reactor scale

Friday September 5, 11:30 – 12:30

Shannon S. Stahl

Professor of Chemistry, Steenbock Professor of Chemical Sciences at University of Wisconsin – Madison, USA
Recipient of Robert K. Grasselli Award for Catalysis 2025

Managing the oxygen reduction reaction to support the aerobic oxidation of organic molecules

Keynote speakers

Xiulian Pan Professor of the State Key Laboratory of Catalysis at Dalian Institute of Chemical Physics
OXZEO catalysis for C1 chemistry
Monday September 1, 10:30

Alessandra Beretta Professor at Politecnico di Milano, Italy
R&D steps towards H_2 production by methane pyrolysis on Fe-Al_2O_3: From catalyst formulation to kinetic and reactor studies
Monday September 1, 11:10

Miao Sun, Research Science Specialist and Project Team leader at Saudi Aramco, Saudi Arabia, Recipient of EFCATS Applied Catalysis Award 2025
Low value liquids to chemicals
Monday September 1, 11:50

Todd Hyster Professor of Chemistry at Princeton University, USA
Emergent Mechanisms in Photoenzymatic Catalysis
Monday September 1, 14:00

Edd Anders Blekkan Professor and head of the Catalysis group at The Norwegian University of Science and Technology (NTNU), Norway
Fischer-Tropsch synthesis over 100 years – still more to do?
Monday September 1, 14:00

Anna Chrobok Professor at Silesian University of Technology, Poland
Designing ionic-based materials as catalysts for advance organic synthesis
Monday September 1, 16:00

Ning Yan Professor and director at Centre for Hydrogen Innovations, National University of Singapore, Singapore
Catalytic Synthesis of Renewable Organonitrogen Chemicals
Tuesday September 2, 10:30

Tapio Salmi Professor at Åbo Akademi, Finland
The impact of chemical reaction engineering on the catalytic transformation of biomass to valuable chemicals
Tuesday September 2, 11:10

Jakob Kibsgaard Professor and head of section for Surface Physics and Catalysis at DTU, Denmark
Designing and investigating catalysts for energy conversion catalysts using mass-selected nanoparticles
Wednesday September 3, 10:30

Thomas Schaub Designated Senior Principal Scientist and Lab Head of Catalysis Research Laboratory, BASF Germany, and Honorary Professor at University of St. Andrews, Scotland
Collaborative industrial-academic research for the use of homogenous catalysis in circular processing and the utilization of renewable feedstocks
Wednesday September 3, 11:10

Jacinto Sá Professor at Uppsala University, Sweden
Plasmons: From metal ore to catalyst
Thursday September 4, 10:30

Gianvito Vilé Associate Professor of Chemical Engineering at Politecnico di Milano, Italy and Recipient of EFCATS Young Researcher Award 2025
Single-atom catalysis for greener fine chemical synthesis
Thursday September 4, 11:10

Fábio Bellot Noronha Senior researcher of The National Council for Scientific and Technological Development (CNPq), and a researcher of the State of Rio de Janeiro (FAPERJ). Brazil
Unraveling active sites for the catalytic hydrodeoxygenation of lignin-derived compounds: From mechanistic insights to rational design
Thursday September 4, 14:00

Albin Pintar Research professor and Head of the programme group »Integrated Approach to Water Pollution Prevention« at the National Institute of Chemistry, Ljubljana, Slovenia
Harnessing light for a cleaner future: Advances in heterogeneous photocatalysis
Thursday September 4, 14:40

Gabriele Centi Professor in Industrial Chemistry at the University of Messina, Italy and President European Research Institute of catalysis
Transformative catalysis for a resilient and low-carbon future (Centi and Perathoner)
Friday September 4, 09:00

Gerhard Mestl Head of Department *Oxidation Catalysis*, Clariant AG, Germany
"Vision without execution is hallucination" (T.A. Edison) Effective strategies for scale-up of heterogenous catalysts
Friday September 4, 09:40

YEuCat events

YEuCat contest

The first **YEuCat contest: *Research in a Nutshell*** will take place during EuropaCat 2025:

Time: Tuesday September 2, 14:00-15:30
Place: Auditorium A300, Pirsenteret

This contest aims to recognize outstanding efforts by young researchers (PhD students and early-career PostDocs) to present their work in an accessible and engaging way. We have selected 10 finalists, who will present their research in a dedicated session at EuropaCat 2025 in a short oral presentation. The final winner will be selected based on a combined jury and audience vote and will be announced during the conference dinner on Wednesday.

YEuCat Panel discussion

The first edition of **YEuCat panel discussions "The Metal Showdown: Noble vs. Transition Metals in Modern Catalysis"** will be held at EuropaCat 2025.

Time: Tuesday September 2, 16:10-17:30
Place: Auditorium A300, Pirsenteret

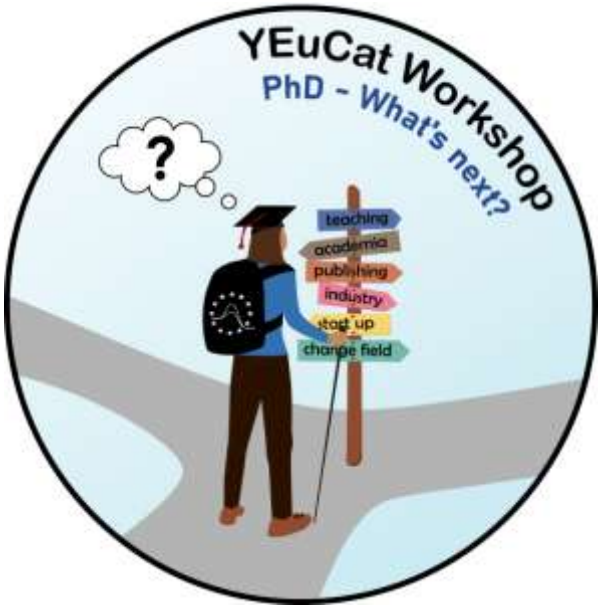
A crucial topic in the context of climate change and sustainability is the utilization of critical raw materials and the pursuit of alternatives. In catalysis, this specifically applies to noble metal based materials. Often praised for their excellent activity and stability, the use of noble metals is integral in large-scale industrial applications. However, both economic pressure and ecological concerns are fueling the search for alternative catalysts, primarily based on transition metals. Though these novel materials are promising candidates, most of them fail to reach the stability and activity of their established counterparts. On the other hand, research on noble metal catalysis nowadays often aims to prolong the lifetime of the materials, reduce the metal loading, and find ways to recycle the spent catalysts. In this discussion, we want to shine a light on the needs and goals of the chemical industry, as well as academic researchers, in the field of transition and noble metal catalysis.

YEuCat workshop

Finally, similar to the very first YEuCat event that was held at EuropaCat 2019 in Aachen, we will again organize a **YEuCat workshop**:

Time: Wednesday, September 3, 12:30 – 14:00
Place: Auditorium A300, Pirsenteret

As young researchers navigating the world of catalysis, the path ahead is full of possibilities – industry, academia, startups – but it can also feel overwhelming. That's why YEuCat is excited to host a new edition of the YEuCat Workshop, designed especially for PhD students and early-career researchers attending EuropaCat 2025.



In this workshop, we want to shed light on different career trajectories with testimonials from people who started just like us. Our panel of speakers includes:

- **Dr. Nikolaos Tsakoumis, Research Scientist at SINTEF**, and **Dr. Liliana Lukashuk, Principal Scientist at Johnson Matthey**, offering a perspective on industrial career paths
- **Dr. Francesco Valentini from the startup co2ol catalyst**, sharing insights into the challenges and rewards of entrepreneurial science
- **Prof. Dr. Christoph Rameshan (Montanuniversität Leoben)** and **Dr. Bidyut Bikash Sarma (LCC-CNRS)**, who will talk about pursuing a career in research, applying for European funding, and boosting your academic journey
- **Dr. Christopher Goodwin, beamline scientist at ALBA synchrotron**, giving you insights into the synchrotron world and *operando* spectroscopy
- **Dr. Sandra González Gallardo, Editor-in- Chief at Wiley for the journals *Advanced Synthesis and Catalysis* and *ChemCatChem***, giving tips to valorize our research and navigate the publication process.

This event will be an informal and inspiring conversation, where the speakers will share their experiences and will answer our questions. It's also a great chance to connect with fellow researchers and meet the YEuCat community. Lunch will be provided and we will enjoy it together during the session.

The workshop will be moderated by the YEuCat board. Don't miss this opportunity to explore, reflect and connect. Stay tuned!

Social events

Welcome reception

There will be a welcome reception in the restaurant area at Clarion Hotel Trondheim Sunday afternoon, just after the Opening Plenary lectures. Pre-registration necessary.

Time: Sunday August 31, 18:00 - 19:00 **Place:** Clarion Hotel Trondheim

Concert in Nidarosdomen

Sunday evening, all attendees and accompanying persons are invited to a complimentary organ concert in Nidaros Cathedral, Norway´s national sanctuary, hosted by the community of Trondheim.

Time: Sunday August 31, at 20:00 **Place:** Nidaros Cathedral

YEuCat mingling

For the young researchers there will be a get together and mingling session in the Pirsenter restaurant next to poster area P2, just after the poster session. An evening meal and something to drink is included. Pre-registration necessary.

Time: Tuesday September 2, at 19:30

Place: Pirsenteret restaurant, ground floor

YEuCat sponsor:

WILEY

EuropaCat 2025 fun run

A run as a warm-up for the marathon on Saturday September 6, open for all attendees and accompanying persons. It is a 5.5 km route which shows some nice parts of the city - and it is not too demanding.

Time: Wednesday September 3, starting at 14:30

Starting and ending place: : Outside the main entrance of Clarion Hotel Trondheim


Norwegian catalysis researchers Trondheim Marathon 2024

Congress dinner

Congress dinner will be organized at the conference venue. This will be a joint event for all participants that starts with sharing a meal, followed by socializing, music and entertainment. Pre-registration necessary to join the meal. If you just want to be a part of Part Two, after the meal, it's for all and included in the participant fee.

Time: Wednesday September 3,

Mingling from 18:00

Dinner starts 19:00

Open party for all from 21:30

Place: Clarion Hotel Trondheim , Cosmos and Space

Congress dinner sponsors:

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2025 EFCATS Awards

2025 Michel Boudart Award for the Advancement of Catalysis

Bert M. Weckhuysen
Distinguished University Professor of Utrecht University, The Netherlands

2025 The APACS & EFCATS Michel Che Award

Gabriele Centi
Professor in Industrial Chemistry at the University of Messina, Italy and President European Research Institute of Catalysis

2025 Francois-Gault-Lectureship

The award will be announced at EuropaCat 2025 closing session

2025 Robert K. Grasselli Award for Catalysis

Shannon S. Stahl
Professor of Chemistry, Steenbock Professor of Chemical Sciences at University of Wisconsin – Madison, USA

2025 EFCATS Applied Catalysis Award

Miao Sun
Research Science Specialist and Project Team leader at Saudi Aramco, Saudi Arabia

2025 EFCATS Young Researcher Award

Gianvito Vilé
Associate Professor of Chemical Engineering at Politecnico di Milano, Italy

2025 EFCATS Best PhD Thesis Award

Vera Giulimondi
PhD student in heterogeneous catalysis at ETH Zurich

Isaac Daniel
Post-doctoral researcher at Cardiff University

Scientific program

Sunday August 31, 2025

15:30-16:00	**Opening of Congress**	
Speakers	Kent Ranum, Mayor of Trondheim Monica Rolfsen, Pro-Rector Outreach and Social Responsibility, NTNU Hilde Johnsen Venvik, Chair of EuropaCat 2025	
Music	Christian Eriksen's trombone quintet	
Chair	Anne Hoff	
16:00 -18:00	**Plenary lectures**	
16:00	**Francois Jérôme**	Research director at National Centre for Scientific Research (CNRS), Poitiers, France Recipient of 2023 Francois-Gault-Lectureship
Lecture title	*Catalysis in biomass conversion: Between promise and feasibility*	
17:00	**Andrzej Kotarba**	Professor of Chemistry, founder of Materials and Surface Chemistry Group, Jagiellonian University, Krakow, Poland Recipient of 2023 Francois-Gault-Lectureship
Lecture title	*Beyond conventional routes in catalyst development: Turning weaknesses into strengths*	
Chairs	Nataša Novak Tušar and Hilde J. Venvik	
18:00-19:00	**Welcome reception**	
20:00-21:00	**Organ concert in Nidarosdomen**	

Monday September 1, 2025

08:45 – 09:45	**Plenary lecture**	
Speaker	**Bert M. Weckhuysen**	Distinguished University Professor of Utrecht University, The Netherlands Recipient of the 2025 Michel Boudart Award for the Advancement of Catalysis
Lecture title	*Spatial and Temporal Exploration of Heterogeneous Catalysts with Operando Spectroscopy*	
Chairs	David Kubička, Hilde J. Venvik and Carsten Sievers	

Room	1-Cosmos1	2-Cosmos2
Session	D1-S1-T03 ***CO_2 activation:*** ***Reverse water-gas shift catalysis***	D1-S1-T01 ***Hydrogen production by CH_4 pyrolysis***
Chairs	Unni Olsbye and Petra De Jongh	Magnus Rønning and Ilenia Rossetti
10:30	**Keynote lecture:** *OXZEO catalysis for C1 chemistry* **Xiulian Pan**, the State Key Laboratory of Catalysis at Dalian Institute of Chemical Physics, China	280 *Utilising operando XRD-CT and XANES for investigating the active phase formation of a Fe/$MgAl_2O_4$ catalyst during CH_4 pyrolysis* Antonia Diana Bobitan*, Stephen Price, Ilenia Giarnieri, Patricia Benito, Andrew Michael Beale
10:50		908 *Deactivation and Kinetic Study of Catalytic Methane Pyrolysis on Fe/Al_2O_3 for Fluidized Bed Reactor Modelling* Piercosimo Vedele*, Enrico Sartoretti, Fabio Salomone, Massimiliano Antonini, Samir Bensaid
11:10	340 *Decoding the Promotional Effect of Iron in Bimetallic Pt-Fe-Nanoparticles for the Low Temperature Reverse Water-Gas Shift* Colin Hansen*, Wei Zhou, Christophe Copéret	**Keynote lecture:** *R&D steps towards H2 production by methane pyrolysis on Fe-Al_2O_3: From catalyst formulation to kinetic and reactor studies* **Alessandra Beretta**, Politecnico di Milano, Italy
11:30	267 *Efficient Reverse Water Gas Shift Reaction Over Designed Metal-Free Borophene Oxide Catalyst* Anju Sobhana*, Shiju Raveendran	
11:50	1378 *Catalytic Roles of Reactive Hydrogen in CO_2 activation via Reverse Water Gas Shift on Rh and Pt Surfaces* Riccardo Colombo, Gabriele Spanò, Luca Nardi, Ya-Huei (Cathy) Chin, Matteo Maestri*	165 *Unravelling Carbon Properties during Catalytic Methane Pyrolysis with Operando Raman Spectroscopy* Hanya Spoelstra*, Matteo Monai, Eelco Vogt, Bert Weckhuysen
12:00		1420 *Iron and Iron Carbide as active species for Hydrogen and Carbon Nanotubes Production via Methane Dissociation* Ilenia Giarnieri, Patricia Benito, Vito Foderà*, Clelia Righi, Phuoc Ho
12:10	980 *Tuning Fe crystal phase of Fe/C catalysts enables highly active and selective towards CO_2 reduction to CO* Yang Gao, Fayi Jin, Jingbo Du, Zhiyu Chen, Xiaoli Yang, Jia Yang*	1446 *Study of the structure and activity of Fe-based catalysts during H_2 production via CH_4 pyrolysis* Chiara Negri*, Lidia Castoldi, Veronica Piazza, Marco Orsenigo, Davide Cafar, Matteo Maestri, Gianpiero Groppi, Alessandra Beretta
12:20	641 *Copper-based catalysts for efficient CO production at low temperatures* Elena Vicente*, Cecilia Solís, Ramón Manzorro, Patricia Concepción, Ana B. Hungría, David Catalán, María Valls, María Balaguer, Jose M. Serra	1418 *Methane pyrolysis on Fe-Al_2O_3 catalyst for low-C hydrogen: kinetic and reactor studies with a multiscale approach* Veronica Piazza*, Marco Orsenigo, Davide Cafaro, Chiara Negri, Lidia Castoldi, Matteo Maestri, Gianpiero Groppi, Alessandra Beretta
12:30 – 14:00	**Lunch break**	

Room	3-Cosmos3	4-A300
Session	D1-S1-T07 ***Bulk chemicals from biological feedstock***	D1-S1-T04 ***Refinery catalysis: Hydro-deoxygenation - 1***
Chairs	Matti Reinikainen and Evgeniy Redekop	De Chen and Nataša Novak Tušar
10:30	242 *Different Valorization Pathways for bio-based Ethanol examined by high-throughput catalyst testing* Matthias Stehle, Benjamin Mutz*, Fabian Schneider	1048 *Catalytic Activity of Zeolite-supported Pt for Hydrothermal Plant Oil Deoxygenation* Monique Joice Auguis*, Masato Kouzu, Jun Suzuki, Yusuke Nishida
10:50	1483 *Elucidating Pd role in UiO-66 alcohol growth via Guerbet reaction* Pedro Jesús Cantarero Gómez*, Marco Montesi, Roberto Fernández de Luis, Pedro Luis, Arias Iker, Agirrezabal Telleria	466 *Unlocking the Potential of Animal and Vegetable Oils for Renewable Fuels via Hydrotreating* Benedetta Oliani*, Jostein Gabrielsen, Magnus Stummann
11:10	961 *Zeolite Catalysts for the Valorisation of Fatty Esters* Jonathan Fabian Sierra Cantor, Olinda Gimello, Carlos Alberto Guerrero Fajardo, Hugo Petitjean, Anne Aubert-Pouessel, Luca Bernardi, Francesco Di Renzo*, Corine Gérardin, Nathalie Tanchoux	754 *Acidity drives selectivity: tuning reaction pathways under acetone hydrodeoxygenation conditions* Guilherme Strapasson, Gabriel Bafero, Davi Leite, Dyovani Santos, Angela Albuquerque, Ingrid Barcelos, Liane Rossi, Cristiane Rodella, Daniela Zanchet*
11:30	1046 *Mechanism and kinetic investigation of aldol condensation reactions over Lewis acid (≡SiO)xM−OH···O(H)−Si≡ sites* Yanfei Zhang*, Peng Tian, Zhongmin Liu, Alexis T. Bell	751 *Anisole on Ni (111) as a model reaction of hydrodeoxygenation of bio-oil in the pressure gap* Giorgio Bruno Braghin* Franziksa Dahlmann Dan J. Harding Henrik Öström Klas Engvall
11:40		69 *Production of sustainable aviation fuels: hydrodeoxygenation of a model compound dihydroeugenol over Fe-Ni/Al_2O_3 catalyst in continuous operation* Päivi Mäki-Arvela*, Zuzana Vajglova, Olha Yevdokimova, Mark Martinez-Klimov, Irina Simakova, Kari Eränen, Anssi Peuronen, Johan Linden, Dmitry Doronkin, J.E.S. Van der Hoeven, Dmitry Murzin
11:50	512 *Polyfunctional catalysts for tandem processes of obtaining valuable hydrocarbons and oxygenates from C2, C4 (bio)alcohols* Olga Larina*, Karina Valihura, Oksana Zikrata, Svitlana Orlyk, Sergiy Soloviev	**Keynote lecture:** *Low value liquids to chemicals* **Miao Sun**, Research Science Specialist and Project Team leader at Saudi Aramco, Saudi Arabia, Recipient of EFCATS Applied Catalysis Award 2025
12:10	1389 *(Ni,Cu)-catalysts for bio-acetaldehyde: preparation and pretreatment vs. performances* Elena Spennati*, Giovanni Pampararo, Garbriella Garbarino, Paola Riani	
12:20	649 *Machine Learning-Enabled Optimization of Supported Gold Catalysts for Base-Free Furfural Oxidation* Joelle Thuriot*, Camila Palombo Ferraz, Hisham K. Al Rawas, Svetlana Heyte, Sébastien Paul Franck Dumeignil, Robert Wojcieszak	
12:30 – 14:00	**Lunch break**	

Room	5-A150	6-Andromeda
Session	D1-S1-T08 ***Fine chemicals and polymer production - 1***	D1-S1-T15 ***Special session:*** ***Frontiers in Enzyme Catalysis***
Chairs	Anna Chrobok and Gianvito Vilé	Changzhu Wu and Todd Hyster
10:30	1304 *Designing a new weakly coordinating surface anion for a highly active catalyst in olefin polymerization using surface organometallic chemistry* Morten Grunnaleite Ingebrigtsen*, Vittoria Chiari, Dominique Sauter, Manel Taam, Gaëlle Pannier, Olivier Boyron Christophe Boisson, Mostafa Taoufik	899 *Engineering Living Cells with Polymers for Cascade Biocatalysis* Changzhu Wu*
10:50	81 *Binuclear Ti-Fe Sites in MFI Framework for Synergistically Catalysing Alkene Epoxidation* Dong Lin*, Richard Lewis, Graham Hutchings	1463 *LARA – for automated, FAIR biocatalysis* Mark Doerr*, Konstantin Weigmann, Stefan Born, Uwe Bornscheuer
11:10	948 *An in-situ DRIFTS-MS study on the role of V in the oxidation of methacrolein to methacrylic acid over heteropoly acids* Sarayute Chansai*, Yuki Kato, Wataru Ninomiya, Chris Hardacre	934 *Bio/photocatalytic hybrid system for visible-light driven biodegradable plastic precursor production from CO_2 gas and acetone* Yutaka Amao*, Yu Kita
11:30	161 *"Marriage" of C–H Activation and Chain-Walking: Ir-Catalyzed Hydroarylation for the Remote Functionalization* King Hung, Nigel Tang, Haluhi Takahashi, Ryo Tokutake, Kanako Uchida, Kazuki Nishihara, Takanori Shibata*	1231 *Enzymatic esterification from lab scale synthesis to industrial reality* Kwinten Janssens*, Dries Gabriels
11:50	283 *Gas phase hydroformylation with the post-modified Metal-Organic Framework NU-1000* Silje F. Håkonsen, Morten Frøseth, Bjørnar Arstad, Terje Didriksen, Ole Swang, Knut Thorshaug Richard H. Heyn*	573 *Bioinspired interface catalysis for hydrogen-related reactions* Jian Liu*
12:00		1200 *Design of an enzyme-based bioreactor for anticancer drugs screening: kinetic evaluation of Lactate Dehydrogenase in the presence of different inhibitors* Chiara Vincenzi*, Clarissa Cocuzza, Valentina Cauda, Debora Fino, Marco Piumetti*
12:10	1352 *Catalytic Olefin Polymerization via High-Throughput Experimentation (HTE): a Powerful Approach to Investigate Complex Materials* Antonio Vittoria*, Gaia Urciuoli, Salvatore Costanzo, Daniele Tammaro, Felicia Daniela Cannavacciuolo, Rossana Pasquino, Roberta Cipullo, Finizia Auriemma, Nino Grizzuti, Pier Luca Maffettone, Vincenzo Busico	503 *Hybrid synthesis of AMFC-derived amides using supported goldnanoparticles and acyl-coenzyme A ligases.* Lucas Bisel, Aurélie Fossey-Jouenne, Richard Martin, Jonathan Bassut, Carine Vergne-Vaxelaire, Anne Zaparucha, Egon Heuson*
12:20		1325 *Mono-copper enzymes that oxidize high-energy C-H bonds are protected by an electron hole transfer mechanism* Tom Emrich-Mills*, Ivan Ayuso-Fernandez, Julia Haak, Ole Golten, Kelsi Hall, Lorenz Schwaiger, Trond Moe, Anton Stepnov, George Cutsail III, Morten Sørlie, Åsmund Røhr, Vincent Eijsink
12:30 – 14:00	**Lunch break**	

Room	1-Cosmos1	2-Cosmos2
Session	D1-S2-T03 ***Frontiers in Enzyme Catalysis/ CO_2 to fuels and chemicals***	D1-S2-T01 ***Hydrogen production by reforming catalysis (MSR / DR / WGS)***
Chairs	Changzhu Wu and Mark Saeys	Alessandra Beretta and Zhixin Yu
14:00	**Keynote lecture:** *Emergent Mechanisms in Photoenzymatic Catalysis* **Todd Hyster,** Professor of Chemistry at Princeton University, USA	1004 *Alleviating the Deactivation of Pt/CeO_2 catalyst by Non-Thermal Plasma during the Water-Gas Shift Reaction* Jingjing Li, Sarayute Chansai*, Mariyam Bi, Piu Chawdhury, Cristina Stere, Chris Hardacre
14:20		475 *Combined IR spectroscopy and TEM microscopy study of Co promoted MoS_2 catalysts for Water Gas Shift reaction* Saloua Nouma, Laetitia Oliviero*
14:40	584 *Alginate-supported amino acids as active halogen-free, biobased heterogeneous catalysts for the conversion of glycidol and CO_2 into glycerol carbonate* Tanika Kessaratikoon*, Valerio D'Elia, Paolo P. Pescarmona	1037 *Enhancing and understanding the stability of Ni catalysts via In-promotion for the steam reforming of oxygenates: An in-depth operando XRD-XAS and modeling investigation* Martina Fracchia, Thantip Roongcharoen, Mauro Coduri, Luca Sementa, Soroosh Saeedi, Xuan Trung Nguyend, Dragos Constantin Stoian, Emanuela Pitzalis, Beatrice Campanella, Claudio Evangelisti,Alesssandro Fortunelli, Vladimiro Dal Santo, Filippo Bossola*
15:00	338 *Computationally Guided Synthesis of MOF-74-Derived Catalyst for CO_2 Hydrogenation using Neural Network Potential* Shunsaku Yasumura*, Mone Yamazaki, Masaru Ogura	92 *A combined in situ NAP-XPS, XAS, and catalytic study towards an improved understanding of iron-based HTWGS catalysts* Liliana Lukashuk*, Leon van de Wate, Tahmin Lais, Gopinathan Sankar
15:20	130 *Defect Engineering of Z-scheme Heterojunction Catalysts for Efficient Photocatalytic CO_2 Reduction to CH_4* Ye Song*	877 *Impact of Cu (II) incorporation in $LaFeO_3$ for H_2 production via Chemical Looping Dry Reforming of CH_4 (CL-DRM)* Ganesh Jabotra*, Amanda Sfeir, Lorenzo Stievano, Axel Löfberg, Sébastien Royer, Sudhanshu Sharma, Jean Philippe Dacquin
15:30 – 16:00	**Coffee break**	

Room	3-Cosmos3	4-A300
Session	D1-S2-T07 ***Hydrogenation/dehydrogenation catalysis***	D1-S2-T06 ***Catalysis for recycling of plastics - 1***
Chairs	Petra Ágota Szilágyi and David Willock	Ljubiša Gavrilović and Salvador Ordóñez
14:00	1281 *Unveiling the Crucial Role of Supports in Hydrogenation of Biomass-Derived Oxygenates* David Kubicka*, Snehasis Dutta, Babar Amin, Sharmistha Saha, Evgeniya Grechman, Jaroslav Aubrecht, Oleg Kikhtyanin	765 *Catalysts for nylon-6 depolymerization to its monomer ε-caprolactam* Prabin Dhakal, Derek Creaser, Louise Olsson*
14:20	728 *Low-temperature non-oxidative dehydrogenation of short-chain alkanes over copper(I) mordenite via chemical looping* Mikalai Artsiusheuski, Jiawei Guo, Ambarish Kulkarni, Jeroen van Bokhoven, Vitaly Sushkevich*	371 *Upcycling waste EPS into highly efficient catalysts for sustainable conversion of PET to BHET via catalytic glycolysis* Chitra Sarkar, Jong In Choi, Yujin Kang, Do-Young Hong*
14:40	1456 *Application of Non-thermal Plasma in the Catalyst Design for Propane Dehydrogenation* Jingyi Yang*, Eduardo Ortega, Nils Pfister, Shamil Shaikhutdinov, Beatriz Roldan Cuenya	999 *Chemical Upcycling of Polycarbonate Plastic Waste* Arjun Manal*
15:00	168 *Elucidating active sites in iron molybdate catalysts during oxidative dehydrogenation using coupled operando and transient methods* Jan Welzenbach, Hannah Wilhelm, Leon Schumacher, Kathrin Hofmann, Barbara Albert, Christian Hess*	568 *Catalytic tandem dehydrochlorination–hydrogenation of waste PVC: transition from ionic liquids to Lewis acid catalysts* Galahad O'Rourke*, Dirk De Vos
15:20	900 *Influence of structure and coordinative environment on C-C bond formation Catalysis over Lewis acid (≡Si-O)-M and bimetallic (≡Si-OM1)-M2 centers* Liang Qi*, Zhongmin Liu, Alexis Bell	51 *Catalytic Pyrolysis of Polyethylene with Microporous and Mesoporous Materials: Assessing Performance and Mechanistic Understanding* Jochem van de Minkelis*, Adrian H. Hergesell, Jan C. van der Waa,l Rinke M. Altink, Ina Vollmer, Bert M. Weckhuysen
15:30 – 16:00	**Coffee break**	

RSC connect scientists with each other and society as a whole. They publish new research and develop, recognise and celebrate professional capabilities. RCS bring people together to spark new ideas and new partnerships and support teachers to inspire future generations of scientists. RCS want to be a catalyst for the chemistry that enriches our world.

Room	5-A150	6-Andromeda
Session	D1-S2-T02 ***Gas to liquid fuels technology - 1***	D1-S2-T05 ***Recycling and waste treatment catalysis - 1***
Chairs	Jia Yang and Mika Huuhtanen	Christian Hulteberg and Yasushi Sekine
14:00	**Keynote lecture:** *Fischer-Tropsch synthesis over 100 years – still more to do?* **Edd Anders Blekkan** Professor and head of the Catalysis group at The Norwegian University of Science and Technology (NTNU), Norway	93 *Catalysing Industrial Symbiosis of the Steel and Ammonia Industries* Liliana Lukashuk*, Santiago Palencia Ruiz,H.A.J. van Dijk
14:20		1363 *Oxalic Acid as a Multifunctional Agent for Iron Recovery and Catalytic Fe-FAU Zeolite Synthesis from Class C and Class F Fly Ash* Süleyman Şener Akın*, İlhan Duruk, Can Barkın Dericioğlu, Selin Cansu Gölboylu, Bahar İpek, Burcu Akata
14:40	763 *Accounting for 'missing' HCP Co in to understand alcohol & olefin selectivity in Mn promoted Co/TiO_2 FTS catalysts* Andrew Beale*, Danial Farooq, James Paterson, Mark Peacock	381 *Stoichiometric selective carbonylation of methane to acetic acid by chemical looping* Yinghao Wang*, Chunyang Dong, Mariya Shamzhy, Yury Kolyagin, Jeremie Zaffran, Andrei Khodakov, Vitaly Ordomsky
15:00	1399 *NiMgAl-coated foams for gas upgrading by tri-reforming to be integrated in a biomass gasifier* Francesco Basile*, Elisabetta Orfei, Filippo Suzzi, Angela Gondolini, Elisa Mercadelli, Andrea Fasolini, Jacopo De Maron, Alessandra Sanson	384 *Conversion of α-pinene to cis-pinane using carbon supported noble metals* Filippo Ravasio*, Eszter Baráth, Katharina Konieczny
15:10		1167 *Novel functionalized zeolite and zeotype catalysts for direct oxidation of biomethane to biomethanol* Miaomiao Wen*, Magnus Skoglundh
15:20	1362 *Synthesis and integration of bioinspired copper active sites into UiO-67 for selective C-H activation in methane* Ingeborg Braskerud Tangevold*, Rafael Cortez Sgroi Pupo, Jihad El Guettioui, Zoltán Németh, György Vankó, Mohamed Amedjkouh, Unni Olsbye, Petra Ágota Szilágyi	890 *A new catalytic process for H_2S splitting to H_2 and elemental S* Anna Nova, Emanuele Moioli*, Flavio Manenti
15:30 – 16:00	**Coffee break**	

Room	1-Cosmos1	2-Cosmos2
Session	D1-S3-T03 ***CO_2 conversion by photoactivation***	D1-S3-T01 ***Hydrogen production by NH_3 decomposition - 1***
Chairs	András Sápi and Dorota Rutkowska-Żbik	Magnus Rønning and Alessandra Beretta
16:00	135 *Photothermal Catalysis of CO_2 to Hydrocarbon on Bimetallic Catalysts* Xinhuilan Wang*, Alejandra Rendón-Patiño, Diego Mateo, Jorge Gascon	618 *Size/Site-Dependent Reaction Pathways of Ammonia Decomposition on Transition Metal Catalysts* Jihao Wang, Jelena Jelic, Shilong Chen, Felix Studt, Malte Behrens*
16:20	499 *Light-driven ambient temperature dry reforming of methane over CuInxGa1-xSe (CIGS) Solar Cells* Duc Manh Nguyen*, Thomas Tom, Julian Guerrero, Jean-Francois Guillemoles, Negar Naghavi, Vitaly Ordomsky, Andrei Khodakov	331 *Hydrogen production by NH_3 decomposition at low temperatures assisted by surface protonics* Yukino Ofuchi, Kenta Mitarai, Sae Doi, Koki Saegusa, Mio Hayashi,Hiroshi Sampei, Takuma Higo, Yasushi Sekine*
16:40	1386 *CO_2 Conversion via Photocatalysis and Photoelectrocatalysis: Harnessing CuMgFe Layered Double Hydroxide and Derived Oxides* Eleonora Tosi Brandi*, Andrea Fasolini, Jacopo De Maron, Nicola Sangiorgi, Alex Sangiorgi, Miroslava Filip Edelmannová, Kamila Koci, Alessandra Sanson, Francesco Basile	303 *Ceria doped carbon nanofibers for H_2 production via catalytic NH_3 cracking* Christian Di Stasi*, Jaime López-de los Ríos, Alejandro Ayala-Cortés, Isabel Suelves, José Luis Pinilla
17:00	225 *Alkali-promoted indium oxide as selective photo-thermal catalyst for CO_2 hydrogenation* Diego Mateo*, Xinhuilan Wang, Alejandra Rendón-Patiño, Jean-Marcel Gallo, Jorge Gascon	307 *Exploring the Effects of Oxide Additives on Spinel $Ni_{0.1}Co_{0.9}Al_2O_4$ Catalysts for Efficient Ammonia Decomposition* Anh Binh Ngo*, Liseth Duarte-Correa, Oscar Gomez-Capiro, Frank Girgsdies, Olaf Timpe, Thomas Lunkenbein, Holger Ruland, Annette Trunschke
17:10	87 *Mixed-phase Ga_2O_3 as a photocatalyst for CO_2 reduction with water : the role of each crystalline phase* Muneaki Yamamoto, Naoto Ota, Yukie Takashiro, Tetsuo Tanabe, Tomoko Yoshida*	47 *High surface area Ni/La_2O_3 exsolved catalysts for H2 production through NH_3 decomposition* Sebastián Gámez, Josefine Schnee, Eric Gaigneaux*
17:20	54 *Photo-Thermal Catalytic CO_2 Conversion over Oxide-Supported Nickel Phosphides and Borides* Mark Bussell*, Jacob R. Schare, Carlos Linares Aponte, Talia Flaherty, Megan Desing	414 *Mo or Fe nitrides: active phases for NH_3 decomposition on Fe_3Mo_3N* Oscar Gómez-Cápiro*, Jan Folke, Simon Ristig,Daniela Ramermann, Walid Hetaba, Eva M. Heppke, Sophie Hund, Martin Lerch, Holger Ruland
17:30 – 19:30	**Poster session**	

Room	3-Cosmos3	4-A300
Session	D1-S3-T08 ***Fine chemicals and polymer production - 2***	D1-S3-T06 ***Catalysis for recycling of plastics - 2***
Chairs	Richard H. Heyn and Thomas Schaub	Louise Olsson and Haresh Manyar
16:00	**Keynote lecture:** *Designing ionic-based materials as catalysts for advance organic synthesis* **Anna Chrobok** Professor at Silesian University of Technology, Poland	1177 *PVC Pyrolysis Oil: From Organochlorine Challenges to Hydrodechlorination Solutions* Ehsan Mahmoudi*, Gjani Hulaj, Miloš Auersvald, Kevin Van Geem, Angeliki Lemonidou, Dirk De Vos
16:20		579 *Catalytic Cracking of Waste Plastic Pyrolysis Oil in a Circulating Fluidized Bed Reactor: A Sustainable Route to Light Olefin Production* Xuan Tin Tran, Dae Hun Mun, Eun Sang Kim, Do Kyoung Kim*
16:40	723 *Improving and Control of the Selective Methanol Oxidation by Catalyst Design and Reactor Operation* Jan Paul Walter*, Tanya Wolff, Lea Hilfert, Carina Hoffmann, Christof Hamel	1107 *Polyethylene waste hydrogenolysis over bimetallic catalysts with favorable environmental footprint and economics* Shibashish Devidutta Jaydev, Iris Nogueroles-Langa, Cecilia Salah, Jordi Morales-Vidal, Pol Sanz Berman, Yuzhen Ge, Henrik Eliasson, Rolf Erni, Gonzalo Guillén-Gosálbez, Núria López, Antonio José Martín*, Javier Pérez-Ramírez
17:00	1161 *Oxidative Esterification of HMF: A Shift from Batch to Continuous Flow Using Noble Metal Catalysts* Maya Eyleen Ludwig*, Dominik Neukum, Jan-Dierk Grunwaldt, Erisa Sarac	670 *CeO_2-Supported Ni–Pd Catalyst for Hydrogenolysis of Epoxy Resins toward Recycling of Epoxy Thermosets* Xiongjie Jin*, Yanze Huang, Yukari Yamazaki, Katsutoshi Nomoto, Hiroki Miura, Tetsuya Shishido, Kyoko Nozaki
17:10	1264 *Unlocking Selective Furfural Hydrogenation with Cu-ReOx Catalysts: A Pathway to Renewable Chemicals and Fuels* Debarun Banerjee, Jack Clegg, Sreedevi Upadhyayula*	
17:20	7 *Vitamin E from Renewable Raw Materials: Phenols from Furan Derivatives and Alkynes* Thomas Baldinger, Werner Bonrath, Alissa Götzinger, Jan Schütz*	1010 *Theoretical investigation of Single Atom Catalysts for Light-Induced Ullmann Homocoupling Reactions.* Maria Voccia*
17:30 – 19:30	**Poster session**	

Room	5-A150	6-Andromeda
Session	D1-S3-T02 ***Gas to liquid fuels technology - 2***	D1-S3-T05 ***Recycling and waste treatment catalysis - 2***
Chairs	Edd Blekkan and Nico Fischer	Jia Yang and Hrvoje Kušić
16:00	1035 *High loaded Cu-exchanged zeolite omega and its performance in the direct methane-to-methanol conversion* Johannes Wieser*, Jeroen A. van Bokhoven	1482 *Design of photo-Fenton-like catalysts for removal of organic contaminants of emerging concernfrom water under sunlight* Nataša Novak Tušar*, Andraž Šuligoj, Ksenija Maver, Albin Pintar, Nataša Zabukovec Logar
16:20	368 *Dynamic structural changes of ZSM-5 catalysts during methanol-to-hydrocarbons conversion and their impact on catalytic performance* Vladimir Paunović*, Chao Wang, Przemyslaw Rzepka ,René Verel, Jun Xu, Feng Deng, Jeroen A. van Bokhoven	815 *Observing Plastic Degradation with In-situ Atomic Force Microscopy* Jiaorong Yan*, Bert Weckhuysen
16:40	76 *A High Active CuCo Nanoalloy Catalyst with Dynamic Carbon Overlayers for Syngas to Higher Alcohols* Jia Liu, Siwei Ying, Bilyu Hong, Jianwei Zheng, Youzhu Yuan*	621 *Using TiO_2 NB/Bi_3O_4Br composite for photocatalytic degradation of paracetamol* Sajad Ahmadi, Velma Beri Kimbi Yaah*, Satu Ojala, Sergio Botelho de Oliveira
16:50		838 *Periodate activation by iron particles embedded into nitrogen rich biochar for bisphenol A degradation: efficiency and mechanism* Jin Kang*
17:00	1246 *Modulating jet fuel production by hydrogen transfer over Co/Al_2O_3-Hβ composite catalysts* Shuaishuai Lyu*, Jinxu Liu, Run Xu, Xingang Li	415 *Plasmonic metal-enhanced titanate nanorods for visible-light photocatalysis* Špela Slapničar*, Gregor Žerjav, Albin Pintar
17:10	793 *Revolutionizing Syngas Conversion: High-Purity Aromatics via Na-FeCuMg/HZSM-5 Catalysts* Maria Saif*, Muhammad Asif Nawaz*	637 *Direct Carboxylation of Phenol Over Supported Metal Carbonates* Richard Martin*, Egon Heuson, Zhen Yan, Sébastien Paul
17:20	1505 *Investigation of Pt-Ga/HZSM-5 Catalysts Prepared by Atomic Layer Deposition for Ethane Dehydroaromatization with and Without CO_2* Heloisa Bortolini*, Rita Alves, Justin Notestein, Elisabete Assaf	1091 *Unveiling the Co-Pyrolysis Mechanisms of Biomass and Plastic Wastes for Sustainable Fuel Production* Zhihui Li*
17:30 – 19:30	**Poster session**	

08:45 – 09:45	**Plenary lecture**	
Speaker	**George Willis Huber**	Richard Antoine Professor of Chemical Engineering, University of Wisconsin-Madison, USA
Lecture title	*Inorganics and catalytic conversion of biomass and plastics*	
Chairs	David Kubička and Dmitry Murzin	

13:30-13:50	**Lunch symposium by Heraeus Precious Metals!**	
Speaker	**Dr. Artur Gantarev**	Global Technical Sales Manager, Heraeus Precious Metals.
Lecture title	*Optimizing Precious Metal Catalysts: Tailored Solutions for Unique Applications*	
Room	6-Andromeda	

Efficient production of chemicals and simultaneous reduction of harmful emissions rely heavily on high-performance catalysts. Yet, translating lab-scale catalyst systems into scalable, customized solutions for industrial processes present both technical and commercial challenges.

In this expert talk, Artur from Heraeus Precious Metals will present key strategies for developing tailored heterogeneous precious metal catalysts – designed to meet the specific demands of your production environment. Key topics include:

- Heraeus' Catalyst Development Toolbox: Discover Heraeus' comprehensive array of tools and material selection enable us to develop tailored catalyst specifically designed to meet your production process needs.
- Customized Manufacturing Models: Get to know our flexible manufacturing models, which allow us to fulfill unique customer requirements with customized catalyst formulations and manufacturing options.
- Aligned with Sustainability - Keeping it in the loop: Monetizing CO2 Reduction with 100% Recycled Precious Metals. Discover how precious metals are recycled, reused and result in a 98% reduced CO2 footprint.

Room	1-Cosmos1	2-Cosmos2
Session	D2-S1-T03 ***CO_2 activation / GTL***	D2-S1-T04 ***Various process aspects of refinery catalysis***
Chairs	Pablo Beato and Yves Schuurman	Miao Sun and Dmitry Murzin
10:30	1514 *Catalysts for sustainable fuels production caught in the act* Petra De Jongh*	759 *Advancing Waste Plastic Catalytic Pyrolysis: Dendritic Zeolites for Superior Oil Quality by Enhanced Aromatization and Dehalogenation* Jennifer Cueto Naredo*, Alberto Pinto, Lidia Amodio, Beatrice Fodor, María del Mar Alonso-Doncel, Patricia Horcajada, Patricia Pizarro, David P. Serrano
10:50	387 *Enhanced CO_2 Hydrogenation via SIL-Modified Fe-Ru Catalysts: Tailoring Activity and Selectivity Through Support Engineering* Juan Jose Villora-Pico*, Chunfei Wu, Jillian Thompson, Nancy Artioli, Haresh Manya	651 *Mesoporous catalysts for the low-temperature depolymerization of lignin* Julio Terra*, Jeremy Luterbacher
11:10	1221 *Unravelling the structure-activity relationship for iron-based CO_2 hydrogenation catalysts* Sinqobile Vuyisile Lusanda Mahlaba*	**Keynote lecture:** *The impact of chemical reaction engineering on the catalytic transformation of biomass to valuable chemicals* **Tapio Salmi,** Professor at Åbo Akademi, Finland
11:30	227 *UV-visible modulation-excitation X-ray absorption spectroscopy to obtain insights in photocatalysts active species: the example of CO_2 reduction by TiO_2 supported Mo oxysulfides* Sébastien Roth*, Audrey Bonduelle Skrzypczak, Christèle Legens, Julie Marin, Anthony Beauvois, Briois Valérie, Victor Mougel, Christophe Copéret, Pascal Raybaud	
11:50	551 *Tuning Light Olefin Selectivity from Direct CO_2 Hydrogenation over Ga-based Catalysts* Yasemen Kuddusi*, Laura Piveteau, Mounir Mensi, Daniel Blanco, Andreas Züttel	1427 *Catalytic upgrading of biomass pyrolysis oil model compounds in a continuous dual trickle-bed reactor* Alexander Søgaard*, Oliver P. Rasmussen, Rasmus B. Knudsen, Rasmus M. Pallisgaard, Amalie P. Krebs, Rui P. da Cruz, Magnus Z. Stummann, Martin Høj, Anker D. Jensen, Amalie Paarup Krebs*
12:00	912 *Time-Resolved in situ X-ray Absorption Spectroscopy Study of Fe_5C_2 Formation from Ferrous Oxalate under CO_2 Fischer-Tropsch Conditions* Elizaveta Fedorova*, Aleksandr Fedorov, Dmitry Doronkin, David Linke, Christoph Kubis, Angelika Brückner, Evgenii Kondratenko	
12:10	540 *Tailoring Pd-UiO-67 Catalysts: Insights into Structural Changes and Pretreatment Effects for Efficient CO_2-to-Methanol Conversion* Elif Tezel*, Beatrice Garetto, Davide Salusso, Izar Capel Berdiell, Dag K. Sannes, Unni Olsbye, Stian Svelle, Elisa Borfecchia ,Petra Ágota Szilágyi	214 *Catalytic Transformation of Hemicellulose: Comparing Zeolites and Ion Exchange Resins in Carboxylic Acid Production* Izabela Czekaj*, Natalia Sobuś, Marcin Piotrowski
12:20	60 *The Influence of Aluminum Distribution in Cu-MOR Systems Towards Methane-to-Methanol Conversion: A Combined Experimental and Theoretical Study* Peter Njoroge*, Bjørn Solemsli, Asanka Wiejeranthe, Izar Berdiell, Agnieszka Seremak, Beatrice Garetto, Elisa Borfecchia, Unni Olsbye, Sebastian Prodinger	298 *Depolymerization of Industrial Lignin by Platinum-based Catalyst* Franziska Heck*, Hans-Jörg Wölk, Ingo Gräf, Raphaela Süss, Birgit Kamm
12:30 – 14:00	**Lunch break**	

Room	3-Cosmos3	4-A300
Session	D2-S1-T01 ***Hydrogen production by NH_3 decomposition - 2***	D2-S1-T13 ***Special session: Catalysts and reactors under dynamic conditions for energy storage and conversion - 1***
Chairs	Malte Behrens and Liliana Lukashuk	Jan-Dierk Grunwaldt, Linda Klag, Tanja Franken
10:30	**Keynote lecture:** *Catalytic Synthesis of Renewable Organonitrogen Chemicals* **Ning Yan,** Professor and director at Centre for Hydrogen Innovations, National University of Singapore, Singapore	1432 *Operando Spectroscopy Vision of Dynamic Catalyst Surfaces* Jan Knudsen,* Ulrike Küst, Calley Eads, Alexander Klyushin, Mattia Scardamaglia, Weijia Wang, Robert Temperton, Esko Kokkonen, Joachim Schnadt, Andrey Shavorskiy
10:50		404 *Identifying active sites by surface science and in situ microscopy* Günther Rupprechter*
11:10	1180 *O2-Cofeed Enhances Ammonia Cracking via Surface H-scavenging on Ru-based Catalysts* Yi Qiu*, Ivan Conti, Luca Vergani, Gianpiero Groppi, Alessandra Beretta*	1510 *In situ and operando study of reversible Ru metal exsolution on fluorite-based high-entropy oxides for ethanol steam reforming* Fabiane Trindade, Cristiane Rodella*, Gustavo Doubek
11:30	376 *High-performance NH_3 decomposition catalysts through spray-flame synthesis* Baris Alkan, Liseth Duarte-Correa, Frank Girgsdies, Jutta Kröhnert, Thomas Lunkenbein, Annette Trunschke*	1080 *Measuring Adsorbate Profiles in Heterogeneous Catalytic Reactors by Iso-Potential Operando DRIFTS* Sebastian Sichert, Oliver Korup, Raimund Horn*
11:50	687 *Theory-Guided Development of a Barium Cobalt Catalyst for Ammonia Decomposition* Alexander Gunnarson*, Olivia F. Sloth, Ang Cao, Miriam Varón, Thomas Veile, Ruben Bueno Villoro, Christian D. Damsgaard, Cathrine Frandsen, Jens K. Nørskov, Ib Chorkendorff	1311 *Abatement and valorization of stationary NOx emissions for small scale NH_3 production* Giuseppe Nava, Alessandro Porta, Roberto Matarrese, Luca Lietti*
12:00		1016 *ZSM-5 at work in the methanol-to-olefins reaction using operando DRIFTS/GC and CH_3OH/CD_3OD pulses* Luca Maggiulli, Jeroen van Bokhoven, Davide Ferri*
12:10	1208 *Promoted LDH-derived cobalt catalysts for low-temperature ammonia decomposition* Monica Pazos Urrea*, Magnus Rønning	291 *Capture and conversion of CO_2 to methanol under mild conditions over an optimized bifunctional mesoporous catalyst* Andreas Jentys*, Huidong Xu, Jennifer Strunk
12:20		167 *Elucidating active species under dynamic CO_2 hydrogenation conditions over ceria catalysts using multiple transient spectroscopy* Christian Hess*, Jakob Weyel, Marc Ziemba, Henrik Hoyer
12:30 – 14:00	**Lunch break**	

Room	5-A150	6-Andromeda
Session	D2-S1-T07 ***Hydrocarbons and olefins synthesis***	D2-S1-T16 ***Special session:*** ***Electrification of catalytic reactions***
Chairs	Anders Risager and Päivi Mäki-Arvela	Joris Thybaut and Patricia Benito Martin
10:30	80 *Selective Electrochemical Coupling of Acetylene to 1,3-Butadiene and Longer Hydrocarbons* Boon Siang Yeo*	268 *Electrochemical Conversion of Toluene Derivatives to Aromatic Nitriles using Water and Ammonia* Sander Spittaels*, Jef Vanhoof, Dirk De Vos
10:50	1285 *Production of green aromatics from ethanol and furfural over Zn and Ga modified zeolites* Francesco Sandri*, Narendra Kumar, Päivi Mäki-Arvela, Dmitry Yu. Murzin	299 *Enhanced Electrocatalytic Hydrogenation of Phenol in Biphasic Systems* Andreas Jentys*, Christian Bielke, Jennifer Strunk
11:10	513 *The Active Role of Carbon Deposits during 1-Butene Isomerization over Zeolite FER* Karoline Hebisch, Pawel Chmielniak, Carsten Sievers*	1147 *Electrically assisted thermochemical production of H_2 over CeO_2* Jonathan Perry, Raul Peño, Timothy Jones, Scott Donne, Alberto de la Calle, Juan Coronado*, Alicia Bayon
11:30	1022 *Transition-metal-free catalysis for hydrogenation reactions* Fei Chang*	217 *Direct growth of nickel borides on Ni foam for enhanced electrocatalytic performance in the oxidation of 5-HMF* Jennifer Hong*, Loredana Protesescu, Paolo P Pescarmona
11:50	391 *Tuning hydrogenation selectivity by playing with the carbide speciation in Mo-W mixed carbides* Parviz Azimov*, Clément Guibert, Céline Sayag, Xavier Carrier	1374 *Selectively monitoring the operando temperature of active metal nanoparticles during catalytic reaction* Matthias Filez*, Valentijn De Coster, Hilde Poelman, Valerie Briois, Anthony Beauvois, Jolien Dendooven, Maarten B. J. Roeffaers, Vladimir Galvita, Christophe Detavernier
12:10	198 *Reaction features of zeolite-catalyzed hydrocarbon processing: alkane vs. polyolefin* Bo Peng*, Wei Lin, Mingfeng Li	1025 *Measurement of local pH change during hydrogen evolution reaction under buffered conditions* Yukihiro Takahashi*, Oda Fjulsrud, Frode Seland Svein Sunde
12:20	514 *Methanol conversion to light olefins over SAPO crystals grown on γ-Al_2O_3 microspheres* Roham Ghavipour, Jan Kopyscinski*	23 *Self-supported MnFeCoNiIr high entropy oxides as acid resistant and highly-active OER catalysts* Sara Riera Reguera, Ana-Matilde Pérez-Mas, Uriel-Alejandro Sierra Gomez, Jonathan Ruiz Esquius*
12:30 – 14:00	**Lunch break**	

Room	1-Cosmos1	2-Cosmos2
Session	D2-S2-T03 ***CO_2 activation: Carbon coupling catalysis***	D2-S2-T02 ***Gas to liquid fuels technology - 3***
Chairs	Xiulian Pan and Petra Ágota Szilágyi	Mika Huuhtanen and Edd Blekkan
14:00	1150 *Inhibition of alkali migration during CO_2 hydrogenation over tandem iron-zeolite catalysts by effective encapsulation in carbon nanotubes* Elena Corrao, Raffaele Pirone, Samir Bensaid, Agustin Martinez*	901 *Sustainable Fuels from CO_2-rich synthesis gas via Fischer-Tropsch technology* Bart de Jong, Konstantijn Rommens, Tal Rosner, Paul van den Tempel, Léon Rohrbach, Leendert Bezemer, Erik Heeres, Mark Saeys, Charlotte Vogt, Jingxiu Xie*
14:20	1134 *Methane Synthesis from CO_2 and NH_3 over Supported Ru Catalysts* Katsutoshi Sato*, Hiroki Ishikawa, Yuji Ueda, Katsutoshi Nagaoka	1348 *The effect of S on catalytic dehydrogenation of methylcyclohexane on Pt surfaces* Alvaro Posada-Borbón, Felicia Zaar*, Henrik Grönbeck
14:40	1435 *Catalytic behavior of copper active centers in FER zeolite in CO_2 recycling* Kinga Mlekodaj*, Julia Sobalska, Karolina Tarach, Olena Tynkevych, Dalibor Kaucky, Mark Newton, Przemyslaw Rzepka, Kinga Gora-Marek, Edyta Tabor	1164 *Determination of aluminum distribution and active sites location in zeolite based-catalysts by anomalous X-ray powder diffraction* Przemyslaw Rzepka*, Kinga Mlekodaj, Edyta Tabor, Jiří Dědeček, Jeroen A. van Bokhoven
15:00	1248 *Investigating the Structure and Activity of K-Co-Cu-Al Catalysts for CO_2 Hydrogenation to Higher Alcohols* Vitor Duarte Lage*, Carlos Andres Ortiz-Bravo, Carla Ramos Moreira, Alexander Eduardo Caytuero Villegas, Alexander Le Valant, Nicolas Bion, Fabio Souza Toniolo	241 *Catalysis in the energy transition* Ingrid Aartun Bøe*, Hamid Rafiq, Rauf Salman, Kjell Moljord, Øyvind Borg, Trond Myrstad
15:10	180 *CO2 Hydrogenation to Methane, Methanol and Ethanol Using Cu- and Rh-Exchanged Defective UiO-66 Metal-Organic Frameworks* Ken Luca Abel*, Unni Olsbye	
15:20	996 *Probing the selectivity of Ni-Ga exsolved catalysts for the conversion of CO_2 to C1 products* Angelos Konstantinos Bonis*, Melis Duyar, Kalliopi Kousi	1156 *Unraveling Cu Migration Within Zeolite Omega via XAS and (A)XRPD and its Influence on the Methane-to-Methanol Conversion* Johannes Wieser*, Lev Khait, Przemylsaw Rzepka, Jeroen van Bokhoven
15:30 – 16:00	**Coffee break**	

Room	3-Cosmos3	4-A300
Session	D2-S2-T01 ***Hydrogen production by NH_3 decomposition - 3***	YEuCat contest: ***Research in a nutshell***
Chairs	Annette Trunschke and Monica Pazos Urrea	Emanuele Moioli and Veronica Piazza
14:00	861 *Eco-Friendly and Industrially Scalable Synthesis of Ni-$BaZrO_3$ Catalysts for H_2 production from NH3 Decomposition* Andrea Felli*, Maila Danielis, Alessandro Trovarell,i Christine Artner-Wallner, Byron Truscott, Sara Colussi	Angelos Konstantinos Bonis: *Probing the selectivity of Ni-Ga exsolved catalysts for the conversion of CO_2 to C1* products [996]
14:10		Willow Dew: *Alloying and Segregation Effects in Supported Palladium-Silver Alloy Catalysts During Carbon Monoxide and Methane Oxidation* [1375]
14:20	1481 *Ru clusters on graphitized carbon nanofibers for hydrogen production from ammonia*. Benjamin Young Thomas Liddy*, Emerson Kohlrausch, Gazimagomed Aliev, Yifan Chen, Andreas Weilhard, Luke Keenan, Diego Gianolio, David Duncan, Andrei Khlobystov, Jesum Alves Fernandes	Sibylle Schwartmann: *The Electro-Oxidation of β-O-4 Model Compounds monitored in a Chamber-Separated Cell using In Situ ATR-IR Spectroscopy* [438]
14:30		Rasmus Svensson: *Adsorbate-induced catalyst reconstructions* [742]
14:40	1105 *Electrified ammonia cracking via thermally conductive packed POCS* Matteo Ambrosetti, Federico Sascha Franchi*, Alessandra Beretta, Gianpiero Groppi, Enrico Tronconi, Giovanna Massobrio, Matteo Lualdi	Piercosimo Vedele: *Deactivation and Kinetic Study of Catalytic Methane Pyrolysis on Fe/Al_2O_3 for Fluidized Bed Reactor Modelling* [908]
14:50		Daniel Costa: *Machine Learning guided Zeolite Preparation using Literature augmented Datasets* [1321]
15:00	1215 *Kinetic Study of NH_3 Cracking over Highly Active Ru/CeO_2 Catalysts Prepared by Traditional IWI and Novel Mechanochemical Methods* Yi Qiu, Ivan Conti*, Nicole Bendazzoli, Rudy Calligaro, Alessandro Trovarelli, Elisabetta Iengo, Enzo Alessio, Alessandra Beretta	Satya Sireesha Rameswarapu: *Direct CO_2 Hydrogenation to higher Carboxylic acids via Heterogenous Thermo-Catalysis in liquid phase* [1458]
15:10		Ariana Serban: *Self-supported hydrogen evolution reaction (HER) NiMo for targeted water splitting devices* [767]
15:20	1341 *Ammonia decomposition over iron-, molybdenum-, and cobalt-based nitride and carbide catalysts* Sahra Louise Guldahl-Ibouder*, Monica Pazos Urrea, Ingeborg-Helene Svenum, Magnus Rønning	Marc-Eduard Usteri: *Explainable Artificial Intelligence Elucidates Synthesis-Structure-Property-Function Relationships in Nanostructured Catalysts* [1120]
15:30		Elena Vicente: *Copper-based catalysts for efficient CO production at low temperatures* [641]
15:30 – 16:00	**Coffee break**	

Room	5-A150	6-Andromeda
Session	D2-S2-T16 ***Special session:*** ***Electrification of reactors - 1***	D2-S2-T12 ***Special session:*** ***Intermetallic compounds in catalysis - 1***
Chairs	Joris Thybaut and Patricia Benito Martin	Marc Armbrüster and Büsra Sevdaroglu
14:00	954 *CO_2 valorisation using inductively heated bifunctional Fe-based catalysts via the RWGS reaction* Stylianos Spyroglou*, Janis Timoshenko, Christian Schröder, Noelia Barrabes, Maricruz Sanchez-Sanchez	855 *Surrounding the Active Site for Selective Hydrogenation by Different Structural Motifs* Kaartick Sivakumar, Vincent Fournée, Julian Ledieu, Émilie Gaudry, Peter Gille, Yuri Grin, Marc Armbrüster*
14:20	699 *Magnetically heated Ru-catalyst hydrotreatment of (hemi)cellulosebasedplatform chemicals in electrified slurry reactor* Miha Grilc*	1492 *Oxygen evolution reaction with nickel borides: from local to bulk* Büsra Sevdaroglu*, Lithin Madayan-Banatheth, Ulrich Burkhardt, Corina Andronescu, Yuri Grin, Iryna Antonyshyn
14:40	41 *Resolving heat distribution in magnetic induction reactors for CO_2 conversion by operando and 3D X-ray diffraction* Lucy Costley-Wood*, Andrew Beale, Christian Cerezo-Navarette, Anthony Vamvakeros, Asuncion Molina Esquinas, Pascual Ona Burgos	1400 *Understanding the stability and role of RENi5 as a catalyst precursor in the energy scenario* Gabriella Garbarino*, Riccardo Freccero, Elena Spennati, Giorgio Palla, Paola Riani
15:00	680 *Hydrogen and Carbon production from Methane Pyrolysis: Comparing Conventional and Microwave heating methods* Valentin L'hospital, Leandro Goulart de Araujo, Emmanuel Landrivon, Ariel Mello, Marilena Radoiu ,Yves Schuurman, Nolven Guilhaume, David Farrusseng*,	810 *SiO_2-Supported PdIn Intermetallic Nanoparticles as Highly Active Catalyst for CO_2 Hydrogenation to Methanol* Qin Zhang*
15:10	967 *Electrified Steam Methane Reforming in monoliths:understanding the interplay of eccentricity and heating wire diameter* Roberta Castiglione*, Matteo Ambrosetti, Gianpiero Groppi, Enrico Tronconi, Martin Baumgärtl, Gianluca Pauletto	
15:20	434 *Plasma catalytic dry reforming of methane: metal oxides vs. metallic catalysts* Valeria Vermile*, Bram Seynnaeve, Jeroen Lauwaert, An Verberckmoes, Vera Meynen	1447 *Ligand Enhanced Oxygen Reduction Kinetics in High Entropy Intermetallic Alloy* Daniel Wan*, Jay Yan, Ryan Wang
15:30 – 16:00	**Coffee break**	

Room	1-Cosmos1	2-Cosmos2
Session	D2-S3-T03 ***CO_2 hydrogenation to methanol***	D2-S3-T07 ***Ammonia and methanol synthesis***
Chairs	Ingrid Aartun Bøe and Ning Yan	Tapio Salmi and Daniela Farmer
16:00	1344 *Operando spectroscopic evidences about the pre-treatment step of Cu-based catalysts during CO2 hydrogenation to MeOH* Catia Cannilla*, Chiara Corrente, Serena Todaro, Mariarita Santoro, Mario Samperi, Fabrizio Randazzo, Francesco Arena, Giuseppe Bonura	958 *Investigating the Promotion Mechanism of Lanthanum on Magnetic Metals for Ammonia Production* Clara Aletsee*
16:20	516 *In situ restructuring produces a highly active Cu@ZnOx catalyst for CO_2 hydrogenation* Xianhua Zhang*, Antti-Jussi Kallio, Xinwei Ye ,Simo Huotari, Bert Weckhuysen	1288 *In situ AP-XPS in a Plasma Environment: Understanding Plasma Catalysis for Ammonia Production* Sam Taylor*, Filip Halböök, Robert Temperton, Jinguo Sun, Jonas Elmroth Nordlander, Sebastian Nilsson, Yupan Bao, Andreas Ehn, Johan Zetterberg, Sara Blomberg
16:40	918 *Sorption-enhanced methanol synthesis – effect of water removal* Ljubiša Gavrilović*, Saima Sultana Kazi, Tomas Cordero-Lanzac, Unni Olsbye	799 *Bridging Scales in Catalyst Development: Synthesis, Shaping and Testing of an Optimised $Cu/ZnO/ZrO_2$ Methanol Catalyst* Fabian Neumann*, Lucas Warmuth, Moritz Herfet, Sebastian Grewe, Thomas A. Zevaco, Thomas N. Otto, Michael Zimmermann, Stephan Pitter, Moritz Wolf
17:00	1111 *Cu^{+}-O-Ga^{3+} Pairs Drive Methanol Synthesis in Hydrotalcite Materials: SSITKA and Spectroscopic Insights* Daviel Gómez*, Vlad Martin Diaconescu, Laura Simonelli, Alejandro Karelovic, Estefanía Fernández-Villanueva, Pablo G Lustemberg, Verónica Ganduglia-Pirovano, Marcelo Domine, Jaime Mazario, Patricia Concepción	1315 *A Descriptor Guiding the Selection of Catalyst Supports for Ammonia Synthesis* Andreas Weilhard*, Thomas Liddy, Ilya Popov, Emerson Kohlrausch, Jesum Alves Fernandes
17:10	866 *Mechanistic insights into Mg-IRMOF-74-based catalysts for CO_2-to-methanol* Anna Liutkova*, Fabio André Peixoto Esteves, Anastasia Molokova, Emiliya Poghosyan, Marco Ranocchiari	85 *In Situ Formation of Fe Clusters During Haber-Bosch NH_3 Synthesis* Evangelos Smith*, Marc Figueras Valls, Manos Mavrikakis
17:20	420 *Flame spray pyrolysis synthesis of NiO-Ga_2O_3: The role of metal alloys in CO_2 hydrogenation to methanol* Muhammad Ariq Attallah*, Nikolay Kosinov, Emiel Hensen	667 *Promotion Effect of Ru-based Catalysts for Mild Ammonia Synthesis* Shih-Yuan Chen*
17:30 – 19:30	**Poster session**	

Room	3-Cosmos3	4-A300
Session	**D2-S3-T01** ***Hydrogen production: Dehydrogenation***	***The Metal Showdown: Noble vs. Transition Metals in Modern Catalysis***
Chairs	Matti Reinikainen and Maria Louloudi	Lorenz Lindenthal and David Kubicka
16:00	315 *Autothermal DME and OMEs as long distance hydrogen carriers: Efficient and stable steam reforming using indium-based catalysts* Patrick Schühle*, Robert Stöber, Fabian Kroll	
16:20	646 *Efficient perhydrobenzyltoluene dehydrogenation on Pt/TiO_2* Nataliia Marchenko, Mohamad Kharma, Franck Morfin, Laurent Picollo, Nuno Batalha*, Valérie Meille	16:10 - 17:30 **YEuCat Panel discussion with:** **Dr. Florian Harth,** Heraeus Precious Metals, Project lead heterogeneous catalysis **Prof. Dr. Georg Willis Huber,** Professor of Chemical and Biological Engineering, University of Wisconsin–Madison **Dr. Jessica Michalke,** PostDoc at Technical University of Leoben **Dr. Marissa Reigel,** Saint-Gobain NorPro, Director of Research and Development
16:40	1078 *Dehydrogenation of Liquid Organic Hydrogen Carrier* Monica Distaso,* Fabian Siegert, Michael Gundermann, Lukas Maurer, Nicolas Johner, Timo Schaerfe, Franziska Auer, Michael Geisselbrecht, Peter Wasserscheid	
17:00	392 *Identifying optimal active sites within fully exposed clusters towards efficient cyclohexane dehydrogenation* Mi Peng*, Ding Ma	
17:10	157 *Understanding and mitigating catalyst deactivation for acetate valorization to acrylate via aldol condensation with formaldehyde* Simon Verstraeten*, Ekaterina Makshina, Bert Sels	
17:20	257 *Carbon-based photocatalysts for H_2 production through natural and artificial polymers photoreforming* Maria Teresa Armeli Iapichino*, Roberto Fiorenza, Salvatore Scirè	
17:30 – 19:30	**Poster session**	

Room	5-A150	6-Andromeda
Session	D2-S3-T16 ***Special session:*** ***Electrification of reactors - 2***	D2-S3-T12 ***Special session:*** ***Intermetallic compounds in catalysis - 2***
Chairs	Joris Thybaut and Patricia Benito Martin	Marc Armbrüster and Büsra Sevdaroglu
16:00	844 *3D printed Joule-heated Periodic Open Cellular Structures (POCS) for carbon and hydrogen production by methane cracking* Riccardo Balzarotti*, Daniele Minichini, Samuele Bottacin, Mirko Grignola, Marco Pelanconi, Giovanni Bianchi, Fabian P. Hagen, Dimosthenis Trimis, Alberto Ortona	1047 *Understanding Promotion and Poisoning Effects of Ga on CO_2-to-Methanol Hydrogenation Activity of Supported $Cu_{1-x}Ga_xO_y$ Nanoparticles* Olga Safonova*
16:20	752 *Electrification of Process Industry - Insights into eQATOR` s Reactor Concept* Martin Wilhelm Philipp Pichler*, Luca Nohel*, Verena Schallhart, Enes Caliskan, Elias Klemm, Lukas Moeltner	574 *Design of Alloy Surfaces Based on Intermetallic Compounds for Highly Efficient Catalysis: Binary to High-Entropy* YUKI Nakaya*, Shinya Furukawa
16:30	833 *Electrified pilot line for methanol synthesis and sulfur recovery from acid gas* Igor Shlyapnikov*, David Bajec, Matic Grom, Miha Grilc*, Gleb Veryasov, Helene Retot, Alexey Novikov, Jeroen Lauwaert, Amin Delparish, Hanna Dura, Hilde Poelman, Blaž Likozar, Joris Thybaut	
16:40		348 *Electrochemical CO_2 reduction reaction over Cu–In non-equilibrium intermetallic compound* Soichi Kikkawa*, Tatsuya Koubayashi, Toshiaki Oka, Takeshi Watanabe, Tetsuo Honma, Hideyuki Kawasoko, Seiji Yamazoe
16:50	1437 *Fe loading and Metal-Support Interaction in Hydrotalcite-derived Catalysts for Catalytic Methane Decomposition* Patricia Benito*, Ilenia Giarnieri, Antonia Bobitan, Giuseppe Fornasari, Andrew Beale	
17:00		1316 *Effects of Stoichiometry and Structure in Intermetallic Nanoparticle Catalysts for the Liquid-Phase Semihydrogenation of Diphenylacetylene* Si Chen, Xiaohui Huang, Di Wang, Christian Kübel, Silke Behrens*
17:10	1405 *Low-Temperature Hydrothermal Synthesis of Medium- and High-Entropy Spinel Oxides for Oxygen Evolution* Davide Vendrame, Kety Vezzu, Simon Schweidler, Ben Breitung, Vito Di Noto, Silvia Gross*	546 *Journeying to asymmetric heterogeneous catalysis on PdGa{111}: enantioselective adsorption behavior* Jacob Wright*, Roland Widmer, Harald Brune
17:30 – 19:30	**Poster session**	

08:45 – 09:45	**Plenary lecture**	
Speaker	**Núria López**	Professor of Chemistry at Institute of Chemical Research of Catalonia (ICIQ), Tarragona, Spain
Lecture title	*Dynamics in catalytic materials*	
Chairs	Nico Fischer and Unni Olsbye	

Room	1-Cosmos1	2-Cosmos2
Session	D3-S1-T03 ***Electrochemical conversion of CO_2***	D3-S1-T08 ***Fine chemicals and polymer production - 3***
Chairs	Bert M. Weckhuysen and Svein Sunde	Richard Heyn and Anna Chrobok
10:30	**Keynote lecture:** *Designing and investigating catalysts for energy conversion catalysts using mass-selected nanoparticles* **Jacob Kibsgaard,** Professor and head of section for Surface Physics and Catalysis at DTU, Denmark	139 *Surface Organometallic Chemistry Engineering of Dual-Atom Catalysts for Selective H/D Isotope Exchange* Clément Camp*, Andrey V. Pichugov, Laurent Veyre, Chloé Thieuleux
10:50		848 *Metal-Free Carbon Nitride for Enhanced Continuous-Flow Vicinal Halotrifluoromethylation of Vinyl Compounds* Shilpa Palit*, Gianvito Vilè
11:10	48 *Hydronium ions inhibit CO_2 reduction on coinage metals* Max J. Hülsey*, Bryan Tang, Yogesh Surendranath	**Keynote lecture:** *Collaborative industrial-academic research for the use of homogenous catalysis in circular processing and the utilization of renewable feedstocks* **Thomas Schaub,** Designated Senior Principal Scientist and Lab Head of Catalysis Research Laboratory, BASF Germany, and Honorary Professor at University of St. Andrews, Scotland
11:30	789 *Understanding the Role of Interfacial pH in the Electrochemical Reduction of CO_2 to Formate* Georgios Katsoukis*, Guido Mul	
11:50	304 *Automating Flow Electrochemistry: A High-Throughput Approach to CO_2 Utilization Using AMPER* Damian Gizinski*, Julio Lloret Fillol	1479 *Unraveling the Dynamics of Copper Species in Alumina-Supported $CuCl_2$-Catalysts during Ethylene Oxychlorination using operando XAFS, PXRD and UV-Vis with multivariate statistical analysis* Samuel Konrad Regli*, Magnus Rønning
12:10	636 *Stability issues in zero-gap CO_2 electrolyzers for C2+ products* Qiucheng Xu*, Brian Seger, Xile Hu	*209 Performance of tailored sulfonated poly(ether ether ketone) (sPEEK) catalyst in temperature-elevated esterification, etherification, and low-temperature acetylation reactions* Alina Greve*, Hendrik Stein, Thomas Osterland, Olaf Hinrichsen
12:20		1095 *DOE for screening and optimization of the reaction conditions of cyclohexene allylic partial oxidation over Ce-UiO-67 MOF* Valeria Finelli*, Federico Panagini, Francesca Rosso, Mouhammad Abu Rasheed, Stefano Bertinetti, Petra Ágota Szilágy,i Matteo Signorile, Unni Olsbye, Silvia Bordiga
12:30 – 14:00	**Lunch break**	

Room	3-Cosmos3	4-A300
Session	D3-S1-T18 ***Advancements in catalysis: Kinetics***	D3-S1-T04 ***Refinery catalysis:*** ***Materials and fundamentals***
Chairs	Nico Fischer and Albin Pintar	Fábio Bellot Noronha and Louise Olsson
10:30	1141 *On Active Site Density in Heterogeneous Catalysis: Implications for Kinetics* Dmitry Murzin*	1328 *Cooperativity between Atoms in Atomically Dispersed Metal Catalysts* Pedro Serna*, Manuel Moliner, Avelino Corma, Yuriy Roman-Leshkov, Randall Meyer, Mercedes Boronat
10:50	1397 *Modulation Excitation and Phase-Domain Analysis for the Mechanistic and Kinetic Investigation of Non-thermal Plasma CO_2 Hydrogenation* Mariyam Bi*, Shanshan Xu, James Paterson, Stephen Poulston, Meenakshisundaram Sankar, Sarah Haigh, Christopher Hardacre	741 *X-ray Diffraction Tomography of Nb_2O_5-Based Pellets for Guaiacol Hydrodeoxygenation* Leonardo Almeida De Campos*, Naiara Da Costa Telis, Kamila Iskhakova, Erisa Saraci, Jan-Dierk Grunwaldt, Klaus Raffelt, Thomas Sheppard
11:10	134 *Adsorption of alcohols allows defining hydrophilic and hydrophobic interactions in tectosilicates* Ruixue Zhao*, Sungmin Kim, Mal-Soon Lee, Fuli Deng, Xiaomai Chen, Yue Liu, Johannes Lercher	1511 *Catalytic pyrolysis of model biomass compounds: structure-reactivity relationships, LFERs, kinetic isotope effect, semiempirical equations, kinetics & mechanisms* Tetiana Kulik*, Borys Palianytsia, Alberto Roldan, Dunkan Wass, Philip R.
11:30	1336 *Navigating Diffusion Highways in H-MFI through Machine Learning* Pieter Cnudde*, Evegeniy Redekop, Unni Olsbye, Veronique Van Speybroeck	963 *Davies Nanoparticle-Loaded Z-Scheme Photocatalysts for Sustainable Lignin Valorization: Towards a Circular Bioeconomy* Rajat Ghalta*, Rajendra Srivastava
11:50	585 *Base catalytic activities of Nb and Ta oxide clusters* Supisara Hongpuek*, Hideyuki Kawasoko, Soichi Kikkawa, Daiki Yanai, Kosuke Suzuki, Kazuya Yamaguchi, Seiji Yamazoe	99 *Fast-tracking SAF production by co-processing in kerosene hydrotreaters* Kasper Hartvig Lyng Lejre*, Jostein Gabrielsen, Christian Holst Ebert
12:00	1217 *CO_2 methanation mechanistic study on Ru/NiO-CeO_2 catalysts: unravelling reaction pathways* Juan Bueno-Ferrer*, Iván Marínez-López, Iris Martín-García, Arantxa Davó-Quiñonero, Esteban Guillén-Bas, Virginia Pérez-Dieste, Dolores Lozano-Castelló, Agustín Bueno-López	
12:10	**2025 EFCATS Best PhD Award lecture:** *Toward Atomic Precision in Heterogeneous Catalyst Design for Vinyl Chloride Synthesis* **Vera Giulimondi**, PhD ETH Zürich, Switzerland	150 *Base-Free Oxidation of HMF to FDCA with Regenerable Au/HT Catalysts: Role of Surface Hydroxyl Groups and Support Basicity* Ane Bueno*, Nerea Viar, Iñaki Gandarias, Jesús María Requies
12:20		1031 *Rational catalyst design of ketonization catalysts through combined computational and experimental studies* Petter Tingelstad*, Evangelos H. Smith, Kishore Rajendran, Albert Miró i Rovira, Manos Mavrikakis, De Chen
12:30 – 14:00	**Lunch break**	

Room	5-A150	6-Andromeda
Session	D3-S1-T13 ***Special session: Catalysts and reactors under dynamic conditions for energy storage and conversion***	D3-S1-T23 ***Materials in CO_2 activation chemistry***
Chairs	Jan-Dierk Grunwaldt, Linda Klag, Tanja Franken	Silvia Bordiga and Dana Dvoranová
10:30	1089 *Revealing the dynamic structure of Ga in CuGa catalysts for green methanol production* Lorena Baumgarten*, Patrik Hauberg, Sebastian Mangelsen, Morteza Saedimarghmaleki, Claude Coppex, Jelena Jelic, Linda Klag, Felix Studt, Erisa Saraçi, Malte Behrens, Jan-Dierk Grunwaldt	1322 *Electrochemical Copper Exsolution from Perovskite Thin Films* Jonathan Rollenitz*, Christian Melcher, Florian Schrenk, Tobias Berger, Alexander K. Opitz, Christoph Rameshan
10:50	742 *Adsorbate-induced catalyst reconstructions* Rasmus Svensson*, Henrik Grönbeck	1059 *Optimizing Silica-supported DFM catalysts for Efficient CO_2 Capture and Hydrogen-Assisted Re-Use* Elisabetta Finocchio*, Sergio Molina, Giuseppe Nava, Cinzia Cristiani, Barbara Di Credico, Roberto Scotti, Lorenzo Viganò, Matteo Di Virgilio, Luca Lietti, Lidia Castoldi
11:10	426 *Introducing Stimulando Time-Resolved IR Spectroscopy to Study Intermittent Light-Stimulated CO_2 Hydrogenation* Floor Brzesowsky*, Mees Emond, Sander Deelen, Peter de Peinder, Bert Weckhuysen, Matteo Monai	724 *Towards scale-up of catalyst synthesis: Bi-based materials for CO_2 electroconversion into formate at high rates* Lucas Warmuth*, Phillip Reichert, Alain Rieder, Richard Samman, Matthias Kind, Thomas A. Zevaco, Stephan Pitter, Peter Broekmann, Jörg Sauer
11:30	1310 *In series integration of a CO_2 capture unit and a catalytic methanation reactor and dynamic process modeling* Iñigo Lacarra-Etxarri*, Elena Gómez-Bravo, Beñat Pereda-Ayo, Unai de la Torre, Juan Ramón González-Velasco, Jose Antonio González Marcos	686 *Low-Temperature Template Oxidation with Ozone: A New Handle for Acidity Tuning in Zeolite Catalysis* Julien Devos*, Ibrahim Khalil, Michiel Dusselier
11:50	1076 *Evaluating the potential of forced periodic methanol synthesis* Wieland Kortuz, Lothar Kaps, Johannes Leipold, Dalibor Marinkovic, Daliborka Nikolic, Achim Kienle, Andreas Seidel-Morgenstern*	744 *Palladium recovered from Spent Nuclear Fuels as an electrocatalyst for CO_2 reduction into CO* Anthony Ropp*, Frédérique Hourcade, Isabelle Rougeaux, Dorottya Hursán
12:00	1289 *Tracking Dynamic Evolution of Single Atom Catalyst with In-situ/Operando Spectroscopy* Bidyut Bikash Sarma*	776 *Insights into Graphene-Embedded Single-Atom Catalysts in Liquid Water: Molecular Dynamics Simulations on the Fe, Co, and Ni Series* Romain Reocreux*, Thomas Vacus, Sam Brooks, Fabian Berger, Angelos Michaelides, Marie-Laure Bocquet
12:10	721 *Transient surface degradation of (La,Sr)CoO_{3-d} and (La,Sr)FeO_{3-d} during OER in alkaline electrolyte under dynamic cycling conditions* Felix Gunkel*	*284 Ethylene production and CO_2 splitting via a chemical looping system utilizing lattice oxygen of redox-enhanced In_2O_3* Kosuke Watanabe*, Takuma Higo, Koki Saegusa, Sakura Matsumoto, Hiroshi Sampei, Yuki Isono, Akira Shimojuku, Hideki Furusawa, Yasushi Sekine
12:20	1464 *Catalytic Potential of Exsolved Iron based Oxides as Oxygen Reservoirs* Deblina Majumder*, Shailza Sain,i Alex Martinez Martin, Debayan Mondal, Evangelos I. Papaioannou, Kalliopi Kousi	247 *The catalytic channel of Co particle, carbon nanotube and defective TiO_2 for CO_2 hydrogenation* Haoxin Liu*
12:30 – 14:00	**Lunch break**	

08:45 – 09:45	**Plenary lecture**	
Speaker	**Jan-Dierk Grunwaldt**	Professor and director at the Institute for Chemical Technology and Polymer Chemistry, Karlsruher Institute of Technology (KIT), Karlsruhe, Germany
Lecture title	*Dynamics in catalysis: From the atomic structure to the reactor scale*	
Chairs	Nathalie Tanchoux and Magnus Rønning	

Room	1-Cosmos1	2-Cosmos2
Session	D4-S1-T03 ***Plasmon frontiers / CO_2 to chemicals***	D4-S1-T04 ***Refinery catalysis: Chemical conversions***
Chairs	Unni Olsbye and Artur Gantarev	Michelle Lynch and De Chen
10:30	**Keynote lecture:** *Plasmons: From metal ore to catalyst* **Jacinto Sá**, Professor at Uppsala University, Sweden	628 *Moliner In-situ acetalization strategy for retro-aldolization of glucose catalyzed by niobium oxide and zeolite* Ryota Osuga*, Navya Subray Bhat, Quan Shi, Mizuho Yabushita, Satoshi Suganuma, Emiel J.M. Hensen, Kiyotaka Nakajima
10:50		1172 *Design of Ni-zeolites for ethylene oligomerization: controlling catalyst properties by one-pot and post-synthetic Ni incorporation.* Cristina Martínez*, Adrián Gómez-Aldaraví, Cecilia Paris, Manuel
11:10	525 *Efficient CO_2 Cycloaddition Reactions at Ambient Pressure and Mild Temperature Using a Zn Single-Atom Catalyst* Nicolò Allasia*, Luis Antonio Cipriano, Giovanni Di Liberto, Gianfranco Pacchioni , Gianvito Vilé	1140 *From biomass pyrolysis oils to BTXs via catalytic aromatization with zinc and gallium-doped ZSM-5 zeolites* Aitor Arandia*, Veikka Lehtinen, Francesco Sandri, Ida Uotila, Nicolaas Van Strien, Matti Reinikainen, Johanna Kihlman, Juha Lehtonen
11:30	13 *Enhanced Catalytic Hydrogenation of CO_2 to Formate Using Ruthenium Nanoparticles on Water-Stable Supported Ionic Liquid Phases* Neha Antil*, Alexis Bordet, Walter Leitner	486 *Reactivity and Intermediate Stereochemistry in Lignin Diol-Stabilized Acidolysis: The Role of Cation-Anion in Triflic Brønsted Acidic Salts* Ge Guo*, Zhenlei Zhang, Jozef.G.M Winkelman, Ciaran W Lahive, Peter.J. Deuss
11:50	73 *Direct Conversion of CO_2-Captured Alkanolamines into Organic Urea Derivatives over CeO_2 Catalyst with Continuous-Flow Reactor* Shogen Mihara*, Natsuki Mizutani, Hikari Terada, Mizuho Yabushita, Yoshinao Nakagawa, Keiichi Tomishige	871 *Synthesis of Ni-W catalysts supported on glucose/carbon nanotube hybrid carbons for the one-pot cellulose conversion to ethylene glycol* L.S. Ribeiro, R.G. Morais, J.J.M. Órfão, Manuel Fernando Pereira*
12:10	1458 *Direct CO_2 Hydrogenation to higher Carboxylic acids via Heterogenous Thermo-Catalysis in liquid phase* Satya Sireesha Rameswarapu*	386 *Hydrogen Transfer Reactions of Internal Alkynes with Secondary Amines on Carbon-Supported Noble Metals* Till De Cahsan*
12:20	536 *Green ionic metal-organic frameworks as nanocatalysts for CO_2 fixation* Francisco García Cirujano*, Nuria Martín, Miguel Maireles, Julian Sanchez, Belén Altava, Eduardo García Verdugo	1554 *Automated, Digital Solutions for Accelerated, Quality Assured Power-to-X (PtX) Technologies* Arunraj Chidambaram*
12:30 – 14:00	**Lunch break**	

Room	3-Cosmos3	4-A300
Session	D4-S1-T01 ***Hydrogen production: Electrocatalysis***	D4-S1-T09 ***Gaseous emissions:*** ***NOx abatement catalysis***
Chairs	Andrzej Kotarba and Frode Seland	Hanna Härelind and Silviya Todorova
10:30	710 *Performance of Optimised NiFeOOH Catalysts on 3D Electrodes in Alkaline Water Electrolysis under Industrial Conditions* Julia Hoffmann*, Nicolai Schmitt, Christian Goerens, Bastian Etzold	343 *Mechanistic study of NOx reduction by H_2 on Pt/Mo/ZrO_2 catalyst using Steady State Isotopic Transient Kinetic Analysis* Daniel Schröder*, Sven Kureti
10:50	172 *Towards understanding the dynamics of non-precious metal oxygen evolution catalysts for alkaline water electrolysis* Johanna Schröder*, Miika Mattinen, Giulio D'Acunto, K. Alex A. Persson, Ashton M. Aleman, Elis L. Ponte ,Mikko Ritala, Michaela Burke Stevens, Stacey Bent, Thomas F. Jaramillo	456 *Revealing the mechanism of SO_2 poisoning of Cu-CHA catalyst for NH_3-SCR by in situ X-ray absorption spectroscopy* Anastasia Molokova, Gloria Berlier, Elisa Borfecchia, Davide Salusso, Ton V.W. Janssens, Silvia Bordiga, Fei Wen, Kirill Lomachenko*
11:10	1092 *Unraveling Surface Structure Dynamics on Model Electrocatalysts* Felix Simon*, Fanny Duquet, Giuseppe Abbondanza, Björn Lönn, Vera Roth, Olof Gutowski, Ann-Christin Dippel ,Björn Wickman, Uta Hejral	880 *Modeling the Transient Selective Catalytic Reduction by Physics Embedded Neural Networks* Leander Biet*
11:30	919 *Metal migration in PEM water electrolysis cells: insights from synchrotron X-ray fluorescence* Leonardo Almeida de Campos, Alexander Rex, Torben Gottschalk, Dario Ferreira Sanchez, Erisa Saraci, Patrick Trinke, Boris Bensmann, Jan-Dierk Grunwaldt, Richard Hanke Rauschenbach, Thomas Sheppard*	904 *Tracking the surface/subsurface dynamics of $LaFeO_3$-based perovskites under redox excitation* Elise Berrier*, Shreya Nandi, Sagar Sharma, Valerie Theuns, Héloïse Tissot, Anne-Sophie Mamede, Asma Tougerti, Jean-Sébastien Girardon, Martine Trentesaux, Pardis Simon, Jean-François Paul, Emiliano Fonda
11:50	1106 *High-tech manufacturing for the next-generation PEM electrolysis* Cássia Sidney Santana*, Jie Shen-Berset, Tim de Visser, Frennie Bens, Davide Ripepi, Bas van Dijk, Oscar Diaz-Morales	1102 *Speciation of Cu-SCR catalysts under H_2-ICE conditions* Lisa Allen*, Roberta Villamaina, Husn Islam, Maria Pia Ruggeri, Paul Millington, David Bergeal, Jillian Collier
12:00	767 *Self-supported hydrogen evolution reaction (HER) NiMo for targeted water splitting devices* Ariana Serban*, Xile Hu, Meng Ting Liu, Nanjun Chen, Hao Ming Chen	
12:10	1062 *Hydrogen evolution by 2D MoS_2 crystals decorated with an iron(III) complex* Soma Keszei*, Péter Vancsó, Gergely Dobrik, Antal Koós, Miklós Németh, József Sándor Pap, Levente Tapasztó	156 *Revisiting the kinetics of the NOx reduction by H_2 on Pt/WO_3/ZrO_2 catalyst* Vaibhav Patel*
12:20	95 *Supported Precious Metal Catalysts for the Removal of Oxygen from Hydrogen Gas* Florian Harth*, Santiago Casu, Christian Breuer, Hans-Jörg Wölk, Ingo Gräf	1474 *Effects of H_2O, O_2 and H_2 on NH_3-SCR for H_2-ICE Aftertreatment* Tarık Bercan Sarı*, Selmi Erim Bozbag, Deniz Sanli Yildiz, Can Erkey
12:30 – 14:00	**Lunch break**	

Room	5-A150	6-Andromeda
Session	D4-S1-T33 ***CO_2 methanation***	D4-S1-T18/T08 ***Advancements in catalysis: Oxidations***
Chairs	Bo Peng and Ken Luca Abel	Shannon S. Stahl and Francesca L. Bleken
10:30	515 *Inverse CeOx/Co catalysts for low-temperature CO_2 hydrogenation* Yu Gao*, Nikolay Kosinov, Emiel Hensen	1488 *Catalytic oxidation of alcohols over cobalt spinel oxides: A comparison of liquid and gas phase* Alberto Tampieri, Federica Romanelli, Marianne Ivkic, Michael Pittenauer, Moritz Zelenka, Ellen Backus, Karin Föttinger*
10:50	668 *Spark ablation: A novel route for powdery metal nanoparticle-based catalysts in CO_2 methanation* Plaifa Hongmanorom*, Tobias Pfeiffer, Bernardus Zijlstra, Yingrui Zhao, Sandra Casale, Capucine Sassoye, Damien Debecker	684 *Modelling of ammonia oxidation taking into account catalyst degradation* Sven Jakobtorweihen*, Felix Beckmann, Jakub Michał Bujalski, Daniela M. Farmer, David Waller, Raimund Horn
11:10	457 *Dual Functional Material for CO_2 Capture and Conversion: Reaction Pathway and Interaction between Sorbent and Catalyst* Freek Karaçoban, Tomas van Haasterecht, Harry Bitter*	1472 *Resolving the facet structure of supported Rh and Pt-Rh alloy nanoparticles during ammonia oxidation* Uta Hejral*, Andrea Resta, Stefano Albertin, Alina Vlad, Alessandro Coati, Edvin Lundgren
11:30	674 *Boosting CO_2 Methanation: Carbon nitride-modified Co/Al_2O_3 catalysts enhance thermocatalytic performance* Angelina Barthelmeß*, Dan Zhao, Maik Kahnt, Michael Zimmermann, Enrico Tusini, Timo van Roje, Cherie Hsu, Thomas Sheppard, Anna Zimina, Jan-Dierk Grunwaldt, Moritz Wolf	173 *A novel method for testing SO_2 oxidation catalysts* Christian Hulteberg*, Josephine Digné, Manfred Schmidt, Jan Brandin
11:50	956 *Enhancing CO_2 methanation performance over a novel Ni/La/HAP catalyst: A pathway to sustainable energy conversion* Nassima Berroug*, Miguel A. Gutiérrez-Ortiz, Juan R. González-Velaco, Zouhair Boukha Ghazi-Jerniti	1350 *The Simultaneous Total Oxidation of Toluene, Propene and CO Environmental Pollutants Using Bimetallic Au-Pt/ZrO_2/UVM-7 Catalysts* Kieran Aggett*, Tomás García, David Morgan, Mario Peláez-Fernández, Álvaro Mayora,l Raul Arenal, Benjamín Solsona, Pedro Amorós, Stuart Taylor
12:10	914 *Palladium distribution on shaped alumina and its impact on the catalytic performance for the CO_2 methanation* Zafeiria Fragkou Topaloglou*, Mathilde Guilpain, Rémy Herbaut, Sébastien Royer, Damien Bourgeois, Jean-Philippe Dacquin	1069 *O_2 activation by Fe, Mn, Co, and Ni bi-metallic sites for oxidation reactions: DFT and Experimental Study* Agnieszka Kornas, Edyta Tabor, Kinga Mlekodaj, Stepan Sklenak, Jiri Dedecek, Agnieszka Drzewiecka Matuszek, Małgorzata Smoliło-Utrata, Katarzyna Samson, Michał Śliwa, Dorota Rutkowska-Zbik*
12:20	678 *Unraveling the behavior of mixed metal oxide catalysts during activation, CO_2 methanation and reoxidation by operando methods* Dennis Weber*, Tanja Franken	417 *Heterogeneous catalysts for oxidation of cyclohexane to KA oil and adipic acid* Tommaso Rizzuti*
12:30-14:00	**Lunch break**	

Room	7-Aurora
Session	D4-S1-T18 ***Fine chemicals and polymer production/ Photo-/electrocatalysis***
Chairs	Narendra Kumar, Nataša Novak Tušar and Anders Holmen
10:30	1131 *Perfluoro-functionalization of Zr-MOFs for Photosynthesis of Hydrogen Peroxide* Yoshifumi Kondo*, Shiori Mizutani, Yasutaka Kuwahara, Kohsuke Mori, Tohru Sekino, Hiromi Yamashita
10:50	1306 *Advanced 3D green glass ceramic porous membrane with photocatalytic functionalities for water treatment applications*. Akansha Mehta*, Jozef Kraxner, Mansi Dua, Maria Waqar, Martin Schwentenwein, Enrico Bernardo, Dusan Galusek
11:10	**Keynote lecture:** *Single-atom catalysis for greener fine chemical synthesis* **Gianvito Vilé,** Associate Professor of Chemical Engineering at Politecnico di Milano, Italy and Recipient of EFCATS Young Researcher Award 2025
11:50	520 *Ligand Engineered In-MOFs with Tuned Energy Structure for Enhanced Photocatalytic CO_2 Reduction* Geqian Fang*, Vitaly Ordomsky, Andrei Khodakov
12:10	659 *Photochemical Oxidation of Ethylene to Glycolaldehyde Catalyzed by SnO_2: The Role of Lattice Oxygen* Vladislav Butenko*
12:20	245 *Mechanistic Insights into Peroxide-Activated Cu(I) Complexes for C–H Bond Oxidation Reactions* Ning Cao*, Mouhammed Abu Rasheed, Unni Olsbye, Ainara Nova
12:30-14:00	**Lunch break**

Room	1-Cosmos1	2-Cosmos2
Session	D4-S2-T03 ***Electrochemical conversion of CO_2***	D4-S2-T04 ***Refinery catalysis: Hydrodeoxygenation - 2***
Chairs	Gabriele Centi and Christoph Rameshan	Eric Gaigneaux and Christian Hulteberg
14:00	1085 *CO_2 electrocatalytic reduction in organic electrolytes: redefining challenges and solutions* Daniele Giusi, Veronica Costantino Siglinda Perathone r Gabriele Centi Claudio Ampelli*	**Keynote lecture:** *Unraveling active sites for the catalytic hydrodeoxygenation of lignin-derived compounds: From mechanistic insights to rational design* **Fábio Bellot Noronha** Senior researcher of The National Council for Scientific and Technological Development (CNPq), and researcher of the State of Rio de Janeiro (FAPERJ). Brazil
14:20	141 *Carbon-based hybrid materials for electrocatalysis* Zhihong Tian*	
14:40	554 *Surface Roughening Effects in Copper-Catalyzed CO_2 Electroreduction* Joakim Halldin Stenlid*, Joseph Gauthier, Martin Head-Gordon, Alex Bell, Frank Abild-Pedersen	226 *Synthesis of acrylic acid via dehydration of lactic acid on mesoporous silica modified with barium* Jong Wook Bae*, Rong Zhao
15:00	555 *Quasi-Simultaneous X-ray Absorption Spectroscopy and Diffraction of In-Bi CO_2 Electrocatalytic Reduction in a Gas Diffusion Electrode Cell* Mariangela Biggiero*, Hugo P. Iglesias van Montfort, Vaishnavi Ganesh, Kirill A. Lomachenko, Tom Burdyny, Brian Rawls, Florian Meirer, Ward van der Stam, Annelie Jongerius, Bettina Baumgartner, Bert M. Weckhuysen lang	791 *Detailed characterization of in situ-generated MoS2 nanoparticles for HDO of pyrolysis oil* Jonas Elmroth Nordlander*, Niklas Bergvall, Simone Sala, Ole Reinsdorf, Maik Kahnt, Linda Sandström, Sara Blomberg
15:20	497 *What Happens at a Copper Surface during CO_2 Electro-reduction Revealed by In Situ Electrochemical Atomic Force Microscopy* Hui Wang*, Bert M. Weckhuysen, Ward van der Stam, Laurens D.B. Mandemaker	393 *Few layer MoS_2 as a catalyst for the bio-oil upgrading to biofuels* Fuli Deng*, Ruixue Zhao, Johannes A. Lercher
15:30 – 16:00	**Coffee break**	

Room	3-Cosmos3	4-A300
Session	D4-S2-T01 ***Hydrogen production: Photocatalysis***	D4-S2-T18 ***Advancements in catalysis: In-situ/operando characterization***
Chairs	Uta Hejral and Narcis Homs	Thomas Sheppard and Sara Blomberg
14:00	390 *Can better photocatalysts be achieved through ball milling?* Jordi Llorca*, Lluís Soler, Núria J. Divins, Ignasi Burgués, Isabel Serrano, Asier Agrelo, Yufen Chen, Elies Molins, Mónica Benito	196 *High Spatial Resolution Reactivity Analysis of Catalytic Nanoparticles with Operando IR Nanospectroscopy Measurements* Elad Gross*
14:20	582 *Using Ferroelectric Polarization to Tune Electronic Properties and Surface Catalytic Activity for Photoelectrochemical Water Splitting* Judy Hart*, Owen Bowdler, Michael Gunawan, Rose Amal, Nagarajan Valanoor, Jason Scott, Cui Ying Toe	179 *Outstanding surface reaction investigation using pulse microreactor inside a calorimeter: The study of isopropanol dehydration* Tristan Cabanis*, Aline Auroux, Jean-Luc Dubois, Nicolas Sbirrazzuoli, Georgeta Postole
14:40	**Keynote lecture:** *Harnessing light for a cleaner future: Advances in heterogeneous photocatalysis* **Albin Pintar**, Research professor and Head of the programme group »Integrated Approach to Water Pollution Prevention« at the National Institute of Chemistry, Ljubljana, Slovenia	1113 *Laser induced temperature-jump time-resolved infrared spectroscopy of zeolites* Amy Edmeades*, Alexander Hawkins, Russell Howe, Gregory Greetham, Mike Towrie, Richard Catlow, Paul Donaldson
15:00		1012 *Tracking the evolution of Co-based single atom catalysts for the CO_2 electroreduction reaction: an operando XAS study* Andrea Martini*
15:20	30 *Atomic defects in mesoporous TiO_2 enhance solar photocatalytic activity: A structural insight into defect creation and stabilization*. Edith Mawunya Kutorglo*, Jan Šmahlík, Yusef Hassan, Reinhard Schomäcker, Miroslav Šoóš, Michael Schwarze	1258 *Three-way catalyst nanoparticle stability tracking under ambient pressure gas flow and heat – insights by in-situ HRTEM* Phuc Hai Nguyen*, Nathalie Claes, Sara Bals, Kei Muramoto
15:30 – 16:00	**Coffee break**	

Room	5-A150	6-Andromeda
Session	D4-S2-T11 ***Special session: Light as a reagent- 1***	D4-S2-T38 ***Advancements in catalysis:*** ***Fuel cells/electrolysis. Theory/modeling***
Chairs	Jacinto Sá and Géraldine Masson	David Waller and Derek C. Creaser
14:00	96 *Better Organic Synthesis with Light* Burkhard Koenig, Jonas Düker, Vincent George*, Indrajit Ghosh	937 *Mitigating Silica Impurities in Solid Oxide Electrolysis Cells for Enhanced Performance* Daniel Bruun*, Elena Marzia, Sala Peter, Blennow Jakob Munkholt Christensen, Anker Degn Jensen
14:20	104 *Photocatalytic asymmetric homocoupling of aniline with platinum-loaded titanium oxide photocatalyst* Kexin Zou, Akira Yamamoto, Hisao Yoshida*	1300 *Structural and chemical stability of $LaSrCoFeO_3$ perovskites for ammonia-fueled solid oxide fuel cells* Alicia San Martin Rueda*, Faranak Foroughi, Ingeborg-Helene Svenum, David Waller, Magnus Rønning
14:40	916 *Photocatalytic OH Radicals for Alkanes and Olefins Activation* Chunyang Dong, Yinghao Wang*, Andrei Khodakov, Vitaly Ordomsky	1508 *Oxygen Reduction Reaction in Alkaline Fuel Cells: A Focus on Catalysts Selectivity and Radical Formation* Krzysztof Kruczała*, Szymon Wierzbicki, John C. Douglin, Dario R. Dekel
15:00	83 *Tailoring Nanocatalytic Interfaces for Efficient Light-Driven Energy and Environmental Applications* Hiang Kwee Lee*	379 *Hydrogen dissociation on Co(0001) – Effect of adsorbate ions* Ali Can Kizilkaya*, Ingeborg-Helene Svenum, Hilde Johnsen Venvik, Kees-Jan Weststrate
15:20	762 *Photocatalytic Glycol-Cleavage over Rutile TiO_2 for the Selective Production of Aldehydes and H_2* Luke Roebuck*, Marta Falkowska, Chris Hardacre	TBA
15:30 – 16:00	**Coffee break**	

Room	7-Aurora
Session	D4-S2-T14 ***Special session: From data to AI- 1***
Chairs	Pedro F. Mendes and Núria López
14:00	534 *Predictive Dynamical Modelling of Zeolitic Catalysts via a Flexible Reactive Machine Learning Framework* Andreas Erlebach, Daniel Willimetz, Chen Lei, Carlos Bornes, Tereza Benešová, Indranil Saha, Christopher J. Heard, Lukas Grajciar*
14:20	481 *Materials Genes of CO_2 Hydrogenation on Supported Cobalt Catalysts: an AI Approach Integrating Theoretical and Experimental Data* Ray Miyazaki* Kendra S Belthle Harun Tüysüz Lucas Foppa Matthias Scheffler
14:40	326 *The role of bulk intercalation in the electrocatalytic hydrogen evolution reaction on tungsten oxides* Giannis Mpourmpakis*
15:00	757 *Learning kinetics from integral data of non-ideal reactors using global reaction neural networks* Tim Kircher* Martin Votsmeier
15:10	1120 *Explainable Artificial Intelligence Elucidates Synthesis-Structure-Property-Function Relationships in Nanostructured Catalysts* Marc-Eduard Usteri* Manu Suvarna Frank Krumeich Sharon Mitchell Javier Perez-Ramirez
15:20	714 *Data-Driven Approaches for Accelerated Catalyst Discovery and Digital Research* Mohammad Khatamirad* Raoul Naumann d'Al non Court Michael Geske Edvin Fako Tiago Goncalves Sandip De Stephan A. S. Schunk Sonja Schimmler Frank Rosowski
15:30 – 16:00	**Coffee break**

Room	1-Cosmos1	2-Cosmos2
Session	D4-S3-T03 ***Methane dry reforming of CO_2***	D4-S3-T18 ***Advancements in catalysis: Materials and fundamentals***
Chairs	Harry Bitter and Deniz Uner	Jordi Llorca and Nathalie Tanchoux
16:00	788 *High-performance Ni-based catalysts via SOMC for dry reforming of methane* Wei Wang*, Christophe Copéret	282 *Galvanic Coupling Measurements as a Predictive Tool for Cooperative Redox Enhancement (CORE) in Thermocatalytic Alcohol Oxidation* James Spragg*, Bohyeon Kim, Isaac Daniel, Steven McIntosh, Graham Hutchings
16:20	697 *Atomic Ni/Al_2O_3 clusters for enhanced H_2 production from low-temperature dry methane reforming* Elisabetta Bonaglia*, Seongmin Jin, Jeremy S. Luterbacher	531 *Sulfur-centered Lewis superacid on sulfated zirconium oxide drives polyolefin depolymerization* Alexander A. Kolganov*, Ratchawi Jammee, Marc Groves, Orson Sydora, Matthew Conley, Evgeny Pidko
16:40	596 *Effects of feed impurities on dry reforming over a Ni-Ce-Zr catalyst* Bjørn Christian Enger*	783 *Heterogeneous Catalysis Mediated Cofactor Regeneration for Biosynthesis* Xiaodong Wang*, Jianwei Li, Joseph Burnett, Wilm Jones, Russell Howe
16:50	1484 *Synthetic Fuel Production under modern CCU Technologies* András Sápi*	
17:00	401 *The exciting world of high-temperature dry reforming of methane investigated with in-situ spectroscopy* Florian Schrenk*, Lorenz Lindenthal, Hedda Drexler, Tobias Berger, Jonathan Rollenitz, Karin Föttinger, Christoph Rameshan	590 *CO_2 capture and methanation on the 3D printed modified mesoporous silicas* Margarita Popova*, Grigoria Teohari, Svilen Simeonov, Ivalina Trendafilova, Boian Mladenov
17:10	660 *Kinetic relevance of water in the dry reforming of methane on Ni-based catalyst coatings* Enes Caliskan*, Luca Nohel*, Samuel Lichtenberger, Verena Schallhart, Lukas Möltner, Elias Klemm	1296 *Small Ni-Fe zeolite-supported bimetallic nanoparticles: purposeful synthesis and functional properties* Ivan Kopa, Olha Yevdokimova, Päivi Mäki-Arvela, Dmitry Murzin, Nataliya Shcherban*
17:20	238 *Bridging Lab-Scale and Industrial Applications: Advanced Catalyst Testing for CO_2 Conversion via rWGS and Dry Reforming* Benjamin Mutz, Robert Baumgarten, Christoph Hauber*, Fabian Schneider	236 *DLP 3D printing revolutionizes practical heterogeneous catalysis* Luca Mastroianni, Ananias De Jesus Medina Ferrer Kari Eränen, Martino Di Serio, Vincenzo Russo, Dmitry Murzin, Tapio Salmi*

Room	**3-Cosmos3**	4-A300
Session	D4-S3-T09 ***Gaseous emissions catalytic aftertreatment (NH_3, N_2O, NOx, …)***	D4-S3-T17 ***CATHEX special session: Sustainable fuels and chemicals via syngas -1***
Chairs	Lucie Obalová and Jakob Munkholt Christensen	Ingeborg-Helene Svenum and Felix Herold
16:00	818 *Structure-sensitivity of Platinum during Selective Ammonia Oxidation for Emission Control Applications* Vasyl Marchuk*, Pieter Glatzel, Dmitry I. Sharapa, Jan-Dierk Grunwaldt, Dmitry E. Doronkin	1060 *Crystallite size dependency in iron-based Fischer-Tropsch CO and CO_2 hydrogenation* Marian Chen, Mohamed Fadlalla, Hennie Kotze, Nico Fischer, Alexis Bordet, Dominikus Heift, Bruno Chaudret, Michael Claeys*
16:20	882 *Site-specific reactions for N_2O utilization and abatement over Fe-exchanged zeolites: an operando spectroscopy study* Daniel Camilo Cano-Blanco*, Jörg Fischer, Filippo Buttignol, Daniele Bonavia, Gabriela Dutca, Gunnar Jeschke, Oliver Kröcher, Davide Ferri	840 *Reaction-driven formation of novel active sites on catalytic surfaces* Emmanouil Mavrikakis*
16:40	578 *HCN formation from propene and NH_3 over V_2O_5-WO_3/TiO_2* Jingjing Liu*, Hong He, Davide Ferri	562 *Single-Step Syngas-to-Dimethyl Ether Synthesis on Nanoparticle-Derived PdZn/ZnO/mp-HZSM-5 and Pd/CeO_2/Al_2O_3 Catalysts* Bing Wang ,Zairan Yu, Shuang Chen, Nicola Da Roit, Michael Zimmermann, Yuemin Wang, Silke Behrens*
17:00	910 *Cooperative red-ox mechanism during simultaneous conversion of N_2O and NO* Filippo Buttignol, Jörg W. A. Fischer, Alberto Garbujo*, Pierdomenico Biasi, Gunnar Jeschke, Oliver Kröcher, Magdalena Zybert, Davide Ferri	1204 *Flame-made copper-ceria structure as excellent high-temperature rWGS catalyst attributed to a triplet reaction pathway* Bingqiao Xie*, Oliver Krocher, Rose Amal
17:10	1457 *Supercritical Ion Exchange for Tailored Cu Active Sites in SSZ-13 for NO_x Reduction via NH_3-SCR* Tarık Bercan Sarı*, Selmi Erim Bozbag*, Hamed Yousefzadeh, Deniz Şanlı, Yıldız Can Erkey	*702 In situ XAS investigation of Co-based model catalysts for FTS* Rabia Ilica*, Dan Zhao, Erisa Saraçi, Enrico Sireci, Cherie Hsu, Moritz Wolf, Felix Studt, Mohamed Fadlalla, Michael Claeys, Jan-Dierk Grunwaldt, Anna Zimina
17:20	1067 *Rate of NH_3-SCR over hydrothermally aged Cu-CHA catalysts* Shivangi Singh*, Henrik Grönbeck, Ton. V. W Janssens	675 *Direct conversion of syngas to acetic acid by a molecular one-way valve strategy* Suhan Liu*

Room	5-A150	6-Andromeda
Session	D4-S3-T11 ***Special session:*** ***Light as a reagent- 2***	D4-S3-T38 ***Advancements in catalysis:*** ***In-situ/ operando characterization***
Chairs	Jacinto Sá and Géraldine Masson	Günther Rupprechter and Jan Knudsen
16:00	1471 *The uncommon photocatalytic generation of singlet oxygen by silanized TiO_2 nanoparticles* Massimiliano D'Arienzo*, Francesco Parrino, Sandra Diré, Riccardo Ceccato, Emanuela Callone, Lorenzo Viganò	10 *Unraveling Ammonia Synthesis: New Insights from in Operando APXPS at High Pressures* Christopher Goodwin*
16:20	233 *Protein-driven electron-transfer process in a fatty acid photodecarboxylase* Giacomo Londi*, Lorenzo Cupellini, Benedetta Mennucci	1186 *Towards Bridging the Pressure Gap in Analyzing Catalytic Reactor Effluents with Photoionization Mass Spectrometry* Morsal Babayan*, Esko Kokkonen, Evgeniy Redekop, Samuli Urpelainen, Unni Olsbye, Marko Huttula
16:40	388 *Photo-rechargeable Batteries: Convert and Store the Light* Taymaz Tabari*, Przmyslaw Labuz, Sanjay Mathur, Zbigniew Sojka, Wojciech Macyk	1086 *Reduction dynamics of Ru/Al_2O_3 monitored by temperature programmed operando methods* Paolo Lazzarini*, Alberto Ricchebuono, Daniele Bonavia, Stefano Checchia, Riccardo Pellegrini, Davide Ferri, Andrea Piovano, Elena Groppo
17:00	125 *Amine-based Solid Molecular Catalysts in Photocatalytic Applications* Sarah Brettschneider*, Keanu Birkelbach, Regina Palkovits	106 *Insights from Raman Spectroscopy on noble (Ir) and non-noble (Ni) electrocatalysts for oxygen evolution reaction* Angelja Kjara Surca*, Leonard Moriau, Anja Logar, Luka Suhadolnik, Marjan Bele, Nejc Hodnik
17:10	276 *Visible-Light Driven Synthesis of Bis(indolyl)methanes from Indoles and Alcohols via Interrupted Borrowing Hydrogen Strategy Employing Perylene Monoimide Photocatalysts* Premnath Das*, Priyanath Das, Sanjib.K Patra	
17:20	328 *Photolytic Activation of Ni(II)-X Bonds Explains Initiation and C-H Activation in C(sp2)-C(sp3) Bond Forming Reactions* Max Kudisch*, Reagan Hooper, Lakshmy Valloli, Justin Earley, Anna Zieleniewska, Jin Yu, Stephen Di Luzio, Hannah Sayre, Xiaoyi Zhang, Matthew Bird, Amy Cordones, Garry Rumbles, Obadiah Reid	987 *Ag restructuring during methanol to formaldehyde conversion: An In situ X-ray ptychography and electron microscopy study* Srashtasrita Das, Maik Kahnt, Youri van Valen*, Tina Bergh, Sara Blomberg, Mikhail Lyubomirskiy, Christian Schroer, Hilde Venvik, Thomas Sheppard

Room	7-Aurora
Session	D4-S3-T14 ***Special session:*** ***From data to AI- 2***
Chairs	Pedro F. Mendes and Núria López
16:00	1321 *Machine Learning guided Zeolite Preparation using Literature augmented Datasets*. Daniel Costa*, Leonor Frazão*, Victor Costa ,Filipa Ribeiro, Pedro Mendes
16:20	769 *A Database for Catalysis* Julia Schumann, Michael Götte, Lauri Himanen, Abdulrhman Moshantaf, Hampus Näsström, Markus Scheidgen, José A. Márquez, Annette Trunschke*
16:40	1125 *ML-Prediction of Adsorption and Surface Reaction Energies* Aleix Comas-Vives*
17:00	296 *Exploration of a multi-dimensional promoter space via machine learning* Aybike Terzi*, Christian Kunkel, Frederik Rüther, Frederic Felsen, Charles W. Pare, Robert Baumgarten, Esteban Gioria, Raoul Naumann d'Alnoncourt, Christoph Scheurer, Frank Rosowski, Karsten Reuter
17:10	689 *Closed-loop ML-driven catalyst optimization at ETHZ SwissCAT+* Yuhui Hou*
17:20	1242 *Applications of universal interatomic potentials on Pd-based model systems* Tor S. Haugland*, Daniel Marchand, Ingeborg-Helene Svenum, Stefan Andersson, Ole M. Løvvik

Room	1-Cosmos1	2-Cosmos2
Session	D5-S1-T03 ***CO_2: Emerging chemistries***	D5-S1-T18 ***Advancements in catalysis: Catalyst synthesis***
Chairs	Margarita Popova and David Kubička	Florian Harth and David Waller
09:00	**Keynote lecture:** *Transformative catalysis for a resilient and low-carbon future (Centi and Perathoner)* **Gabriele Centi** Professor in Industrial Chemistry at the University of Messina, Italy and President European Research Institute of catalysis	1119 *Aquivion®-based spray-freeze dried composite catalystsfor the one-pot cascade synthesis of γ-valerolactone*. Alessandro Allegri, Anna Saotta, Francesca Liuzzi, Giuseppe Fornasari, Luca Ciacci, Enrica Giannotti, Geo Paul, Claudio Oldani, Alice Cattaneo, Andrea Brigliadori, Stefania Albonetti*
09:20		1417 *Barium Alginate Gel Beads: A Homochiral Porous Material for Heterogeneous Asymmetric Catalysis* Nathalie Tanchoux*, Pietro Pecchini, Daniel Antonio Aguilera, Maria Francesca Fochi, Pierrick Gaudin, Luca Bernardi
09:40	65 *AutoMeth: Catalytic Technology for Biomethane Production* Rossana Boccia, Elena Martin Morales, Martí Biset-Peiró, John Chamberlain, Jordi Guilera*	**Keynote lecture:** *"Vision without execution is hallucination" (T.A. Edison) Effective strategies for scale-up of heterogenous catalysts* **Gerhard Mestl** Head of Department *Oxidation Catalysis*, Clariant AG, Germany
10:00	1068 *CO2 co-feeding to mitigate deep oxidation in methane coupling* Yonggang Cheng, Parviz Yazdani, Pedro Mendes*, Joris Thybaut	
10:20	1383 *Versatile carbide-based materials in catalysis: CO2 reduction to syngas and H2 photo-production* Adrià Sánchez, Margarita Bania, Matthijs Koning, Pilar Ramírez de la Piscina, Narcis Homs*	779 *Speciation of Active Sites in Sn-zeolite Catalysts Prepared via the ADOR Synthesis Approach* Yuqi Zhang, Carlos Bornes, Mariya Shamzhy*
10:40	482 *Pilot-scale integrated CO2 capture and methanation using novel perovskite-derived dual function materials: a parametric study* Jon Ander Onrubia Calvo*, Elena Gómez Bravo, Beñat Pereda-Ayo, José Antonio González Velasco, Juan Ramón, González Velasco	1291 *Epoxide driven sol-gel synthesis of Ni/Al2O3 based catalysts for ethanol dry reforming: Kinetic effect of CeO2 over coke gasification* Feilong Yang*, Damien Debecker
10:50	1011 *Innovative CO2 Capture & Utilization Technologies: Porous Liquids* Jyri-Pekka Mikkola*, Shokat Sarmad, Darius Nikjoo	1103 *Mechanochemical approach for the synthesis and modification of carbon catalysts for methane pyrolysis* Nicolas Fonda*, Deborah Perco, Maila, Alessandro Baraldi, Alessandro Trovarelli
11:00 – 11:30	**Coffee break**	

Room	3-Cosmos3	4-A300
Session	D5-S1-T09 ***Gaseous emissions treatment: Catalytic aftertreatment of carbon containing species***	D5-S1-T17 ***CATHEX special session: Sustainable fuels and chemicals via syngas - 2***
Chairs	Ljubiša Gavrilović and Eric Gaigneaux	Ingeborg-Helene Svenum and Felix Herold
09:00	204 *Optimizing Oxygen Transfer and Pd Properties through Morphology Engineering of Ceria Catalysts for Lean Methane Oxidation* Martim Chiquetto Policano*, Leon Lefferts, Jimmy Alexander, Faria Albanese	1500 *Diverse Active Site Structures on Transition Metal Oxide Surfaces and their Kinetic Consequences in C-H Bond Activation Catalysis* William Broomhead, Arvind Chauhan Guangming Cai Ya-Huei (Cathy) Chin*
09:20	605 *Computational Prediction of Catalytic Activity for CH_4 Combustion by Automated Reaction Route Mapping* Shiho Sakuma*, Shunsaku Yasumura, Kenichiro Saita, Tetsuya Taketsugu, Masaru Ogura	1540 *Controlling Selectivity in Catalytic Hydrogenation via Regulating Adsorption Configuration* Yueqiang Cao*, Xinggui Zhou, Xuezhi Duan, De Chen
09:40	797 *Doped-ceria nanoshapes for soot oxidation: effect of surface chemistry and particle restructuring on reaction pathways and contact sites* Enrico Sartoretti*, Fabian Hagen, Chiara Novara, Marco Piumetti, Henning Bockhorn, Samir Bensaid	782 *Key Role of Realistic Surface Coverages in First-Principles Microkinetic Models for COx Hydrogenation* Konstantijn Rommens*, Thobani Gambu, Mark Saeys
10:00	1332 *Overcoming Activity/Stability Trafeoffs in CO Oxidation by Pt/CeO_2* Benjamin Bohigues Vallet*, Sergio Rojas-Buzo, Davide Salusso, Yu Xia, Avelino Corma, Silvia Bordiga, Mercedes Boronat, Tom Willhammar, Manuel Moliner, Pedro Serna	681 *Conversion of Synthesis Gas into Isobutylene over Zirconia-based Catalysts for the Production of Sustainable Aviation Fuels* Niko Heikkinen*, Laura Keskiväli, Krista Kuutti, Rasmus Ikonen, Bhumi Baraiya, Ville Korpelin, Manu Lahtinen, Jaana Kanervo, Mikko Heikkilä, Xinwei Ye, Bert Weckhuysen, Karoliina Honkala, Juha Lehtonen, Matti Reinikainen
10:20	1227 *First-Principles Study of Ceria-Zirconia-Supported Catalysts* Sarah Bernart*, Ivo Filot, Emiel Hensen	654 *Optimizing the Conversion of DME to C3 & C4 Paraffins over Pd/Beta* Candace Eslick* Shaine Raseale Stephen Roberts Jack Fletcher
10:30		883 *Low Temperature Syngas-to-Olefins Conversion: The Role of Zinc Incorporation in a MnZr Oxide-Zeolite Catalyst* Willem De Meyer*, Alexandra Bouriakova, Cindy Adam, Walter Vermeiren, Kevin M. Van Geem,, Vladimir V. Galvita Joris W. Thybaut
10:40	1218 *Challenges in low-temperature soot oxidation for DPFs* Samuel af Ugglas*, Nadezda Sadokhina, Anders Ersson, Dawei Yao, Lars J. Pettersson, Henrik Kusar	1055 *The Effect of Metal Vacancies on Fischer-Tropsch Catalysis Using a Two-Dimensional Molybdenum Carbide MXene* Evgenia Kountoupi*, Yevkeni Wisse, Joseph Halim, Christoph Müller, Vitaly Ordomsky, Johanna Rosen, Alexey Fedorov
10:50	1430 *Combining systematic characterization with DFT modeling: design of a bimetal/ -alumina VOC low-temperature oxidation catalyst* Matej Bubaš*	991 *Operando STM Investigation of Fischer-Tropsch Synthesis on Co(10$\bar{1}$2)* Shitha Valsan Korachamkandy*,Elahe Motaee, Menno Heijnen, Irene Groot
11:00 – 11:30	**Coffee break**	

Room	5-A150
Session	D5-S1-T28 ***Advancements in catalysis: Theory and modeling***
Chairs	Dorota Rutkowska-Zbik and Tor S. Haugland
09:00	324 *New insights into the mechanism of the Haber-Bosch process* Simon Ingeman Hansen, Benjamin Heckscher Sjølin, Ivano Eligio Castelli, Tejs Vegge, Anker Degn Jensen, Jakob Munkholt Christensen*
09:20	1211 *Efficient Rare Event Simulation via Path Sampling with Asynchronous Replica Exchange and Infinite Swaps* Titus Van Erp*
09:40	319 *Impact of Amorphous Structure on CO2 Electrocatalysis: A Combined Machine Learning Forcefield and DFT Modelling Approach* Akshayini Muthuperiyanayagam*
10:00	1061 *Solvent-Voltage model for water splitting on Nickel Phosphide catalyst* Syam Sadan*, Sander Hanslin, Jaakko Akola, Ingeborg-Helene Svenum
10:20	988 *CO_2 Utilization Through Reaction with Alcohols: A Computational Mechanistic Study*. Francesca L. Bleken*, Klaus-J. Jens, Richard H. Heyn, Ole Swang
10:30	1401 *Machine Learning-Driven Molecular Dynamics Unveil a Bulk Phase Transformation Driving Ammonia Synthesis on Barium Hydride* Axel Tosello Gardini*, Umberto Raucci, Michele Parrinello
10:40	993 *Influence of morphology and hydroxyls of alumina on Pt1 stabilization* Martin Cotoni*
10:50	547 *Metal-Heteropolyacids Complexes as Promising Catalysts in Photocatalytic Reaction. DFT Study.* Renata Tokarz-Sobieraj*, Dorota Rutkowska-Zbik, Piotr Niemiec
11:00 – 11:30	**Coffee break**

11:30 - 11:40	**2025 Francois-Gault-Lectureship Award**	
11:40 - 12:40	**Plenary lecture**	
Speaker	**Shannon S. Stahl**	Professor of Chemistry, Steenbock Professor of Chemical Sciences at University of Wisconsin – Madison, USA Recipient of 2025 Robert K. Grasselli Award for Catalysis
Lecture title	*Managing the oxygen reduction reaction to support the aerobic oxidation of organic molecules*	
Chairs	David Kubička and Hilde J. Venvik	
12:40 - 13:00	**Closing of congress** EFCATS update Closing remarks Invitation to EuropaCat 2027	
Chairs	EFCATS President and Hilde J. Venvik	

Poster sessions

Monday September 1, 17:30 – 19:30

Poster ID	Monday September 1	Hydrogen production in a low emissions scenario		P1, Pirsenteret
24	Low Overpotential, High Impact: NiO Catalysts for Alkaline Media Electrolysis	Aswin	Gopakumar	Institut Català d'Investigació Química (ICIQ)
66	Stability Investigations of BiVO4 and LaTiO2N Particles for Photocatalytic Water Splitting	Jakob	Praxmair	University of Salzburg
86	Hydrogen from steel-making gases: a challenge for reactor configuration and catalyst design	Salvador	Ordonez	University of Oviedo
726	Tuning the properties of alkali metal poly(heptazine-imides) for CO2 adsorption and activation	Salvador	Ordonez	University of Oviedo
194	Enhanced Hydrogen Evolution Reaction Performance Using Recycled NiCoMn Materials	Juliana	Sousa	INL
208	Cobalt-Based MOF catalysts for efficient photothermal ammonia decomposition and synthesis	Alejandra	Rendon Patino	King Abdullah Univ.of Sci.and Technology
229	Plasmon-assisted Formic Acid Dehydrogenation (FADH) by Molecular Catalyst Hybrids: towards in situ large-scale H2 production	Maria	Louloudi	University Of Ioannina
230	Multimetal Catalytic-Perovskites as CoCatalysts in H2-Production via HCOOH Dehydrogenation by Molecular-Catalysts	Maria	Louloudi	University Of Ioannina
234	Engineering of Multimetal Catalytic-Perovskites La0.75Sr0.25Cr0.9M0.1O3 (M=Mn, Fe, Co, Ni) for SOEC in one-step by Flame Spray Pyrolysis Technology	Yiannis	Deligiannakis	University Of Ioannina
266	Plastic decomposition with microwave energy yielding hydrogen and carbon nanotubes	Motlokoa	Khasu	University of Cape Town
300	Co-Ce based catalysts supported on SiO2 for preferential CO oxidation in hydrogen reach gases	Silviya	Todorova	Bulgarian Academy of Sciences
316	Computational and experimental studies of single atom alloy catalysts for NH3 synthesis	Geofrey	Njovu	University of Oxford
322	An optimized synthesis procedure of Au/Cu-Zn-Al catalyst for one-step water-gas shift reaction: Transfer to a higher TRL	Dimitrinka	Nikolova	Bulgarian Academy of Sciences
335	BaCeO3−xNyHz catalyst synthesized from CeO2 nanoparticle prepared by supercritical hydrothermal method	Kaito	Niita	Institute of Science Tokyo
337	GHG Reduction through Low-Temperature Decomposition of Ammonia and Nitrous Oxide	Jesus	Rodriguez Castanon	Sumitomo Chemical Co., Ltd.
351	Enhanced performance of bi-metallic Ni-Ru catalyst supported on alumina MOF for methane tri-reforming	Arisha	Sharma	Indian institute of technology Roorkee, India
361	Role of Nitrogen Vacancy Sites in Oxynitride Supports in Enhancing Catalytic Activity for Ammonia Decomposition	Kazuki	Miyashita	Institute of Science Tokyo
366	Efficient Proton Conduction via Hydrogen-bonded Water Network Confined in Nano-porous Beta-type Zeolite under Neutral Condition	Haruka	Ukita	Seikei University
382	H2 production by glycerol photoreforming: Influence of the support on the Au-Ni photoactivity	Eleonora	La Greca	University of Catania
409	Tailoring Bimetallic Gold Nanoclusters on CeO2 in heterogenous catalysis: Insight into ligand effects on Water-gas shift and CO oxidation reactions with XAFS and DRIFT studies	Sebastian	Mößlacher	TU Wien
422	Probing the Metal/Oxide Interface of IrCoCeOx in N2H4·H2O Decomposition: An Experimental and Computational Study	Ilaria	Barlocco	Università degli Studi di Milano

450	Synergetic effect between Pd and Ni on CeO2 in the partial oxidation of methane: an operando characterisation study	Laia	Pascua Solé	Universitat Politècnica de Catalunya
452	Mesostructured Cobalt-Manganese Oxides Electrocatalyst for Oxygen Evolution Reaction	Jean Pascal	Fandré	Max Planck Institute
455	Green biosynthesis of WO3 nanoelectrodes by anodization using vegetal extracts for the energetic transition	Ramón M.	Fernández-Domene	Universitat de València
469	Particle Size and Catalyst Bed Configurations for DBD Plasma-Catalysis in Hydrogen Production	Jordi	Guilera	Catalonia Institute for Energy Research
489	Investigation of modified Pd-catalysts for stable biogenic formic acid dehydrogenation in batch and continuous operation	Tamara	Hein	F.-A.-Universität Erlangen-Nürnberg
569	Dry Reforming of Methane over Co-Al Catalysts Prepared by Solution Combustion Synthesis	Manap-khan	Zhumabek	D.V.Sokolsky Institute of Fuel, Catalysis and Electrochemistry
606	Thiocoumarin-based Au(I) Complexes and Au(0) Systems as Hybrid Selective Contacts over TiO2 Photocatalysts for Hydrogen Evolution	Jordi	Llorca	Technical University of Catalonia
629	High-performance alkaline water electrolysis on magnetron-sputtered transition metal-based electrocatalysts	Isilda	Amorim	International Iberian Nanotech-nology Laboratory
643	Unlocking Low-Temperature Ammonia Decomposition via an Iron Metal–Organic Framework-Derived Catalyst Under Photo-Thermal Conditions	Angel	Sousa	King Abdullah Univ.of Sci.and Technology
652	Z-scheme water splitting using Fe2O3 as an oxygen evolving photocatalyst	Hideki	Kato	Tohoku University
725	Cellulose and Chitosan Based Carbon Aerogel Supported Pt Electrocatalysts Via Supercritical Deposition for Hydrogen Evolution Reaction	Ala A. A. Moqbel	Alsuhile	Koç University
922	Structure and dynamics of the catalytically active surface phase of Ni-based anodes for the alkaline oxygen evolution reaction	Jan Philipp	Hofmann	TU Darmstadt
943	Harnessing synergy between nanoparticles and single atoms on C3N4 ultrananosheets for enhanced hydrogen evolution	Gaia	Castellani	University of Trieste
950	Developing bifacial photoelectrodes in a PEC device	Ingeborg-Helene	Svenum	NTNU / SINTEF
977	Methane pyrolysis over Fe/Co catalysts for COx-free H2 production	Elpida	Zeza	Centre for Research & Technology, Hellas
1039	Investigating the Effect of Cerium Loading on the Oxygen Evolution Reaction (OER) Performance of Iridium-Based Catalysts	Merve	Kurt	Karlsruhe Institute of Technology
1070	DFT Studies on Single Atom and Sub-nanometer Copper Clusters and Cu-MOF Deposited on Titania for H2 Photocatalytic Generation	Dorota	Rutkowska-Zbik	Jerzy Haber Institute of Catalysis and Surface Chemistry
1129	Development of 3D gas diffusion electrodes with controlled and tunable catalyst composition for AEM water electrolysers	Fabrizio	Lisi	University of Bologna
1207	Operando Insights into the Structural Dynamics and Catalytic Activity of Fe-doped Ammonium Cobalt Phosphates for Oxygen Evolution Reaction	Maria Victoria	Martínez-huerta	Institute of Catalysis and Petrochemistry, CSIC
1216	Exploring cobalt-free lanthanum strontium ferrite perovskite materials for the electrode of symmetrical solid oxide cells	Siavash	Alizadeh Farsangi	International Iberian Nanotechnology Laboratory (INL)
1324	Molecular Engineering of Amorphous Molybdenum Sulfides for Efficient Hydrogen Evolution Electrocatalysi	Francisco	Gonell	Instituto de Tecnología Química (UPV-CSIC)
1518	Copper-modified nickel-based materials for ammonia electrooxidation	Justyna	Łuczak	Gdańsk University of Technology

Poster ID	Monday September 1 Fine chemicals and polymer production			P1, Pirsenteret
16	N-Methylation of amines with methanol in the presence of carbonate salt catalyzed by a metal–ligand iridium bifunctional catalyst	ɜeixuan	Dong	Nanjing University of Science & Technology
43	Tandem Hydroformylation-Acetalization of Unactivated Olefins Using Pyrolyzed ZIF-67 Catalysts	Wejdan	Anbari	King Abdullah Univ.of Sci.and Technology
159	Synergy between Homogeneous and Heterogeneous Catalysis: A Novel Approach to Multifunctional Catalytic Systems	Manisha	Durai	Max Planck Institute
170	Ru-catalysis for controlled transfer hydrogenation of muconates	Lisa	De Vriendt	KU Leuven
177	Synthesis and physico-chemical characterizations of clay extrudate catalysts for application in citronellal cyclization to isopulegol isomers	Narendra	Kumar	Åbo Akaemi University
206	Design and catalytic assessment of lignin-derived tertiary amines towards sustainable urethanes	Thomas	Narmon	KU Leuven
272	Role of strong metal-support interaction in the selective hydrogenation of 4-Chloronitrobenzene	Hiromu	Akiyama	Waseda University
293	Lamellar MWW-structured zeolites as hybrid catalysts for enantioselective fine chemical processes	Jordi	Torró Abril	Instituto de Tecnología Química
320	Comparison of Liquid Thermal and Electrocatalysis for the Selective Oxidation of Ethylene Glycol over Cobalt Spinel Oxides	Catalina	Leiva Leroy	RUB
353	Shaping binder-free catalyst monoliths via crystal-glass phase transformation of coordination polymer for facile catalyst recovery	Thidarat	Imyen	Kasetsart University
407	Development of Beta zeolite-supported metal catalyst for selective hydrogenation of 5-hydroxymethylfurfural to fuel additives	Apinya	Wijitrat	Institute of Science Tokyo
413	Mechanistic Elucidation of the Nitrilation Reaction as Catalyzed by Titanium Dioxide	Matthew	Hickson	Ku Leuven
432	Propane-to-Propene Dehydrogenation with CO2 over Zn(Y)BEA Zeolite Catalysts	Oksana	Zikrata	National Academy of Sciences of Ukraine
548	Sustainable FeCl3-Catalyzed Photochemical Transamidation of Nitroarenes with Sacrificial C–H Bonds	Minwoo	Park	Chonnam National University
613	Homogeneously Catalyzed Insertion of Carbon Monoxide into N-Alkyl Bonds in Tertiary Amines	Mats	Engelke	RWTH Aachen
691	Computationally guided development of homogeneous nickel catalysts	Matej	Huš	National Institute of Chemistry of Slovenia
781	Highly active atomically dispersed Ru-hydride in zeolites catalysis	Michiel	Dusselier	KU Leuven
842	Cu-based catalysts for cyclohexane oxidation: studying the effect of cyclic reduction/oxidation treatments for activity enhancement.	Marta	Stucchi	University of Milan
863	Asymmetric Hydroformylation of Vinyl Ethers as Key Step in the Synthesis of Industrially Relevant Bioactive Compounds	Christopher	Weike	RWTH Aachen
897	Tandem Reductive Amination and Deuteration over a Phosphorus-modified Iron Center	Haifeng	Qi	Cardiff University
1008	Nickel Nanoparticles Supported on Covalent Triazine Frameworks as Highly Efficient Catalysts for Nitroarenes Reduction to Anilines	Emanuela	Pitzalis	National Research Council of Italy
1049	Unravelling transport, adsorption and dynamics over catalyst surfaces using advanced nuclear magnetic resonance methods	Carmine	D'Agostino	University of Manchester
1097	Support-mediated formation of Pd nanoclusters for the arylation of styrenes using iodonium salts	Davi	Leite	University of Campinas
1110	Exploring Zeolite Crystal Size Effects in Palladium-Encapsulated Catalysts for the Selective Hydrogenation Reaction of Phenylacetylene	Francisco Javier	Escobar Bedia	Instituto de Tecnologia Química UPV-CSIC
1121	Palladium single-atom catalysts in C-C and C-N cross-coupling reactions: Elucidating mechanistic and kinetic aspects of Pd1@C3N4	Marc-Eduard	Usteri	ETH Zürich

1251	Cis-selective Semi-hydrogenation of Internal Alkynes and Head-to-tail Dimerization of Terminal Alkynes Catalysed by Cationic Titanocenes	Martin	Lamač	Czech Academy of Sciences
1255	From Corrole to Porphyrin: Advancing Cobalt Catalysts for Sustainable Nitroarene Hydrogenation	Anna-Lena	Krabichler-Mark	Technical University of Leoben
1273	Silanols on the surface of mesopores in hierarchical Na-LTA zeolite enable the introduction of extra catalytic sites for the Knoevenagel condensation reaction	Iago	Zapelini	São Paulo State University
1318	In-situ FTIR study on Biphephos-modified rhodium catalyst degradation and reactivation under hydroformylation conditions	Chunhong	Wei	Leibniz Institute for Catalysis e.V.
1345	Palladium/zeolite nanoclusters selectively catalyse hydrogenation of alkynes to alkenes	Jan	Přech	Charles University
1410	Electrochemical reduction of 5-hydroxymethilfurfural to 2,5-bis(hydroxymethil)furan with Cu-electrodeposited foam electrodes and 3D printed Cu monoliths	Giovanni	Malagoli	University of Bologna
1455	Iron Single-Atom Catalysis: A Sustainable Route to DFF from HMF on Nitrogen-Doped Graphene Acid	Jacky	Advani	VSB-Technical University of Ostrava
1470	Optimized Platinum Nanoparticle Dispersion on 2D Supports for Enhanced Selective Hydrogenation of Cinnamaldehyde	Martin	Veselý	University Of Chemistry And Technology Prague
1517	Tailoring Catalyst for Selective Guar Gum Conversion: Unveiling the Interplay between Structure and Surface Functionalities in Galactose and Mannose Production	Ripsa	Nayak	Indian Institute of Science

Poster ID	Monday September 1 Special session 5: Frontiers in Enzyme Catalysis			P1, Pirsenteret
521	Directed Evolution of a Natural Fatty Acid Photodecarboxylase for New-To-Nature C-C Bond Formations	Florian	Weissen-steiner	University of Graz
639	Immobilization of LPMOs on functionalized carbon nanotubes: the effect of spacer length on enzyme stability and activity	Silvia	Bordiga	Turin University
745	Hydrogenation of N-Benzyl Nicotinamide on Pt/SiO2	Makoto	Hirano	Osaka Metropolitan University
872	Covalent enzyme immobilization on magnetite particles modified with lemon peel extracts	Sanja	Panić	University of Novi Sad
875	Horseradish peroxidase immobilized on biofunctionalized magnetite particles as potential biocatalyst for water treatment	Mirjana	Petronijević	University of Novi Sad
1192	Natural photoredox catalysts promote light-driven LPMO activity and enzymatic turnover of biomass	Eirik G.	Kommedal	NMBU
1194	Investigating the impact of cyanide and buffer ions on LPMO catalysis reveals functional variation and pitfalls of functional characterization	Eirik G.	Kommedal	NMBU
1384	Discovery and rational design of hydrolases for polyurethane degradation	Artur	Góra	Silesian University of Technology
1460	Construction and characterization of bifunctional fibrolytic enzymes	Je-Ruei	Liu	National Taiwan University

Poster ID	Monday September 1 CO_2 activation and upgrading			P2, Pirsenteret
113	Self-catalytic Reactor for CO2 Methanation Fabricated by Metal 3D Printing and Surface Functionalization	Kohsuke	Mori	Osaka University
114	Structure-property evolution of Metal-Organic Frameworks (MOFs)-derived catalysts	Bibesh	Gauli	Monash University
117	Regulating photocarrier relaxation pathway in two-dimensional photocatalyst for efficient CO2 reduction	Heng	Cao	University of Science and Technology of China

123	Unraveling the synergistic effects of vanadium in Ru-supported silica catalysts for CO2 methanation	Plaifa	Hongmanorom	UCLouvain
132	Oxidative Fluorination of Cu/ZnO Methanol Catalysts with NF3 as Fluorinating Agent	Henrik	Schuster	University Freiburg
138	Solid Molecular Catalysts based on Nanoporous Polyphosphine Macroligands for CO2 Hydrogenation	Malte	Schummer	TU Darmstadt
142	Catalytic activity and stability of NiPt/C catalysts for the synthesis of iso-butanol from methanol/ethanol mixtures	Joachim	Pasel	Forschungszentrum Jülich GmbH
149	Advancing molybdenum carbide catalysts for sustainable syngas production in the reverse water-gas shift (RWGS) reaction	Nico	Fischer	University Of Cape Town
155	Synthesis and characterization of LDHs-derived catalysts for the photo-thermocatalytic CO2 conversion.	Luca	Calantropo	Università Degli Studi di Catania
169	Cu-based catalysts fabricated by magnetron sputtering for the electrochemical CO2 reduction	Mathias	Van Der Veer	University of Antwerpen
171	Copper's Cozy Blanket – Even Metals Need Comfort	Kalani	Ostermeijer	Delft University of Technology
190	First-principles screening and rationalization for CO2 adsorption and activation using low–cost transition metal and alloy catalysts	Athira	Parambil	IIT-Kharagpur
195	Unique h-BN supported catalysts to enhance CO production by three-way reforming for steelmaking industry	Jeffrey C. S.	Wu	National Taiwan University
199	Carbon-Coated Fibrous Silica Nanospheres for Enhanced Photothermal Catalysis	Enrique Vicente	Ramos Fernandez	King Abdullah Univ.of Sci.and Technology
200	MXene-silica derivatives for photothermo-catalytic valorisation of CO2	Giusy	Dativo	University of Catania
202	Investigation of oxygen species dynamics, carbon deposition and removal on LaNi-Zn perovskite catalysts for methane dry reforming	Morgana	Rosset	Universidade de São Paulo
251	Ionic liquid-mediated CO2-selective electrode for CO2 electrolysis from less pure streams	Hesamod-din	Rabiee	University of Bern
252	Syngas production by hydrogenation of calcium carbonate with reverse water gas shift catalyst	Fuminori	Saijo	Seikei University
265	CO2 conversion via reverse water gas shift chemical looping using indium-based oxide	Takuma	Higo	Waseda University
274	Efficient search for acetic acid synthesis pathway based on the bond disconnection process on Rh surface and Rh/metal oxide interface	Kenshin	Chishima	Waseda University
292	Porphyrin Co-Catalyst Enhancing Low-Temperature CO2 Hydrogenation at Water-CuAu/ZnO Interface	Hung	Mac	Leibniz Institute for Catalysis
329	CO2 carboxylation catalyzed by new C-scorpionate Cu(II) and Fe(III) complexes	Luísa	Martins	Universidade de Lisboa
334	Metal-free N, P Co-doped Carbon for CO2 Electroreduction into Syngas	Ryuji	Takada	Osaka University
362	CO2 Reduction Effect from Lowering Methanol Synthesis Temperature	Koichi	Matsushita	ENEOS Corporation
378	Direct CO2 capture from air and subsequent conversion to CH4 using bi-functional materials	Antonio	Guerrero Ruiz	UNED
571	Mechanochemical development of high surface area Boron Nitride materials for CO2 retention at moderate temperatures	Antonio	Guerrero Ruiz	UNED
400	Synthesis of Transition Metal Substituted Ceria Pre-Catalysts for Plasma-Assisted Heterogeneous Catalysis	Tim	Graupner	Christian-Albrechts-Universität zu Kiel
410	Synergistic coupling of Dry reforming of methane and Reverse water-gas shift reaction: Effect of Ce/Al ratio	Hyun-Seog	Roh	Yonsei University
412	Property-performance correlations in Ni-CaO-CeO2 for integrated CO2 capture and utilization	Vladimir	Galvita	UGent
427	Controlled Morphology of Magnesium Oxide for Efficient CO2 Adsorption	Woosung	Leem	Chonnam National University

428	Impact of Activation Sequence on Selective Oxygenate Formation from CO2 and CH4 Sequential Reaction	Hyogeun	Yang	Chonnam National University
430	Innovative CO2-Negative Hydrocarbon Coupling Utilizing Metal Oxides	Hanbit	Jang	Chonnam National University
431	Catalytic CO2 Upcycling to Aviation Fuels using Pt-Loaded Mesoporous Zeolites with Tailored Acidity	Hyeonji	Yeom	Chonnam National University
449	Exploring the design space offered by Solid Micellar Catalysts: a novel platform for single-site catalysts	Sara	Santos	Ghent University
458	Deactivation of Cu/ZnO/Al2O3 catalysts in methanol synthesis from CO2/H2 and a way to counteract it	Dominic	Walter	TU Bergakademie Freiberg
471	TiS2 Nanoparticles as Model (Photo-)Catalysts for CO2 Activation	Niko	Kruse	Carl-von-Ossietzky Universität Oldenburg
477	Probing D-Band Centre for CO2 Reduction using Resonant Inelastic X-ray Scattering	Xiangchao	Meng	University College London
488	Kinetic study of alcohol assisted-methanol synthesis	Morteza	Saedi	Christian-Albrechts-Universität zu Kiel
491	Integrated CO2 Capture and Methanation via Zeolite-based Dual-Function Materials	Jan	Kopyscinski	McGill University
518	MgO sorbents doped by CaO and/or CeO2 for CO2 capture: synthesis and investigation of the chemical composition effect	Laura	Valentino	National Research Council Italy
615	Al-containing $SrFeO_3$ Perovskite Oxides: Structural Insights and CO_2 Electroreduction Performance	Laura	Valentino	National Research Council Italy
523	CO2 Conversion via Reverse Water Gas Shift Using Industrial Steel Wastes as Catalysts	Imad Eddine	Aouissi	University of Udine
526	Enhanced Catalytic Efficiency in CO_2 Hydrogenation and Ethanol Steam Reforming: The Role of Na-Promoted CoCu/$MgAl_2O_4$ catalyst	Larissa	Ferreira	Unicamp
532	Acid gas conversion to COS by Zeolite 13X: an elementary assessment	Raman	Ghassemi	Ghent University
535	Pd-Imidate@SBA-15: A Multifunctional Heterogeneous Catalyst for the Aqueous Room Temperature Hydrogenation of CO2 to Formic Acid	Nuria	Martín	Universitat Jaume I
544	Enhancing the reaction of CO2 and H2O using non-thermal plasma-catalysis	Piu	Chawdhury	University of Manchester
564	Hydrogenation of CO2 over bimetallic catalysts at atmospheric pressure	Ali	Goksu	University of Surrey
565	Deconvoluting the role of zeolite acidity and proximity in tandem CO2 conversion to olefins over ZnZrOx-AEI zeolite catalysts	Julien	Devos	KU Leuven
576	Thermogravimetric-differential scanning calorimetry study of Zn-based mixed oxides for light olefin production via CO2 hydrogenation	Gyungah	Park	Korea Research Institute of Chemical Technology
577	CO2 hydrogenation over Cu–Fe–Al mixed metal oxide	Shoma	Takahashi	Tokyo Metropolitan University
581	In-situ QXAFS study on CO2 adsorption behaviour on Ta–Nb mixed polyoxometalates	Nattamon	Panichakul	Tokyo Metropolitan University
592	Exploring the ternary interactions in Inverse Cu-ZnO-ZrO2 Catalyst for CO2 hydrogenation to Methanol: Mechanistic Insights from DFT	Akanksha	Goyal	IIT ROPAR
610	Carbon dots from waste for the photodegradation of CO2	Giorgia	Ferraro	Ca' Foscari University of Venice
619	Low-content Ru catalysts for efficient atmospheric CO_2 methanation	Fabio	Salomone	Politecnico di Torino
627	Hierarchical zeolites for methanol and dimethyl ether dehydration into light olefins	Fabio	Salomone	Politecnico di Torino
622	Effect of pre-treatment conditions on Fe-based catalyst for e-fuel production via modified Fischer-Tropsch synthesis	Alessio	Tauro	Politecnico di Torino
625	Effect of zeolite acidity on pre-treated Fe-based catalysts for e-fuel production via CO2-modified Fischer-Tropsch Synthesis	Fabrizio	Celoria	Politecnico di Torino

630	Vanadium doped Ni@Al2O3 core-shell like catalyst for Methanation	Michela	Signoretto	Università Ca' Foscari
635	Development and Evolution of Different Reactivation Pathways and Strategies for the Ruthenium Triphos Catalyst System	Lukas	Jage	RWTH Aachen University, ITMC
644	Exploring tailored Ru-triphos catalysts for hydrogenation reactions through the targeted adaptation of the coordination sphere	Angelina	Schreiber	RWTH Aachen
645	Synthesis of a structurally versatile hexapodal phosphine ligand	Sina	Modersitzki	RWTH Aachen University
663	Synergistic enhancement of photocatalytic CO2 reduction by plasmonic Au nanoparticles on TiO2 decorated N-graphene	Khaja Mohaideen	Kamal Musthafa	National Institute of Chemistry of Slovenia
664	NiRuCa DFMs performance in integrated CO2 capture and methanation under ideal and realistic conditions	Soudabeh	Bahrami Gharamaleki	University of Surrey
683	Towards Shape-Tunable Hierarchical Single-Crystal Catalysts for CO_2 Valorization	Maxime	Mathieu	UNamur
703	A Dynamic Rod-Shaped Low Molecular Weight Cu-Metallogel: A Precatalyst for Green Energy Efficient CO2 Epoxides Cycloaddition Under Mild Conditions	Mahesh	Samanta	Indian Institute of Technology Kharagpur
704	Isolation of Promotional Effects of Manganese (Mn) in Cobalt (Co)-Based CO2 Hydrogenation Catalysts	Cherie	Hsu	Karlsruhe Institute of Technology
719	Water Sorption by Zeolites in CO2 Methanation: Enabling Pure Methane Production	Enrico	Marchi	Åbo Akademi University
733	In-Situ Mass Analyzer for Activation of Fe-based Catalysts for CO2 Hydrogenation	Mei Ju	Goemans	Norwegian University of Science and Technology
746	Highly Efficient and Benign CO Production from CO_2 via RWGS in Imidazolium-Based Ionic Liquids	Perla Haidée	García-Ríos	Technical University of Denmark
750	Reactivity of the Pd/ZnO catalysts, the role of the interface in CO2 hydrogenation.	David	Willock	FUNCAT, Cardiff Catalysis Institute
760	Synthesis of UiO-66 with Mixed Linkers and Its Functionalization for CO2 Conversion into Cyclic Carbonates	Katia	Bernardo-Gusmao	UFRGS
770	Understanding CO2 Conversion to Methanol: Bridging Modelling and Practice	Anze	Prasnikar	National Institute of Chemistry of Slovenia
773	Perovskites as High Performance CO2 Conversion Catalysts	Christoph	Rameshan	Technical University of Leoben
850	Photocatalytic reduction of CO2 into value-added chemicals over metal modified g-C3N4 and h-BN	Luisa	Pastrana Martinez	University of Granada
1114	Structural and chemical evolution of Ga2O3-doped Co(OH)2 nanosheets in CO2 hydrogenation	Daviel	Gómez	Instituto de Tecnología Química
1184	Redox behavior of iron active sites in Al-rich *BEA zeolite in the recycling of CO2 and CH4 into platform chemicals	Agnieszka	Kornas	Czech Academy of Sciences
1308	Reactive CO2 capture using dual-function catalysts based on zeolitic structures and transition metals	Yuri	Lima	University of São Paulo
1358	Co, Fe, and Cu Catalysts for CO_2 Conversion to Low Carbon Products	Vitor Duarte	Lage	UFRJ/COPPE
553	Iron Substituted Hydroxyapatite Catalyst to Green Ethanol Conversion	Fabio	Souza Toniolo	Federal University of Rio de Janeiro
1409	Product Distribution Modeling in CO_2 Hydrogenation Reactors: A Novel Approach Combining Statistical Distributions	Fabio	Souza Toniolo	Federal University of Rio de Janeiro

Poster ID	Monday September 1	Special session 3: Catalysts and reactors under dynamic conditions for energy storage and conversion		P2, Pirsenteret
286	Insights into the structure and activity of Co-Re-S catalysts.	Daria	Ryaboshapka	IRCELYON
290	Titania coated reactor elements for selective partial oxidation of LOHC molecules	Nicolas	Johner	Forschungszentrum Jülich GmbH

302	3D characterization of alloyed fuel cell catalysts using STEM	Alessandro Claudio	Zanre	Oxford University
309	Next-Generation HT-FTS Catalysts: FeOx Nanoparticles Anchored in N-Doped Carbon Frameworks	Muhammad Asif	Nawaz	University of Seville, Spain.
355	In-situ/operando Infrared Spectroscopy based on FELiChEM Facility and the Applications in Energy Chemistry	Xiaodi	Zhu	University of Science and Technology of China
373	Using honeycomb monoliths as catalyst support for a scalable ammonia synthesis	Svea	Hoffgaard	University of Rostock
403	The influence of A-site cations on the in-situ formation of metallic nanoparticles in perovskite oxide catalysts	Florian	Schrenk	Technical University of Leoben
419	Mapping the configurational and stoichiometric space of ß-Ga2O3 for CO2 hydrogenation	Margareth	Baidun	TU Delft
421	Cu substituted Mg-Fe Layered Double Hydroxides as Precursors for Ammonia Decomposition Catalysts	Michael	Chumakovski	Kiel University
498	Activity and stability of zeolite-encapsulated Pt clusters for propane dehydrogenation: the effect of H2 co-feeding	Xiaomai	Chen	Technical University of Munich
508	Synthesis of M/CeO2(M = Pt, Ni) from a leachate solution containing recycled platinum, controlling shape and size of nucleation sites	Alessio	Varotto	Sapienza University of Rome
557	Separation of Ammonia from its Product Stream Utilizing an Efficient Membrane Separation Process.	Arend	Rösel	Rostock University
600	Novel BaTiO3-Based Electrode Materials for SOFC Optimization	Elise	Berrier	CNRS - UCCS - Lille
695	Design of bifunctional electrocatalysts for metal-air batteries based on iron-nickel aerogels	Judith	Gonzalez-Lavin	INCAR-CSIC
748	Operando XANES studies of supported thin film Pt catalysts during CO oxidation	Manuela	Arztmann	Helmholtz-Zentrum Berlin
985	Harnessing visible-NIR light for hydrogen evolution with WO_{3-x} hybrid plasmonic catalyst	Dimple	.	Indian Institute of Technology Delhi
986	Investigating plasmonic properties of AuCu nanostructures immobilized on porous support for photocatalysis	Ajay	.	Indian Institute of Technology Delhi
405	Nickel-Silica Catalysts for CO_2 Methanation: Structure Performance Insights	Fabio	Bellot Noronha	National Institute of Technology Brazil
1002	Continuous fractionation, depolymerization and upgrading of coconut fiber waste under subcritical conditions and molten salts hydrate	Fabio	Bellot Noronha	National Institute of Technology Brazil
1050	Application of Operando Time-resolved XAS for Uncovering the Redox Dynamics of Metals Responsible for Catalytic Activity of Oxides and Metal-Oxide Interfaces	Olga	Safonova	Paul Scherrer Institute
1072	Cyclic adsorption-methanation optimization for Mechanical Mixture (MM) catalyst	Javier	Herguido	University Zaragoza
1081	In Situ Spectroscopic and Analytical Approaches for Monitoring Solid Formation and Designing Catalysts for Energy Applications	Monica	Distaso	Helmholtz Institute Erlangen-Nürnberg
1117	Tracking Dynamics of Supported Indium Oxide Catalysts in CO2 Hydrogenation to Methanol by In-Situ TEM	Yung-Tai	Chiang	ETH Zürich
1127	Surface Study of Structure Evolution and Deactivation of Gauze Catalysts for Nitric Acid Production	Yining	Ma	University College London
1143	The Nickle-Iron hydroxides for Oxygen Evolution Reaction Mechanisms Study.	Yezi	Lu	UCL
1153	Shining Light on Electrochemical studies at the SOLARIS synchrotron	Anna	Wach	Jagiellonian University
1193	Dynamic modeling the CO2 capture and methanation in a bench-scale reactor using perovskite-based dual function materials	Beñat	Pereda Ayo	University Of The Basque Country

1247	Development of electrically conductive cobalt-based catalysts for ammonia decomposition in directly heated reactors	Franziska	Winter	Fraunhofer Institute UMSICHT
1317	OptimizingNi/MgAl2O4 Catalysts for Bi-Reforming: Synthesis, Characterization, and Performance Evaluation	Mohammad	Shakir	Curtin University
1356	Utilization of 3D printing in heterogeneous catalysis	Agustin	Bueno-lopez	University of Alicante

Poster ID	Monday September 1 Special session 4: From data to AI			P2, Pirsenteret
46	Comprehensive catalyst screening for Prins reaction through combined use of domain knowledge and machine learning potential.	Tatsuya	Chiba	ENEOS Corporation
212	AI Alchemy: Revolutionizing Chemistry Through Prediction and Design	Izabela	Czekaj	Cracow University of Technology
357	Machine Learning Analysis of Literature on Catalytic CO2 Hydrogenation to Methanol	Beyza	Yılmaz	Boğaziçi University
885	Advantages in the use of AI-based regressions for the kinetic modelling of industrial catalysts	Emanuele	Moioli	Politecnico di Milano
886	A method to analyze catalyst deactivation in fluidized bed reactors	Emanuele	Moioli	Politecnico di Milano
907	Entering the New Era of Digital Catalysis	Sebastien	Paul	UCCS/Centrale LIlle/REALCAT
1371	e-CatNote: an ELN for heterogeneous catalysis based on ontology for laboratory operations	Daniel	Costa	Centro Química Estrutural, IST
1380	Integration of high-throughput synthesis, testing and characterization robots with a GFlowNet generative model for active learning predictive generation of supported metal nanoparticles	Egon	Heuson	Centrale Lille

Poster ID	Monday September 1 Bulk chemicals from fossil and renewable feedstock			Aurora, Clarion
8	Iron-containing Zeolite Catalysts for the Oxidative Dehydrogenation of Bioethanol to Acetaldehyde	Valeria	Lang	TU Darmstadt
25	Diamine-Capped Metal Nanoparticles for Biomass-Derived Substrate Conversion	Werner	Oberhauser	National Research Council of Italy
62	Aerobic Oxidation of Ethanol in Water by Palladium Supported onto Nickel Foam: Magnetic Inductive versus Electrical Resistance Heating	Werner	Oberhauser	National Research Council of Italy
124	Design of novel phosphine-based SMCs for the telomerization of isoprene and their structural evaluation by XAS studies	Julia	Nikodemus	RWTH Aachen University
137	Carbon-Supported Heteropoly Acids: A Catalytic Approach to Diformylxylose	Leon	Rothe	University Siegen
140	Biomass hydroconversion with bifunctional heteropolyacid catalysts	Fulvio	Varamo	Universität Siegen
145	Kinetic descriptors of propene oligomerization over micro- and mesoporous acid catalysts in light of deactivation by coke formation	Moritz	Link	Technical University of Denmark
158	High-Valent Early Transition Metal Chlorides for the Catalytic Gas-Phase Cyclotrimerization of Acetylene to Benzene	Jonathan Moritz	Mauß	Max Planck Institute
162	Aromatization of Ethanol on Zeolite-Based Catalysts with Controlled Acid Site Locations	Shun	Fukasawa	Idemitsu Kosan Co., Ltd
166	Interparticle Distance controls catalytic performance in the Direct Synthesis of H2O2 over Au@Pd Model Catalysts	Heiko	Schiefer	Karlsruhe Institute of Technology
192	Synergistic Role of Iron Oxide in Promoting the Catalytic Activity of Chromium Oxide for Propane Dehydrogenation	Sunil Kumar	Sahoo	Indian Institute of Technology
210	Non-oxidative direct conversion of methane to ethylene: optimizing the surface reactions	Yong Tae	Kim	Korea Research Institute of Chemical Technology

240	On the Relevance of Surface Hydroxyl Groups in Carbon Catalysts for the Electrocatalytic Production of H_2O_2	Harry	Bitter	Wageningen University
264	Catalyst testing for Renewable Diesel / SAF Production from renewable feedstocks	Martin	Kraus	hte GmbH
301	TaOx encapsulated clusters in zeolites for conversion of oxygenated coumpounds	Raphaël	Del Cerro	IFP Energies Nouvelles
313	Ligand Design for Aerobic Pd-Catalyzed Styrene Production via the One-Step C-H/C-H Coupling of Benzene and Ethylene	Frederick	Martens	KU Leuven
314	Esterification of Valeric Acid and Glycerol via Acidic Zeolites	Rawipa	Intakul	Chalmers University of Technology
349	Precision Control of Bimetallic CuZn Catalysts via Galvanic Replacement for Enhanced Performance in Ethanol-to-Butadiene	Peeranat	Chaipornchalerm	Vidyasirimedhi Institute of Science and Technology
350	Enhancing the catalytic hydrogenation of furfural to furfural alcohol over Ni-loaded MIL-53: Effect of calcination and reduction temperature on catalyst structure and activity	Rediat	Terefe Andualem	Indian institute of technology roorkee
352	Plastic waste-to-olefins using a two-stage reactor concept with catalytic upgrading	Jonas	Vogt	Karlsruhe Institute of Technology
356	Keggin polyoxometalates: novel versatile deoxydehydration catalysts	Eric	Gaigneaux	Université Catholique de Louvain
380	Promotional Effects of Si on Alumina-based Pt-Ga Catalyst for the Propane Dehydrogenation Reaction	Kazutaka	Sakamoto	ETH Zurich
442	Photocatalytic Oxidation of Ethylamine to Acetonitrile with Hydrous Ruthenium Oxide Supported on TiO2	Aliihsan	Bagci	Technical University of Denmark
453	Phosphide and Sulfide-based Catalysts for Hydrodeoxygenation Reactions of Biomass-derived Components to Value-added Chemicals	Ankit	Kumar	Karlsruhe Institute of Technology
463	Glycerol dehydration to acrolein on WO3/TiO2: catalyst and process optimization	Martina	Battisti	RWTH Aachen University
470	Catalytic oxidation of 5-Hydroxymethylfurfural to 2,5-Diformylfuran using MOF-808(Cu) under mild conditions	Fabio	Raspante	University of Liverpool
495	Acidity requirement and reaction pathway for the dehydration of 1,3 butanediol to butadiene over ZSM-22	Loïc	Eloi	Ghent University
507	Decorated Pt1-phosphomolybdate on In2O3 for Photocatalytic Methane Hydroxylation with Nearly Total Selectivity	Geqian	Fang	Université de Lille
529	Morphology-controlled TiO2 nanocatalyst for the continuous aqueous-phase production of lactic acid from trioses	Marco	Fraga	INT - Instituto Nacional de Tecnologia
1301	On the deactivation of Amberlyst-15 in the etherification reaction of glycerol with ethanol	Giuseppe	Bonura	CNR-ITAE

Poster ID	Monday September 1 Special session 6: Electrification of catalytic reactions and reactors			Aurora, Clarion
116	Spherical Polymer-Based Carbon as Fixed-Bed Electrodes for Electrosynthesis Flow Cells	Jan	Gläsel	FAU Erlangen-
151	Tuning the Catalysis of Inorganic Materials by Disentangling their Entangled Interfacial Chemistry	Murielle	Delley	University of Basel
474	Modelling and Analysis of Electrothermal Fluidized Bed Reactors: A Case Study on COS Decomposition via direct resistive heating	Klaus	Jacobs	University of Ghent
487	Temperature gradients during microwave-assisted biogas reforming	Yves	Schuurman	Cnrs
490	eREACT: Electrified reforming at scale in synthesis gas manufacturing	Leon R.S.	Rosseau	Topsoe A/S
558	Development of electrified reformer for low-carbon syngas production - Catalyst coating	Jason	Sun	CSIRO
665	Upscaling a method for electro-reformer catalyst production	Christian	Hulteberg	Lund University

712	Development of Catalyst Bed Concepts for Induction Heating for Emission Control	Asad	Asadli	Karlsruhe Institute of Technology
796	Low-Temperature Electrodeless Reactions in a Microwave reactor	Elena	Vicente	Instituto de Tecnología Química
1064	Intensification of Endothermic Catalytic Processes with a Novel Electrified Reactor based on Radial Current and Flow	Luca	Cozzarolo	Politecnico di Milano
1130	Induction Heated 3D Printed Structured Reactors for Syngas Production.	Mohammad Raihan	Arfin	Monash University
1234	Electrified reactor design for sustainable methane reforming: Converting greenhouse gases into syngas	Ashwin Kishor	Hatwar	Monash University
1452	Microkinetic Model of Electrochemical Urea Synthesis via Carbon Dioxide and Nitrate co-Reduction	Luis F.	Leon-Fernandez	University of Antwerp
1490	Electrified Catalysts: Cu-Ni-W Alloy on Graphite-Coated Alumina Foam for Sustainable Energy Applications	Pietro	Colucci	Enea

Poster ID	Monday September 1 Advancements in catalysis			Aurora, Clarion
31	Investigations of vanadium doped Co3O4(111)/Au(111) and mixed VxCo3-xO4(111) ultrathin films	Jan	Smyczek	Kiel University
37	Heterogeneous Catalysts for Hydrogen Loading and Release of the LOHC System Benzyltoluene/Perhydro Benzyltoluene	Barbara	Bong	Forschungszentrum Jülich GmbH -
61	Investigation of hybrid ternary low-Pt electrocatalysts for oxygen reduction reaction: influence of ceria-based additives	Aldona	Kostuch	University of Warsaw
75	The Rise of Single Atom Catalysts: Synthesis and Catalytic Applications	Manoj Bhanudas	Gawande	Inst. of Chemical Technology Mumbai
84	Good practices for pulse chemisorption	Benjamin	Le Monnier	Anton Paar
90	In situ quantitative single-molecule study of site-specific photocatalytic activity and dynamics on ultrathin g-C3N4 nanosheets	Zhengyang	Zhang	Nanyang Technological University
108	MANTRA – Data on innovative materials for sustainability and transfer	Lilla	Nikl	DECHEMA e.V.
118	The magic of small metallic impurities: Less than 7 ppm of lead or bismuth drive the electrochemical reductive amination of acetone	Justus	Kümper	RWTH Aachen University
129	Secondary Coordination Effects on Ruthenium-Based Molecular Water Oxidation Catalysts	Sreeja	Dasgupta	Indian Institute of Technology Kharagpur
176	Redispersion of supported RuO2 by reduction with organic compounds	Nuno	Batalha	IRCELYON / CNRS
185	Hydrogen Spillover on a Non-reducible Metal Oxide Composed of Earth-abundant Elements and its Catalysis	Kazuki	Shun	Osaka University
186	Computational Insights into Complex Catalytic Processes	Miroslav	Rubes	Czech Academy of Sciences
189	Effect of Crystal Morphology on Photo-induced Peroxide Formation over Cubic Sm2O3	Weizheng	Weng	Xiamen University
273	On-site reduction of Au3+ ions and enhanced confinement effect of Au particles using novel porous support with abundant hydrosilyl groups	Takumi	Masuda	Waseda University
282/ 1582	An Electrochemical Method for Predicting and Optimising Cooperative Redox Enhancement in Bimetallic Thermocatalysis	James	Spragg	Cardiff University
288	Accurate high-coverage surface modeling with annealing technology	Hiroshi	Sampei	Waseda University
336	Electric Field-Controlled CO2 Capture on Doped-CeO2	Koki	Saegusa	Waseda Univ.
344	Advantages of microreactor technology for the investigation of kinetic parameters of catalyzed reactions	Pascal	Desel	University of Applied Sciences Niederrhein
359	Combined impact of pH, catalyst, and strongly non-ideal solvent mixtures (SNISMs) towards boosting acid-catalysed reactions	Lasse	Prawitt	Universität Hamburg

436	Nanofiltration for Cataylst Separation and Downstream Processing	Udo	Kragl	University of Rostock
440	Magnetometry for operando characterisation of catalysts	Michael	Claeys	University of Cape Town
445	Synthesis and Catalytic evaluation of Silica Supported Pt nanoparticles for Transfer Hydrogenation from perhydro-dibenzyltoluene to acetone	Smitkriti	.	CP2M
476	A New Ball Milling Synthesis towards Covalent Triazine Frameworks	Leonie Sophie	Häser	RWTH Aachen University
493	Visualization of Hydrogenated N_2 on LaN-based Catalysts for NH_3 Synthesis	Guanghan	Zhu	University College London
502	Post-Synthetic Modification of ZIF-8: A Strategy for Gold-Selective Adsorption and Catalysis	Javier	Narciso	University of Alicante
522	Resolving the Nanostructure of Carbon Nitride-Based Single Atom Catalysts	Nicolò	Allasia	Politecnico di Milano
527	Direct oxidation of cyclohexane to adipic acid on Fe-Co based catalysts	Erisa	Fero	Università degli Studi di Milano
528	Rational design of novel catalysts for DME synthesis	Narmin	Jabbarli	Università degli Studi di Milano
538	Electrochemical potential of boron-doped black glasses	Klaudia	Łyszczarz	University of Krakow
563	Stabilizing Hydrolytically Labile Germanosilicate Zeolite UWY for Catalytic Applications	Emad	Shamma	Charles University
586	In-situ QXAFS study on H2 and CO adsorption on Pt in solid [PtAu8(PPh3)8]-H[PMo12O40]	Taishi	Suzuki	Tokyo Metropolitan University
620	Opportunities for catalysis research through the application of semiconductor manufacturing techniques	Lukas	Thum	Helmholtz-Zentrum Berlin für Materialien und Energie
638	High Throughput meets Chlorine Chemistry	Christoph	Hauber	hte Gmbh
661	Enzymatic Synthesis of Medium- and Macrolactones	Corinna	Kawaus	University of Graz
669	Second-Generation Dendritic ZSM-5 Zeolites: Efficient and Versatile Catalysts for Green Chemistry and Clean Energy Applications	María del Mar	Alonso-Doncel	IMDEA Energy Institute
676	What is hidden between amide-type solvents and acyl chlorides? Let's unveil it by NMR	Paolo	Freisa	University of Turin
696	Pre-Treatments for Enhanced 2-Propanol Decomposition on Co3O4	Hauke	Scheele	Kiel University
700	Synthesis of Cu2O decorated ZnCr layered double hydroxide for enhanced photocatalytic degradation of methyl orange dye and 4-nitrotoluene under visible light	Sukanya	Guha Roy	IIT Kharagpur
713	Theoretical investigation of the reactivity of Lewis acid sites in zeolites for MTO reactions	Annika E.	Enss	Karlsruhe Institute of Technology
717	Air Purification: Photocatalytic Filters for Pollutant Degradation	Isabel Maria	Oliveira	INL
729	Tuning Electronic Environment of a MOF Derived CoN4@C for ORR	David	Villalgordo Hernández	University of Alicante
732	Generating CoN4 Sites in a ZIF-Derived Carbon for Efficient Nitroarene Hydrogenation Reaction	David	Villalgordo Hernández	University of Alicante
731	Controlling the Mechanism of Nucleation and Growth Enables Synthesis of UiO-66 Metal–Organic Framework with Desired Macroscopic Properties	Vitaly	Sushkevich	Paul Scherrer Institute
822	Monooxygenase mimicry for C–H oxidation: success and challenges of pMMO-inspired Cu catalysts in mechanism, activity, and stability	Mouham-chairmad	Abu Rasheed	University of Oslo
830	Porous capsules with liquid core prepared by Pickering emulsion: Understanding of diffusional phenomena for catalyst implementation.	Rémi	Duclos	IFPEN
845	A novel approach to the production of periodic open cellular structures (POCS) by additive manufacturing for catalytic applications	Riccardo	Balzarotti	SUPSI
859	Rh-Based Pre-Reformer Catalyst: An efficient and Adaptable Solution for SOFC Systems	Pragati	Joshi	Heraeus

864	Structure-Activity Relationship of Transition Metal Carbide Catalyst for Hydrodeoxygenation Reaction	Guanna	Li	Wageningen University
867	Catalytic performance of bare La2O3 in non-oxidative propane dehydrogenation: Active sites and effect of hydrogen co-feeding	Tatiana	Otrosh-chenko	Leibniz-Institut für Katalyse e. V.
878	Electrochemical-Assisted Synthesis of Monometallic Cu+ Active Species Incorporated in Hierarchical Silicalite-1 for Ethanol Dehydrogenation	Wachira	Jeevapong	Mr
935	Parameter testing of Pt/C and PtNi/C batch synthesis for the transfer to a continuous production	Marcel	Müller	Fraunhofer Institute for Chemical Technology ICT
946	ACTIVATED BORANE – NOVEL HETEREGENEOUS LEWIS ACID CATALYST	Jan	Demel	Czech Academy of Sciences
947	Kinetic modeling and continuous catalytic hydrogenation of acetophenone in a jet loop reactor	Pelin	Caglayan	Technical University of Denmark
983	Metal Phosphide Nanoparticles: From Synthesis to Catalysis	Hooman	Ghazi Zahedi	Max Planck Institute
989	Soft X-ray Operando Spectroscopy Platform at MAX IV Laboratory	Alexander	Klyushin	Max IV Laboratory
998	Frustrated Lewis pairs: A DFT perspective on degrees of frustration	Ole	Swang	SINTEF
1018	Organocatalytic Regioselective Hydroboration of Alkynoate Esters	Paweł	Huninik	Adam Mickiewicz University
1023	Enhancing Z-scheme {001}/{110} junction in BiOCl with {110} surface oxygen vacancies for photocatalytic degradation of Rhodamine B and tetracycline	Theeranun	Siritanon	Suranaree University of Technology
1104	Supervised learning for activity prediction based on TPR curves of Fischer-Tropsch catalysts	Sylvie	Maury	IFP Energies Nouvelles
1132	Effect of Co introduction into MnOx nanocluster catalyst on oxidation reaction	Nobuyuki	Ichikuni	Chiba University
1138	Acid-catalyzed aldol condensation over hexagonally ordered mesoporous AlSBA-15	Rexie	Selvarajan Rani	University of Newcastle, Australia
1144	Comparison of acidity characterization methods of zeolite catalysts	Ellen	Järvinen	Aalto University
1148	Hybrid Materials Based on Metal-Organic Frameworks and Graphene Oxide as Electrocatalysts for Oxygen Reduction and Hydrogen Oxidation in Alkaline Environment	Georgios	Bampos	University of Patras
1174	Design of Innovative Sustainable Porous Silica Materials as a Versatile Platform for High-Performance Adsorbents and Catalysts	Ivalina	Trendafilova	Bulgarian Academy of Sciences
1176	Advanced Temperature-Programmed Desorption: A New Method for Characterizing Nitrogen Dopants in Carbon and Oxide Catalysts	Takeharu	Yoshii	Tohoku University
1187	From Laboratory to Pilot Scale: Hydrogenation of Acetone to Isopropanol Using a Fixed Bed Raney-type Nickel Catalyst	Hedvika	Bayarri	RANIDO, s.r.o.
1205	Operando end-station for heterogeneous catalyst research at the Polish synchrotron Solaris	Michał	Śliwa	Jagiellonian University
1228	Development of high-performance ZSM-5 Catalyst for Gasoline Production from Methanol	Daniela	Mauci	RANIDO s.r.o.
1244	Investigating the Origins of Zeolite Fluorescence	Jun Xian	Yap	University College London
1284	Selective Oxidation of Liquid Organic Hydrogen Carrier An Investigation of different Catalysts	Fabian	Siegert	Forschungszentrum Juelich
1298	Morphological Degradation in Solvent-Free Synthesis of Mixed-phase Zeolite	Debkrish-na	Dey	IIT DELHI
1319	Empowering Catalysis Research Using Advanced Digital Tools	Preston	Rodrigues	University Of Stuttgart
1320	Spectroscopy enabled process automation of a continuous flow set-up with an additively manufactured reactor	Vera	Truttmann	Karlsruhe Institute of Technology
1331	Analysis of an understudied family of mono-copper LPMOs reveals unique substrate specificity and redox properties	Tom	Emrich-Mills	Norwegian University of Life Sciences

1349	Synthesis and Catalytic Applications of Metal Oxocluster-based Hybrid Nanoparticles for Oxidation Reactions	Silvia	Gross	Karlsruhe Institute of Technology / University of Padova
1478	Influence of heating mode in the synthesis of heterogeneous bismuth molybdate-based catalysts	Silvia	Gross	Karlsruhe Institute of Technology / University of Padova
1351	Catalytic 2-propanol oxidation on CoFe2O4: a mechanistic surface study via ME-DRIFTS-PSD	Pierfrances co	Ticali	Christian-Albrechts-Universität zu Kiel
1423	The Effects of Bismuth Addition on the Structure and Catalytic Behavior of Supported Cobalt Catalysts in Propane Dehydrogenation	Almira	Çaldıklıoğlu	Middle East Technical University
1443	Catalytic Hydrogen Peroxide Decomposition Monitoring by Operando NMR Spectroscopy	Metin Alp	Yurtseven	Middle East Technical University
1485	Critical assessment of exsolution process in Cu-doped SrTiO3 by a combined spectroscopic approach.	Massimil-iano	D'Arienzo	University of Milano Bicocca
1486	Catalytic hydroboration of ketones using Mn(CO)5Br and Mn2(CO)10	Aleksandra	Szymańska	Adam Mickiewicz University
1516	New routes for low valent Ti(III), Ti(II) and W(IV) synthesis using silylated organic reductants : Combined experimental and theoretical approach	Lionel	Magna	IFPEN
1520	An operando microreactor for combined X-ray Absorption and vibrational spectroscopy – Oxygen storage capacity measurements as an insight into the WGS / RWGS mechanism.	Ruby	Morris	University of Glasgow
1530	Spin-accelerated oxygen electrocatalysis triggered by Internal fields	Yanglong	Hou	Sun Yat-sen University
1531	Electron Paramagnetic Resonance Spectroscopy in Catalysis: Setup for In Situ Studies and Characterization of Catalysts	Friedrich	Stemmler	University Of Stuttgart
1532	Mechanistic EPR investigations on a cooperative Cu(II) catalyst for asymmetric 1,4-Addition reactions	Alexander	Allgaier	University of Stuttgart
1533	Effect of temperature on g-C3N4 photocatalytic activity and NMR surface relaxation	Jiaye	Shao	University of Manchester
1539	Development of Cu-Zn-Al LDH Catalyst for the One-Step Water-Gas Shift Reaction: Structure and Activity Validation from Laboratory to Industrial Batches	Tsvetomila	Parvanova-Mancheva	Bulgarian Academy of Sciences
1541	Evaluating the catalytic activity of Pd embedded in UiO-66 and UiO-67 for cross-coupling reactions	Naiara	Zapirain	Universitetet i Oslo
1543	Single-Atom Platinum Catalysts Drive Regioselective and Chemoselective Functionalization of Sterically Hindered Substrates	priti	sharma	Jerzy Haber Institute of Catalysis and Surface Chemistry
1544	Carbon vacancy modified g-C3N4 hollow tubes-iron oxide composite for photocatalytic application	Jeyalakshmi	Velu	University of Chemistry and Technology Prague
1546	Ruthenium (II) Complexes Containing an N, N-donor Ligands as Active Catalysts for the N-alkylation of Amides with Primary Alcohols via the Borrowing Hydrogen Method	Tapas	Mahata	Indian Institute of Technology Kharagpur
1553	Engineering inverse cobalt catalysts for efficient ammonia synthesis	Weronika	Bulejak	Warsaw University of Technology
1555	Transformation of Bio-based C2 Molecules into Specialty Chemicals	Jianxia	Zheng	E2p2l
1557	Catalytic Advanced Radiator for Emission reduction: the AirCARE project at Politecnico di Torino	Enrico	Sartoretti	Politecnico di Torino
1581	Unraveling the silver-catalyzed methanol to formaldehyde reaction	Tina	Bergh	Norwegian University of Science and Technology
1583	A DoE screening of perovskites for chemical looping ammonia oxidation	Marcin Krzysztof	Makosa-Szczygiel	NTNU

Tuesday September 2, 17:30 – 19:30

Poster ID	Tuesday September 2	Bulk chemicals from fossil and renewable feedstock		P1, Pirsenteret
35	Phosphotungstic Acid Catalyzed Hydrolysis and Retro-aldolization of Xylan to Xylose or Lactic Acid – Investigation of Solvent Effects	Katharina	Beine	Univeristy of Siegen
53	How Local Occupancy in Zeolite Pores Governs the Activity, Selectivity and Stability of Methanol-to-Hydrocarbons (MTH) Catalysts	Nikolay	Kosinov	Eindhoven University of Technology
107	Steam Reforming of Ethanol over Al-doped ZnO	Astrid Sophie	Müller	Ruhr University Bochum
537	Investigating the stability of heterogenous catalyst in the continuous dehydration of aqueous formic acid	Emanuel	Hoffmann	Institute Of Chemical Reaction Engineering Fau Erlangen
539	Ethylene-to-Butadiene: Novel Palladium-based catalyst shifting away from Wacker oxidation	Harry	Poels-Ryckeboer	KU Leuven
549	Partially substituted H3PW12O40 with NH4+ as a catalyst for the gas phase methanolation of toluene into xylenes	Eric	Gaigneaux	Université Catholique de Louvain
560	Supported Keggin heteropolyanions as deoxydehydration catalysts	Eric	Gaigneaux	Université Catholique de Louvain
593	Au/CePO4 for selective glucose oxidation with H2O2: the effect of preparation method on catalyst activity	Joanna	Wisniewska	Adam Mickiewicz University
599	Amination of Bio-based Platform Chemicals with Ru- and Co-based Catalysts	Phillip	Palenicek	TU Darmstadt
601	Sustainable Synthesis of Glycerol Carbonate Using Agro-Waste-Derived Catalysts	Kandis	Sudsakorn	Kasetsart University
623	Selective Hydrogenolysis of Glucose with Supported Bifunctional Catalysts	Aileen	Hübner	TU Darmstadt
633	Influence of Reaction Parameters on the Activity of Supported Iron Nanoparticles for the selective Acetylene Hydrogenation	Hannah	Lamers	TU Darmstadt
677	Valorization of Bio-Derived Levulinic Acid via Hydrogenation to γ-Valerolactone using Recovered Noble Metals	Stefany	Chamorro	Université de Lille
690	Kinetic and Mechanistic Insights into the Oxidative Dehydrogenation of Ethanol on Various Iron-Molybdenum Oxide Catalysts	Danny	Stark	TU Darmstadt
694	Advanced aromatic platforms from lignocellulose for high-value materials production.	Sanja	Vucetic	Åbo Akademi University
718	Unsupported molybdenum carbides enabling high yields of alkylphenols in depolymerisation of lignin	Sari	Rautiainen	VTT Technical Research Centre of Finland Ltd
1257	Tandem upgrading of lignocellulosic pyrolysis bio-oils via a sequence of CSTR-fixed bed hydroprocessing: catalyst and process development	Sari	Rautiainen	VTT Technical Research Centre of Finland Ltd
747	Elucidating the dynamic behaviour of open metal sites in Fe-MOFs	Leonardo	Spuri	UPV/EHU, UniTo
775	Scalable Production of High-Surface-Area Alpha Alumina as an Efficient Catalyst	Özgül	Agbaba	Max Planck Institute
803	Base-free liquid Phase Oxidation of 5-Hydroxy- and 5-Methoxymethylfurfural over Porous Polymer derived Ruthenium Catalysts	Niklas	Kruse	TU Darmstadt
814	Using qNMR as a method of analysis for products of liquid-phase catalysis	Rafael	Cortez Sgroi Pupo	University of Oslo
870	Catalytic Production of succinic acid: Integrating furfural oxidation and biomass fractionation using gamma-valerolactone (GVL)	Maria Jesus	Soto Alvarez	Instituto de Catálisis y Petroleoquímica
893	Sepiolite clays: new and abundant catalysts for isopropanol dehydration to propylene	Tien Hoang	Nguyen	IRCELYON
952	Sn-Silica catalyzes lactose to lactic acid in a fluidized bed reactor	Paula Andrea	Rivera Quintero	Polytechnique Montréal

1006	Boosting Biomass Valorization: High-Yield 1,5-Pentanediol Synthesis via Oxygen-Engineered Metal Oxides	Asier	Barredo	University of The Basque Country
1013	Environmentally benign HMF over NbOPO4 supported TiO2	Jyri-Pekka	Mikkola	Umeå University & Åbo Akademi University
1045	Cu/SiO2 – the importance of synthesis procedure on the formation of Cu active species	Jaroslav	Aubrecht	University of Chemistry and Technology Prague
1122	Novel Routes to Low Temperature Ammonia Synthesis: Metal Hydrides	Selin	Ernam	Technical University of Denmark
1198	Catalytic hydropyrolysis of low-density polyethylene in fluidized bed with sand, zeolite and hydrocracking catalysts	Jie	Jian	Technical University of Denmark
1293	Zirconia-Based Catalysts in Waste Valorisation Applications	Dave	Scapens	Luxfer MEL Technologies
1314	Recovery of valuable bio-molecules and production of bio-fuels from the valorization of wet agroindustrial wastes	Chiara	Corrente	CNR-ITAE
1364	Glycerol conversion to BTX aromatics over pristine and Zn-modified H-ZSM-5 catalysts	Jorge A.	Velasco	Aalto University
1440	Machine learning analysis of crotonaldehyde hydrogenation in liquid phase using ReOx catalysts and formic acid as hydrogen donor	Manuel	Romero-Sáez	Instituto Tecnologico Metropolitano
1497	Catalytic Consequences of Reaction Microenvironment for C-O Scission Reactions and their Thermodynamic Origin	Ya-Huei (Cathy)	Chin	University of Toronto
1507	Enhancing ZSM-5 zeolites selectivity to olefins and aromatics on methanol to hydrocarbons reaction	Iago	Zapelini	São Paulo State University

Poster ID	Tuesday September 2 Gaseous emissions treatment (NOx, CO, CH4, VOC, soot..)			P1, Pirsenteret
40	Modelling the combined HCHO/SCR reaction on V2O5/WO3/TiO2 catalyst in lean gas engine exhaust	Sven	Kureti	Tu Freiberg
120	Accelerating Design High-Efficiency Nitrogen Oxide Electroreduction Catalysts of Transition-Metal Doped phthalocyanine: A DFT and Machine Learning Study	Lixin	Ye	Nanjing University of Science and Technology
181	Sulfur tolerance of Pd-Ceria catalysts for CH4 oxidation through Pr-doping	Samir	Bensaid	Politecnico di Torino
184	Stability Study of a Benzyl Amine Adsorbent for Direct Air Capture by steam assisted TVSA: Aspen Adsorption Simulation	Bijan	Barghi	DACMa GmbH
213	Odor Adsorption in Zeolites: Theoretical and Experimental Studies on Natural Clinoptilolite	Izabela	Czekaj	Cracow University of Technology
270	Synthesis and Characterization of Additively Manufactured Iron Beta Zeolites for Methane Oxidation	Merle	Blum	Technical University of Munich
271	Iron-Containing Beta Zeolites for Methane Oxidation and SCR: Influence of Synthesis Methods and Dual-Emission Control Potential	Anne	Niederdränk	Technical University of Munich
287	NOx-storage-reduction process in an electric field at low temperatures	Yuki	Inoda	Waseda University
295	Investigation of additive manufactured catalysts for the methane oxidation reaction	Sebastian	Wilmes	Technical University of Munich
306	VOCs removal with the valorization of the produced CO2: Hybrid catalysis to solve two issues at single blow	Roberto	Fiorenza	University of Catania
310	Kinetics of site transformations in Pd/AEI passive NOx adsorber	Richard	Knopp	University of Chemistry and Technology, Prague
1451	Interactions of propene with a Cu/SSZ-13 catalyst for selective catalytic reduction of NOx	Richard	Knopp	University of Chemistry and Technology, Prague

395	Mechanistic insights into Direct Air Capture of CO2 with carbon supported K2CO3 sorbents using In Situ XRD	Harry	Bitter	Wageningen University
435	Waste derived activated carbon for CO2 capture and energy storage applications	Maria	Erans	University of Valencia
446	NH3-SCR at 600 °C – Suppression of NH3 Oxidation and By-Product Formation using Tailored CeO2/WO3/TiO2 Catalysts	Jan-Hendrik	Honerkamp	Hochschule Niederrhein
459	Activation of Methane over Aluminosilicate Zeolites	Natnicha	Yotpanya	Institute of Science Tokyo
1178	Oxidative methane reforming over metal-free ZSM-5 zeolite	Natnicha	Yotpanya	Institute of Science Tokyo
480	Efficient Utilization of H_2-DeNOx for NOx Reduction in Coffee Roasting Applications	Andreas	Roppertz	University of Applied Science Niederrhein
1449	Mechanistic Insights into $Pt/CeO_2/TiO_2$ Catalysts for Low-Temperature Oxidation of CO and VOC in Small-Scale Combustion Applications	Andreas	Roppertz	University of Applied Science Niederrhein
530	Effect of Pressure on the Performance and Stability of Fe-Zeolite Catalysts for NH3-SCR of N2O and NOx in Green Shipping	Anders	Riisager	Technical University of Denmark
587	Development of perovskite-based catalyst for the elimination of pollutants such as VOC, CO and PM emitted by wood stoves	Louis	Garin	UNamur - Stûv S.A.
591	Synergistic Approaches in Non-Thermal Plasma Catalysis for Greenhouse Gas Mitigation	Juliane	Titus-Emse	enaDyne GmbH
611	Industrial Implementation of Catalytic Oxidation for Fugitive Lean Methane Streams	Michael	Stockenhuber	University of Technology Sydney
624	Revealing the Impact of SO_2 on the $DeNO_x$ Properties of $K/Co_3MgMnAlOx$	Tereza	Bílková	Institute of Environmental Technology, CEET, VSB-TUO
632	Tuning of Au-TiO2 Interface for Enhanced Catalytic CO oxidation at Low Temperature	Bushra	Mughal	Cardiff University
673	Using forced dynamic reactor operation to increase the activity and selectivity of Pd-based NH3 oxidation catalysts	Thomas	Häber	Karlsruhe Institute Of Technology
862	Understanding Lanthanide doping in a MnFeOx catalyst for NOx reduction with NH3	Cristina Querios	Da Silva	King Abdullah Univ.of Sci.and Technology
887	NO control via H2-selective catalytic reduction (H2-SCR) on bi-metallic Pd-Pt/CeO2-ZrO2 Catalysts	Baqer	Aljaman	King Abdullah Univ.of Sci.and Technology
888	Catalytic removal of air pollutants on redox metal-doped potassium glasses	Piotr	Legutko	Jagiellonian University
924	Effect of copper concentration on the characteristics of potassium silicate glasses tailored for catalytic purposes	Piotr	Legutko	Jagiellonian University
979	Methanol oxidation over doped transition metal catalysts	Elpida	Zeza	Centre for Research & Technology, Hellas
1079	The Effects of Morphology and Composition of Co3-xMnxO4 Spinel Catalysts on 2-Propanol Oxidation	Saskia	Arnold	Kiel University
1096	Carbon monoliths manufactured using 3D printing for catalytic applications	Iván	Martínez-López	University of Alicante
1115	In-situ studies on methanol oxidative dehydrogenation	Tiina	Laitinen	University of Oulu
1152	Development of Monolithic Catalysts for Domestic Stationary Combustion Sources	Martin	Jakubec	Ranido
1199	Enhancing low-temperature catalytic oxidation of indoor pollutants through copper-manganese oxides	Marco	Piumetti	Politecnico di Torino
1225	Catalytic Combustion of Hydrogen at Sub-Zero Temperatures	Anders	Ersson	Scania CV AB
1239	Tailoring CeO2/CuOx inverse catalysts for the CO-PROX reaction	Katia de Jesús	Gómez-Villegas	Universidad de Alicante

1299	Selective Catalytic Reduction of NOx from Hydrogen Internal Combustion Engines	Savitha	Srinivasan	Chalmers University of Technology
1347	Environmental impacts of hydrothermal synthesis of ceria nanoparticles as support for catalyst preparation	Silvia	Gross	Karlsruhe Institute of Technology / University of Padova
1493	A rationally based wet-chemistry toolbox to tailor-made inorganic heterogeneous catalysts and supports: Navigating the experimental parameters landscape	Silvia	Gross	Karlsruhe Institute of Technology / University of Padova
1359	Redox behavior of Fe species in zeolites used in environmentally important processes monitored by in-situ Mössbauer spectroscopy	Agnieszka	Kornas	Czech Academy of Sciences
1375	Alloying and Segregation Effects in Supported Palladium-Silver Alloy Catalysts During Carbon Monoxide and Methane Oxidation	Willow	Dew	NTNU
1382	Experimental and modelling analysis of innovative catalytic substrates for DeNOx Aftertreatment systems in Zero-Impact power units fueled with Neutral CO2 Green H2	Federico Sascha	Franchi	Politecnico Di Milano
1396	Mass-Selected Pt Clusters Deposited on CeO2 Thin-Films: A Model Catalyst Study Using a Dedicated UHV Reactor	Ramin	Shadkam	Karlsruhe Institute of Technology
1413	Minimizing secondary emissions during NH3-SCR of NOx	Simon	Barth	Karlsruhe Institute of Technology
1433	Photocatalytic CO2 Reduction Using IL/MOF Composite Photocatalysts	Laura	Esteves	Instituto Superior Técnico
1491	Hydrodeoxygenation of Palmitic Acid over Ni-based bifunctional catalysts	Laura	Esteves	Instituto Superior Técnico, Universidade de Lisboa
1444	Insights on NH3-SCR redox kinetics by operando UV spectroscopy	Chiara	Negri	Politecnico di Milano
1469	Electrospinning: An Advanced Method for Synthesizing Heterogeneous Catalysts for Treating Gaseous Emissions	Karel	Soukup	Czech Academy of Sciences

Poster ID	Tuesday September 2	Special session 2: Intermetallic compounds in catalysis		P1, Pirsenteret
626	High-Throughput Combinatorial Screening of Alloy Libraries by Magnetron Sputtering	Lukas	Thum	Helmholtz-Zentrum Berlin für Materialien und Energie
792	Structural Resolution of Various Active Species in GaPt Supported Liquid Metal Catalysts for Dehydrogenation Reactions	Tzung-En	Hsieh	Helmholtz-zentrum Berlin Für Materialien Und Energie
1182	Tuning nanoparticle proximity and size: Controlling the agglomeration narrative of metal/TiO2 nanosheet catalytic systems.	Anusha	Jain	IIT DELHI
1369	Synthesis and characterizations of CeO2/HEO for CO oxidation	Isabel	Serrano	Universitat Politècnica de Catalunya

Poster ID	Tuesday September 2	Gas to liquids technology (based on hydrogen, natural gas, biogas, coal and biomass gasification)		P2, Pirsenteret
68	Influence of pressure on the conversion of CH_4 and CO_2 to acetic acid using natural clay catalyst supported with ZnO and CeO2.	Gabriel	Lopes	USP
136	Shaping and Stabilizing the Active Phase: The Role of Carbon Surface Defects in Carbon-Supported Co Fischer-Tropsch Catalysts	Felix	Herold	Norwegian University of Science and Technology
235	CO2 direct FT synthesis over cobalt catalyst supported on rare earth oxide	Shigeo	Satokawa	Seikei University

312	Integrated DFT-Monte Carlo approach to modelling Co nanoparticles	Enrico	Sireci	Karlsruher Institut für Technologie
345	Mg-rich malachite as a catalyst precursor for Cu/MgO applied in the CO hydrogenation to methanol	Bjarne	Taetz	Kiel University
346	CO2 to aromatic hydrocarbons: Effect of magnetic field and iron oxide/ZSM-5 zeolite catalysts.	Manop	Charoenchaitrakool	Kasetsart University
364	Examining the effect of zirconium doping in LaNiO3 perovskites on their performance as catalysts for dry methane reforming	Juan	Alcañiz-Monge	Alicante University
369	Unusual redox dynamics of Nb in the perovskite LaNbxNi1-XO3 and its impact on the dry catalytic reforming of methane.	Gema	Gil-Muñoz	Universidad de Alicante
370	Exploring the role of zeolites as nickel supports in dry methane reforming.	Gema	Gil-Muñoz	Universidad de Alicante
375	CO pulse enabled time resolved in-situ investigation of the chemical structure of Co(0001) FTS model catalysts under reaction conditions	Pinar	Sakoglu	Helmholtz Zentrum Berlin, HZB
506	Developing a model catalyst system for investigating metal-support-interaction in Fischer-Trosch synthesis	Tianli	Zhong	Helmholtz Center Berlin
575	Effects of Types of Calcination Gases on Co/ZSM-5 for Selective Production of Liquid Fuels by Fischer-Tropsch Synthesis	Seon Ju	Park	Korea Research Institute of Chemical Technology
608	Tailoring Dual-Cycle Mechanisms in MTH Processes	Xuan	Gong	King Abdullah Univ.of Sci.and Technology
656	Activation of small molecules over low valent vanadium species stabilized in ferrierite zeolite	Mariia	Lemishka	Czech Academy of Sciences
698	Secondary Promoting Effect of Gallium in Cu/ZnO Methanol Catalysts	Peter	Mikosch	Kiel University
794	Preparation of Fe, Co and Ni single and bimetallic catalysts supported on Sm-doped $BaCeO_3$ and their activity in ammonia synthesis	Hubert	Ronduda	Warsaw University of Technology
928	MOF-808 as effective support for Cu-based catalyst for CO_2 Hydrogenation to Methanol	Abinavnataraj	Ramakrishnan	University of Stavanger
945	Effect of the synthesis method of iron-neodymium catalysts on the properties and activity in ammonia synthesis	Małgorzata	Lemańska	Warsaw University of Technology
1030	FeMOFs: Capillary effect for sustainable light alkane oxidation	Morena	Chiariotti	University of the Basque Country
1151	Cobalt supported on highly mesoporous USY zeolites as bifunctional catalysts for the one-step conversion of syngas to liquid fuels	Agustin	Martinez	Instituto de Tecnologia Quimica
1190	Ni/Y2O3-Al2O3 catalysts active for biogas upgrading to syngas by combined steam dry reforming	Mihaela Diana	Lazar	INCDTIM Cluj Napoca
1287	3D-printed catalyst supports for plasma-assisted ammonia decomposition	Weronika	Bulejak	Warsaw University of Technology
1335	Influence of Mn oxide as a functional promoter in CuO-ZnO/ZrO2 catalyst formulation for CO2 hydrogenation to methanol	Giuseppe	Bonura	CNR-ITAE
1392	X-ray Raman and Emission Studies of Coking on Metal Modified Zeolites during Catalytic Fast Pyrolysis	Luke	Higgins	Diamond Light Source Ltd.
1408	Direct CO2 hydrogenation to liquid fuels on a Fe-Zn-Cu-K catalyst	Beda	Rolandi	Politecnico di Milano

Poster ID	Tuesday September 2 Refinery catalysis (oil and biomass)			P2, Pirsenteret
127	One-pot epimerization of 1,4-anhydroerythritol via dehydrogenation and subsequent hydrogenation over supported Ru-Ir catalyst	Kei	Sato	Tohoku university
188	Developing Zeolite-Based Catalysts for Sustainable Aviation Fuel: Hydrocracking Oleic Acid Using Ru and Ni Metals	Nikita	Sarkov	Abo Akademi University
216	The Synergy of Alloyed Pd and Ni Over H-NbOx: Enhancing Hydrogenation of Lignin Derivatives and Lignin Bio-Oil	Ganesh	More	Material Envi-Lab VSB-TUO Ostrava

237	Catalytic hydrodeoxygenation of biomass pyrolysis oil model compounds in a continuous slurry reactor	Rui	Pedro Da Cruz	Technical University of Denmark
246	Catalytic Stabilization of Fast Pyrolysis Bio-Oil: A Comparative Study of Ni/Al2O3 and Ni-Mo-S/Al2O3	Amalie Paarup	Krebs	Technical University of Denmark
250	Oxidative Organosolv Fractionation of Lignocellulosic Biomass Assisted by Solid Catalysis and Biochemical Sugars Conversion	Stamatia	Karakoulia	Center for Research and Technology-Hellas
253	Metal(IV)-doped silica nanotubes as catalysts for the efficient conversion of ethyl levulinate to γ-valerolactone: unlocking the acidity-reactivity correlation	Martina	Saitta	Université de Namur
258	Conversion of Aliphatic Hydrocarbons to Aromatics Using HZSM-5 Zeolite Catalysts	Pavel	Lestinsky	Technical University of Ostrava
394	High Pressure Ring-Opening of Decalin on Supported NiWMo Sulfide Catalysts	Wenshu	Wang	Technical University of Munich
438	The Electro-Oxidation of β-O-4 Model Compounds monitored in a Chamber-Separated Cell using In Situ ATR-IR Spectroscopy	Sibylle	Schwartmann	Utrecht University
462	Tuning Performance of Ni–Mo Catalysts for the HDO of Lignin Oils	Christian	Hulteberg	Lund University
552	Optimized Catalytic Properties of Co Supported on High-Surface-Area Graphite via Ni or Cu Addition for HDF Hydrogenation	Inmaculada	Rodríguez-Ramos	Instituto de Catálisis y Petroleoquímica, CSIC
580	Oxidative esterification of acetal-protected 5-formylfuran-2-carboxylate over CeO2-supported Au catalysts	Nao	Arai	Hokkaido University
589	Investigating the role of support in the Hydrodeoxygenation of Phenol on supported Pd catalysts: Insights from Microkinetic Modelling	Arghya	Banerjee	IIT ROPAR
594	Continuous production of γ-valerolactone from furfural using optimised catalysts containing Zr and Nb	Anna	Saotta	University of Bologna
616	Role of hydroxyl group on enhancing kinetics of HMF oxidation to FDCA on MnO2 catalysts: A first-principles based microkinetic modelling	Suwit	Suthirakun	Suranaree University of Technology
672	Slurry hydrotreating of solid technical lignins and lignin bio-oils: scale-up and choice of catalyst.	Ole	Reinsdorf	RISE-Research Institutes of Sweden
688	Aqueous Phase Reforming of Maltose: Performance Evaluation of Platinum Catalysts for Value-Added Product Formation	Dhanaji	Naikwadi	TU Delft
693	Pyrolysis Oil Upgrading to Aromatics	Miao	Sun	Saudi Aramco
706	From model compounds to lignin: Selective C-O bond cleavage by Ru nanoparticle size control	Lucía	Camarena Peiró	Instituto de Tecnología Química
715	Aldol Condensation of Cyclopentanone and Furfural on Ce-Based Catalysts for Production of Sustainable Aviation Fuel Precursors	Olha	Yevdokimova	Åbo Akademi University
722	Improving catalyst stability in pyrolysis oil hydrotreating by cofeeding CO- and CO2-containing gases	Salvador	Ordonez	University of Oviedo
734	Catalytic hydrocracking of Fischer-Tropsch wax to produce high-value hydrocarbons	Maria	Goula	University of Western Macedonia
766	Optimization and Performance Evaluation of Ru-Supported Catalysts in the Aromatization of Long-Chain Terminal Alkenes	Matea	Bacic	ITQ-UPV-CSIC
771	Catalytic hydrotreating of waste tire pyrolysis oil	Huy Xuan	Le	Chalmers University of Technology
857	Circular strategies to Exploit Lignin and obtain Catalysts for Biomass-derived Molecules Valorization	Chiara	Bruschetta	University of Turin
913	Investigating the structure-transport relationship of catalytic supports for both liquid and gas phase diffusional systems using NMR cryodiffusometry, hyperpolarised 129Xe MRI and PFG-NMR	Dina	Lofficial	IFP Energies Nouvelles

962	Operando FTIR-ATR analysis on the reductive amination of furfural over Pd/ZrO2-TiO2 catalysts: Effect of acid sites on product selectivity	Daviel	Gómez	Instituto de Tecnología Química
970	Selective deoxygenation of lignin model compounds by bifunctional Ni-supported catalysts	Camila	Abreu Teles	Université de Poitiers
1007	Catalyst deactivation during pyrolysis oil stabilization	Yves	Schuurman	Cnrs
1042	Nickel Promotion Effects in Rhenium Catalysts for Levulinic Acid Hydrogenation in the Aqueous Phase	Néstor	Escalona	Pontificia Universidad Catolica de Chile
1100	Synthesis and incipient impregnation of MCM-22 zeolite for the one pot conversion of furfural to γ-valerolactone.	Yuri	Lima	University of São Paulo
1101	Operando Characterization of MoO3 during the Hydrodeoxygenation of Anisole	Filip	Hallböök	Lund University
1185	Hydroproccessing of stabilized pyrolysis oils at moderate pressure	Nikolaos	Tsakoumis	SINTEF
1253	Catalytic Upgrading of Biomass Pyrolysis Oil to Sustainable Biofuels Applied in Transportation	Tomáš	Ružovič	RANIDO, s.r.o.
1338	Transforming Glycerol into High-Energy Biofuels: Process Optimisation & Techno-Economic Viability	Juan Jose	Villora Pico	Queen's University Belfast
1353	Understanding Mixture Effects in Hydroprocessing of Non-Conventional Feedstocks for Sustainable Aviation Fuel	Pedro	Mendes	Instituto Superior Técnico
1361	The role of hydrogen-deficient species during alkylamine hydrotreating on Pt	Joakim	Kattelus	Aalto University
1365	Catalytic hydrodeoxygenation of bio-oil produeced by pyrolysis of different biomasses	Nehander Carlos	Mendes Felisberto	Instituto Militar de Engenharia
1377	Characterization of zeolite catalysts for aromatization of bio-oil model compounds with operando UV/Vis diffuse reflectance spectroscopy	Ida	Uotila	VTT Technical Research Centre of Finland
1379	Hydrogenation on Molybdenum Sulfide Clusters Encapsulated in Alkali Cation-Exchanged Zeolites	Yunxiang	Sheng	Technical University of Munich
1473	Optimizing the hydrogenation and acidic function of bi-functional HDO catalyst via strong metal-support interaction	Ajaikumar	Samikannu	Umeå University
1499	Dehydrogenation Mechanism of Hydrous Ethanol over Cu/MgOAl_2O_3 for Acetaldehyde Production	Maria Soledad	Chino Mamani	KTH-Royal Institute of Technology
1504	Hydrodeoxygenation of Black Soldier Fly Larvae Lipids	Jon	Selimi	Lund University
1556	Ethylene Oligomerization: Advancing Sustainable Jet Fuel Production Technologies	Ehsan	Mahmoudi	KU Leuven

Poster ID	Tuesday September 2 Liquid or solid purification or waste re-duction			P2, Pirsenteret
20	A One-Stone-Two-Birds Strategy to electrochemical dual degradation	LingZhen	Miao	Nanjing University of Science and Technology
153	Solar-driven degradation of contaminants of emerging concern using tailored photocatalytic materials	Hrvoje	Kusic	University of Zagreb
197	Industrial demand and related solution of sorbent optimization for gasoline desulfurization in fluidized-bed reactor	Bo	Peng	SINOPEC Research Institute of Petroleum Processing Co.,
425	Optimizing g-C3N4 Photocatalysts Through a Statistical Design	Albin	Pintar	National Institute of Chemistry of Slovenia
443	Nanoshaped Plasmonic Materials: Driving Efficiency in Photocatalysis	Albin	Pintar	National Institute of Chemistry of Slovenia
444	Elucidating the effect of nanocube support morphology on the hydrogenolysis of polypropylene over Ni/CeO2 catalysts	Donald	Inns	University of Liverpool

461	Application of Indirect Techniques of Electron Paramagnetic Resonance Spectroscopy in Heterogenous (Photo)Catalysis	Dana	Dvoranová	Slovak University of Technology
730	Preparation of Supported Palladium Catalysts By Liquid-Liquid Extraction of Electronic Waste Leachates	Dmytro	Nikolaievskyi	CNRS / Institut de chimie séparative de Marcoule
772	Magnetite – cheap and efficient photocatalyst for reductive degradation of POPs	Joanna	Kisała	University of Rzeszow
884	Inorganic Sulfide Oxidation by Modified Nb-containing Photocatalysts Using Visible Light	Flávia	Moura	University Federal of Minas Gerais
949	ACTIVATED BORANE AS AN EFFICIENT CATALYST FOR DEFLUORINATION OF ORGANIC HALIDES	Abhishek	Udnoor	Czech Academy of Sciences
1274	Kinetic Optimization of a Model MnCeOx Catalyst in the Wet Air Oxidation of Phenol (CWAO)	Alessandro	Cajumi	Università degli studi di Messina
1370	ZnO synthetized from spent batteries for photocatalytic and antibacterial applications	Leyla	Jaramillo	Tecnológico De Antioquia
1536	Analysis of Hazardous Heavy Elements in Soil and Sediment by WDXRF	Carmen	Kaiser Brügmann	Rigaku Europe SE

Poster ID	Tuesday September 2 Circular processing/applications			P2, Pirsenteret
26	Photo-assisted conversion of nitrates to ammonia	Jacinto	Sá	Uppsala University
78	High yield of light olefins in LDPE cracking over Lewis acidic Sn-Beta	Koji	Miyake	Osaka University
146	Catalytic hydrogenolysis of polyolefins wastes towards hydrocarbons	Antigoni	Margellou	Aristotle University of Thessaloniki
163	Mechanistic Insights in the Oxidative Conversion of Polyethylene Towards Di-carboxylic Acids with O2/NO	Tom	Smak	Utrecht University
164	Photochemical upcycling of bio-based microplastics	Athanasia	Kotsaridou	Aristotle University of Thessaloniki
261	Mechanochemical hydrogenolysis and oxidative depolymerization of polystyrene	Yaru	Gao	Max Planck Institute
406	Partial hydrogenation of sunflower oil over platinum catalysts	Kainaubek	Toshtay	Al-Farabi Kazakh National University
603	Rice husk biochar and activation methods for hydrogenation catalysts	Davide	Baldassin	Ca' Foscari University of Venice
612	From Aircraft Interiors to Chemical Building Blocks and Back: Circular Recycling of Engineering Plastics	Maximilian	Lorberg	RWTH Aachen
800	Catalytic Upcycling of Polyethylene via Hydrogenolysis over Ir-Ru Based Bimetallic Nanoalloys	Furkan	Al	Middle East Technical University
828	Photocatalysts and essential oils to fight microbiological growth	Federica	Menegazzo	Ca' Foscari University of Venice
829	Testing a NiMoP-catalyst for the chlorine removal in plastic pyrolysis oil upgrading via catalytic hydrotreatment	Carola	Jendrzok	KIT
891	Polyolefin hydrocracking: mechanism determination from a polymer approach	Sylvie	Maury	IFP Energies Nouvelles
909	Effect of Antimony oxidative states in Poly(Ethylene Terephthalate) chemical recycling	Corentin	Archimbaud	IFP Énergies Nouvelles
1024	One-Pot Synthesis of Pyridine Derivatives from Wastewater-Derived Ammonium Carbonate	Yuichi	Manaka	National Institute of Advanced Industrial Science and Technology
1157	Upgrading the chemical composition of plastic pyrolysis oils by hydrotreatment with metal supported catalysts	Aitor	Arandia	VTT Technical Research Centre of Finland
1179	Stable & active LOHC dehydrogenation catalyst synthesis by ball milling	Krista	Kuutti	VTT

1206	Noble metal enhanced 3D graphenes for glycerol oxidation	Monica	Dan	National Inst. for Res. and Dev. of Isotopic and Molecular Technologies
1212	Exploring Fly Agaric Mushrooms as Vanadium-Based Catalysts for Oxidation Reactions	Jessica	Michalke	Technical University of Leoben
1238	Impact of treatment conditions on catalysts activity and stability in glycerol hydrogenolysis	Francesco	Valentini	TU Wien
1402	Supported C-catalysts in C1 chemistry and beyond	Gabriella	Garbarino	University of Genova
1549	Catalytic fast pyrolysis of plastic waste using inexpensive clay catalyst: activity testing and comparative study in batch and pilot scale.	Hammad	Ali	Norwegian University of Science and Technology

Poster ID	Tuesday September 2 Special session 7: Sustainable fuels and chemicals via syngas			P2, Pirsenteret
429	Lanthanum promotes CO2 methanation over Ru/carbon catalyst	Elżbieta	Truszkiewicz	Warsaw University of Technology
454	Improved Al2O3-based catalyst performance through 3D printing	Jurjen	Cazemier	Flemish Institute for Technological Research - VITO
519	Hydrogenation of carbon dioxide on composite materials to produce components of synthetic fuels and chemicals	Manap-khan	Zhumabek	D.V. Sokolsky Institute of Fuel, Catalysis and Electrochemistry
550	Light-assisted methanol synthesis over M3+ doped Cu/ZnO	Matthias	Rehner	Technical University of Munich
795	Tuning catalytic performance through Atomic Layer Deposition of Transition Metals on Mesoporous Surface	Jordi	Guilera	Catalonia Institute for Energy Research
1044	Sustainable Energy Solutions: Utilizing Plastic Waste for the Development of MOF-Based Photocatalysts for e-fuels	Abdul Rehman	Khan	University of Oulu
1083	Selectivity and coking behaviour of rWGS catalysts at industrially relevant conditions	Lorenz	Lindenthal	Montanuniversität Leoben
1203	3D X-ray Micro-Tomography for Studying Wax Formation and Dewaxing in Fischer-Tropsch Catalysts	Reihaneh	Pashmine-hazar	Karlsruhe institute of Technologhy
1414	Bimetallic Cu-Re/ZrO_2 catalysts for selective hydrodeoxygenation of furfural to 2-methylfuran	Fabio	Souza Toniolo	Federal University of Rio de Janeiro
1424	Ethylene Oligomerization over Ni/HUSY and Ni/HZSM5 Catalysts: Impact of Zeolite Topology on Product Distribution	Fabio	Souza Toniolo	Federal University of Rio de Janeiro
1450	Ce-Promoted Ni-Based Catalysts for High-Performance Methanation: Insights from Structural Analysis	Burcu	Acar	Boğaziçi University

Poster ID	Tuesday September 2 Hydrogen production in a low emissions scenario			Aurora, Clarion
49	The Synergistic Effect of Pore Architect and Reducibility in Ceria-Promoted Ni Molecular Sieve for Methane Dry Reforming	Norah	Alwadai	Princess Nourah B. A. university
56	Enhancing Ni over Zirconia-Scandia Oxide Support for H2 Production via Ga, Sr, and Ce Doping	Salma	Al-Zahrani	University of Ha'il
59	Photocatalysis for artificial photosynthesis aiming at carbon neutrality	Akihiko	Kudo	Tokyo University of Science
64	A Combined Theoretical and Experimental Perspective on Hydrogen Evolution Through Photoreforming of Methanol on Metal-Loaded Anatase (101)	Matthew	Wiggleswort h	University of Sheffield

71	Enhanced the Alumina Supported Samarium Promoted Ni catalysts: Catalytic Conversion of Fossil Fuels to Syngas through Dry Reforming of Methane	Ahmed	Al-Fatesh	King Saud University
483	Effect of Potassium Promotion on Bimetallic Iron-Cobalt Catalysts for Hydrogen Release from Ammonia	Yannick	Baum	Christian-Albrechts-Universität zu Kiel
602	PtNi/Mg(Al)O catalyst in Aqueous Phase Reforming (APR): the role of hydrogenations in the mechanism leading to H2 from cellulose	Andrea	Fasolini	University of Bologna
701	The effect of the addition Fe to Ni-based layered double hydroxide catalyst on catalytic pyrolysis of methane and carbon morphology.	Tomasz	Skrzydlo	University of Stavanger
705	Influence of Dopant and Biogas Composition on the Performance of Ni Catalysts Supported on Cerium-Based Oxides in Dry Reforming of Methane	Fabio	Bellot Noronha	National Institute of Technology Brazil
761	Reductive catalytic depolymerization of Organosolv lignin over Pd/Nb2O5: an alternative route for the production of sustainable aviation fuel	Fabio	Bellot Noronha	National Institute of Technology Brazil
755	Ni@Al2O3 core-shell like catalyst for Methane Dry Reforming puropses	Rachele	Braido	Ca' Foscari University of Venice
780	Modeling of Dry Reforming of Methane for H2 Production in a Catalytic Membrane Reactor	Panagiotis	Boutikos	Foundation for Research and Technology Hellas
786	Efficient Hydrogen Production via Ammonia Decomposition: Investigating Ni-based Catalysts with Varying Support Properties	Morgana	Rosset	Universidade de São Paulo
790	Decarbonisation of carbon-intensive industries via the combination of advanced chemical looping technologies and catalytic processes	Jose Ramon	Fernandez	INCAR-CSIC
826	Catalytic activity of lignin-based materials for H2 production and storage	Elisabetta	Borsella	Italian National Agency for New Technologies
841	Utilizing aqueous-phase reforming to extract value from biorefinery residual waters: effect of process conditions and individual compounds	Jasmiina	Palo	VTT Technical Research Centre of Finland
843	Microwave Assisted Pyrolysis of Crude Oil: A Detailed Gas and Liquid Products Analysis	Intisar	Ul Hassan	King Fahd University of Petroleum and Minerals (KFUPM)
849	Two-Dimensional Materials for Photocatalytic Green Fuel Production	Luisa	Pastrana Martinez	University of Granada
860	Boosting Catalyst Stability: Ti and Cr-modified La0.98Ni1-xB'xO3 perovskites for Optimised Exsolution in Methane Steam Reforming	María A.	Ortega-Jáuregui	Pontificia Universidad Católica de Chile
892	Catalytic Biogas Reforming: experimental results and model validation	Emanuele	Moioli	Politecnico di Milano
894	From Flames to Function: A Journey from Synthesis to Exsolution	Tobias	Berger	Technical University of Leoben
938	Investigation of the catalytic performance of Pt/C and Pt/Al203 in the cyclic hydrogenation and dehydrogenation of (perhydro) benzyltoluene	Felix	Kurz	Forschungszentrum Jülich GmbH
992	Evaluating IrO2 stability using in-line setup of electrochemical flow cell and ICP-MS	Frode	Seland	NTNU
997	Flame Spray Pyrolysis: Unlocking New Pathways for Perovskite Production	Maximilian Rudolf	Groiß	Technical University of Leoben
1009	Ni-Mo Nanoparticles Supported on Mg-Al Mixed Oxide as coke-resistant catalyst for methane dry reforming	Claudio	Evangelisti	ICCOM-CNR
1034	Palladium on Urea-modified Activated Carbon for Highly Efficient Hydrogen Storage System Based on Potassium Bicarbonate/Formate	Francesco	Poggialini	ICCOM-CNR

1041	In-situ SR-XRD investigation of catalytic auto thermal reforming of methane over Rh-Ni catalyst	Cristiane	Rodella	Brazilian Center for Research in Energy and Materials - Brazilian Synch. Light Laboratory
1056	First Application of the Microcombinatorial TEM Method for Methane Pyrolysis over NiMo/MgO Catalysts	Anita	Horvath	HUN-REN Centre for Energy Research
1057	Mo-Ni Bimetallic Catalysts for Methane Decomposition: Formation and Role of the Alloyed Phases	Anita	Horvath	HUN-REN Centre for Energy Research
1066	Clean Hydrogen Production via Ammonia Cracking over B5-Site-Rich Ru/MgAl2O4 Catalysts	Kee Young	Koo	Korea Institute of Energy Research
1146	Insights in the mechanochemical preparation of Ru/CeO2 Catalysts from Organometallic Precursors	Alessandro	Trovarelli	Università di Udine
1159	Enhanced separation and thermal water splitting activity by nanostructured dense ceramic membranes	Vittoria	Saraceni	University of Bologna
1163	The role of alumina phases and Fe, Ni incorporation effect for the decomposition of methane in COx-free H2 production.	Lasse	Yli-Varo	Oulu University
1173	Development of a Microwave-Susceptible Heterogeneous Catalyst for the Super Dry Reforming Process	Miloš	Václavík	RANIDO s.r.o.
1201	Facile Preparation of Co@BaO Encapsulated in Carbon Cages as an Efficient Catalyst for Ammonia Synthesis	Katsutoshi	Nagaoka	Nagoya University
1243	Advanced kinetic analysis of coke combustion over nickel catalysts in Methane Dry Reforming: Insights from Isoconversional and Master-Plot methods	Andoni	Choya	University of the Basque Country
1339	Regeneration strategies of Ni-Co foam-structured catalysts for the dry reforming of methane	Andoni	Choya	University of the Basque Country
1267	Promoting the stability of advanced Ni catalysts supported over ceramic foams for dry reforming of methane	María	Córdoba	University of the Basque Country
1282	Aqueous-Phase Reforming of Xylose over Ni and Co Exsolved Perovskites	Juan	Seguel	Pontificia Universidad Catolica de Chile
1303	Zeolite-Based Catalysts for Ammonia Decomposition: A Pathway to Clean Hydrogen for Low-Carbon Fuel Economy	Agathe	Pascault	UCL
1312	Ni-Ru/CeO2 catalysts for the production of H2 by ethanol steam reforming	Diana Alexandra	Chirita	University of Alicante
1385	Influence of reaction temperature and acidity of Ni/ZSM-5 catalysts on the dry methane reforming reaction	David	Serrano	Imdea Energy
1438	Self-Sustaining Methane Tri-Reforming to Produce Hydrogen	Deniz	Uner	Middle East Technical University
1439	Investigations of Microwave Assisted Methane Decomposition Reaction Using Trimetallic Ni-Fe-(Pd/La) Supported Catalysts	Rukan Can	Seyfeli	Gazi University
1519	Ultraviolet Assisted Structural Modification of NiFe Prussian Blue Analogues for Improved Oxygen Evolution Reaction	Rana	Sami Ul Haq	University of Newcastle
1521	Biomass-to-hydrogen: the catalytic assessment of dolomite-based catalysts in water gas shift reaction	Francesco	Pietramale	University of Calabria
1524	Porous photocatalysts for H2 production	Elies	Molins	ICMAB-CSIC
1525	Design of a microwave catalytic reactor for high temperature reactions	Mirko	Scanferla	University of Padova

Poster ID	Tuesday September 2 CO_2 activation and upgrading			Aurora, Clarion
70	Optimizing Zr/Cu Interfaces for CO2-mediated N-Methylation of Amines	Bilyu	Hong	Xiamen University
101	Electroreduction of CO2 into CO over zeolite-templated nitrogen-doped carbon catalysts	Kotaro	Narimatsu	Osaka University
105	Mechanistic studies of integrative CO2 capture and photothermal CO2-to-Methanol conversion with reusable amine and catalyst PdCu-MRF	Xiaofang	Shang	Nanjing university of science and and technology
559	Optimizing Vanadium-Impregnated Small Pore Zeolite Catalysts for Propane dehydrogenation: A Synthesis-Structure-Activity study	Michiel	Dusselier	KU Leuven
777	CO2 hydrogenation to light olefins on Fe-Co catalysts supported on CeO2 nanorods	Eirini	Marousi-adou	University of Groningen
806	Spectroscopic investigation of In2O3-ZrO2 catalyst for CO2 hydrogenation to methanol	Fabio	Salomone	Politecnico di Torino
811	Single-Layer and Dual-Layer FTIR Analysis for Identifying Reactive Species in CO_2 Methanation on Core-Shell Catalyst	Marcel	Sladkov	Hochschule Niederrhein
812	Enhancing the Efficiency of CO2 Electrochemical Reduction Using Nickel-single-atom Catalysts	Hinano	Kameko	Idemitsu Kosan Co., Ltd
813	Turning Dirt into Catalysts: Ball-milled α-Al2O3 with Residual Metal Impurities for rWGS and Ammonia Decomposition	Linfeng	Li	Max Planck Institute
825	Molybdenum-based catalyst for high pressure Reverse Water Gas Shift reaction	Orkhan	Sayidov	King Abdullah Univ.of Sci.and Technology
836	Feasibility Evaluation of Ionic Liquids Compared to Industrial Amines in Integrated CO2 Capture and Mineralization Process	Swagat Sabyasachi	Sahoo	Indian Institute of Technology Delhi
852	Lanthanide-Promoted Ni-Based Catalysts for Enhanced Syngas Production via Dry Reforming of Methane	Imtiaz Ul	Hasan	King Fahd University of Petroleum and Minerals
889	Kinetic Analysis of CO2 Hydrogenation over Fe-based Catalyst in Fixed-Bed and Slurry Reactors	Aleksandr	Fedorov	Leibniz-Institut für Katalyse e. V.
898	Decoding active sites for the one-step CO2 hydrogenation to DME over PdGa@MFI catalysts	Patricia	Concepcion	Instituto de Tecnología Química
905	Simulating Membrane Capture of CO2 with Citizen Scientists	Thomas	Ruh	Technical University of Leoben
906	Synthesis of Dimethyl Carbonate from CO_2 Using CeO_2-Based Catalysts: An Optimization Study with Artificial Neural Network Modeling	Praveen	Kumar	University of Ljubljana
921	Aerogel catalysts for P2X applications	Laura	Annunen	University of Oulu
925	CO2 Hydrogenation to Ethanol over Multimetallic Carbon Catalysts	Mariana Branco Soares	Felgueiras	LSRE-LCM (ALiCE)
931	Novel indium-based catalysts to improve selectivity in the DME synthesis process via CO_2 hydrogenation	Simona	Renda	University of Zaragoza
933	Sustainable Syngas Production by Methane Dry Reforming over Ceria-Zirconia Supported Ni Catalysts – detailed carbon analysis	Shweta	Kamaliny	IIT (ISM) Dhanbad
957	Comparative study on the promoter effect of Ce, Mg, Na, Ca and La on the efficiency of Ni/HAP catalysts in the CO2 methanation reaction	Nassima	Berroug	University Of The Basque Country
959	Metal-Support Interaction in In2O3-Based Catalysts of CO2 Hydrogenation Studied Using “Inverse” In2O3(111)/Ru(0001) Model Catalysts	Jie	Zhu	Fritz Haber Institute of the Max Planck Society
972	Dimethyl Ether and Methanol Production via CO_2 Hydrogenation Using a Novel Bifunctional Catalyst	Aysel	Zahidova	SOCAR Turkey Research & Development and Innovation Inc.,

974	Carbon:metal oxides composites: a new approach for the development of catalysts for CO2-to-methanol conversion	Ana Rita Nunes	Querido	LSRE-LCM, ALiCE, FEUP
975	Development of CO2 conversion catalysts for decarbonising the aviation sector	Satoshi	Hamao	IHI Corporation
978	Diamine-Appended Metal–Organic Frameworks Promote the Hydrogenation of CO2 to Methanol at Low Partial Pressures	Fabio André	Peixoto Esteves	Paul Scherrer Institute
982	In situ Near Ambient Pressure X-ray Photoelectron Spectroscopy (NAP-XPS) Investigation of CO2 Methanation over Ruthenium Nanoparticles Supported on Alumina	Guillaume	Rod	Laboratory of Materials for Renewable Energy (LMER) joint lab of EPFL and Empa
1001	Evaluation of Chemically Modified Zeolites for the Conversion of CO2 and CH4	Victor	Albertini	Universidade de São Paulo
1003	From biogas to biomethane through CO2 methanation: catalyst optimization and catalytic process design	Ilenia	Rossetti	Università degli Studi di Milano
1014	Effect of Ce/Sc Ratio on Ni-Based Catalysts Supported on MgAlOx for Dry Reforming of Methane	Hanan	Atia	LIKAT Leibniz Institute for Catalysis
1017	Effects of synthesis method and K addition in Cu/MOFs on CO2 hydrogenation under mild conditions	Janaina	Fernandes Gomes	Universidade Federal de São Carlos
1019	Porous lamellar Cu-ZnO catalysts for CO2 hydrogenation to methanol	Janaina	Fernandes Gomes	Universidade Federal de São Carlos
1032	Spinel-supported exsolved Fe-X (X=Cu, Ni) heterostructures for CO2 to light olefins	Shailza	Saini	University of Surrey
1033	Cobalt Catalysts for Fischer–Tropsch e-Fuels Production	Urszula	Ulkowska	Warsaw University Of Technology
1038	DFMs for CO2 Methanation: Impact of Feed Impurities on Capture Efficiency	Muhammad Asif	Nawaz	University of Seville, Spain.
1053	Investigation of K-Rh-Fe Supported Catalysts for CO2 Hydrogenation to Ethanol: A Study of Substrate Effect	Angeliki	Latsiou	University of Western Macedonia
1054	Steel monoliths with advanced designs: Proof of concept for NiO-CeO_2 (np) catalyzed CO_2 methanation	José Clemencio	Martínez Fuentes	Universidad de Alicante
1058	Effect of Promoter and Ratios in Iron-Molybdenum/Rhenium Catalysts for CO2-FT.	Colomba	Capo	Pontificia Universidad Católica de Chile
1073	Low loading copper-based catalysts for effective CO2 hydrogenation to methanol	Rodrigo G.	Pizarro	University of Zaragoza
1075	Nanoconfinement of Ni clusters in structured carbon catalysts	Jaroslava	Moravkova	Czech Academy of Sciences
1077	3D Printed metallic substrates – Comparison between catalyst coating methods	Niko	Virkki	Vtt
1090	Mechanochemical Synthesis of Dual-Function Materials for the Integrated Capture and Valorisation of Waste CO2	Maila	Danielis	Università degli Studi di Udine
1158	The effect of sulfate/sulfide residuals in promoting/suppressing reactivity of Ru/CeO2 CO2 Methanation Catalysts	Maila	Danielis	Università degli Studi di Udine
1093	A Scalable Artificial Leaf Prototype for CO2 Reduction using Cu-Bi electrocatalysts	Claudio	Ampelli	University of Messina
1099	Direct conversion of CO2 into hydrocarbons using a K-enhanced Fe catalyst supported on Alginate-derived carbon.	Pio	Gramazio	Norwegian University of Science and Technology
1109	CO2 hydrogenation to Methanol over Mg promoted Cu-In2O3-Al2O3 based catalysts	Andrea	Bertuzzi	Unversity of Bologna
1118	Better together: Multi-doped Cu-catalysts for Methanol synthesis	Hedda	Drexler	Technical University of Leoben

1136	BCN-based catalyst for enhanced CO2 methanation via thermocatalysis	Vinay	Naral	University of Newcastle
1162	The synergy between Pd-Cu bimetallic alloy and CeO2 surface for CO2 hydrogenation	Xinlian	Su	University College London
1168	Transition and noble metal doping of In2O3/ZrO2 catalysts for enhancing methanol synthesis via CO2 hydrogenation	Jaime	Soler	Universidad de Zaragoza
1183	Integrated CO2-to-Methanol System for Industrial Decarbonisation	Aysun Ipek	Paksoy	University of Surrey
1189	Waste-derived SILica-based porous solids for Carbon diOxide capture, storage and re-use catalytic technology (SILCO Project)	Matteo	Di Virgilio	Politecnico di Milano
1197	Development of a CO2 electrolyzer for multicarbon production based on heteroatom-doped carbon electrocatalysts	Pablo	Arévalo-Cid	Institute of Catalysis and Petrochemistry
1214	Structural Evolution and Controlled Exsolution in High-Entropy Oxide Catalysts for CO_2 Hydrogenation to Methanol	Simon	Herber	Competence Center Chase GmbH
1219	Forced unsteady state operations to minimize coke buildup in dry reforming of methane reaction	Deniz	Uner	Middle East Technical University
1220	Atomically dispersed Cu into N,P-doped carbon: new tuning possibilities for the electrocatalytic CO2 reduction.	David	Ríos-Ruiz	Institute of Catalysis and Petrochemistry, CSIC
1230	Electrocatalytic CO2 reduction with a Cu(I) metal-organic framework	Julie	Brun	University of Oslo
1232	Promotion of high entropic oxide catalysts for the hydrogenation of CO2 to methanol	Florian	Kühberger	Competence Center CHASE
1237	Supported MoS2 catalysts for CO2 hydrogenation to methanol: investigating the interplay between oxides and sulfides via In-situ X-ray absorption spectroscopy	Gustavo	Andrade Silva Alves	TU Wien
1297	Methanol synthesis on zinc decorated, stepped copper surfaces	Emanuel R.	Billeter	Technical University of Denmark
1445	Investigation of S poisoning on Ru/Al2O3 catalysts for CO2 hydrogenation to methane via ex-situ and in-situ techniques	Luca	Lietti	Politecnico di Milano
1323	In-situ Spectroscopic Studies on CO2 Activation and Oxalate formation by Transition Metal Complexes	Esha	Suresh Babu	Leibniz Institute for Catalysis (LIKAT)
1326	NiO-CeO2 catalysts doped with 3D-ordered macroporous (3DOM) MgO for the capture and hydrogenation of CO2	Arantxa	Davó-Quiñonero	Universidad de Alicante
1327	CO2 hydrogenation into methanol and DME using Cu-ZrO2@SiO2 core-shell catalysts	Vitor Duarte	Lage	UFRJ/COPPE
1330	Nanoconfinement of metal-supported catalysts inside pores boosting hydrogenation reactions	Petr	Sazama	Czech Academy of Sciences
1342	On the local environment of Mg in MgAPO-18	Christophe	Coudercy	University of Oslo
1373	Carbon-Based Supports for Nickel Catalysts: Structural and Textural Effects on CO_2 Hydrogenation to Methane	Nikola	Kostková	University of Pardubice
1376	Surface Carbon Formation and its Impact on Methane Dry Reforming Kinetics on Rh-Based Catalysts by Operando Raman Spectroscopy	Matteo	Maestri	PoliMi
1388	Deciphering Size and Shape Effects on the Structure Sensitivity of CO2 Methanation Reaction on Ni	Matteo	Maestri	PoliMi
1395	Single phase Cu/Mg/M Layered Double Hydroxides photocathodes for Low voltage and highly selective photoelectrocatalytic CO2 reduction	Francesco	Basile	University of Bologna
1415	Study of Ru/NiO-CeO2 catalysts with carbon and steel supports manufactured by 3D printing for CO2 methanation in pilot plant	Juan	Bueno-Ferrer	University of Alicante
1422	Enhanced CO2 methanation through distributed feeding in a Ni-Fe/Al2O3 catalyst packed bed membrane reactor (PBMR)	Javier	Herguido	University Zaragoza
1426	In2O3 and the Promoter Challenge: A Quantum Chemistry and Experimental Quest for CO2 Conversion	Verena	Süß	Fraunhofer ICT
1429	Enhancing CO_2 Methanation Efficiency through Ni-Doped Zeolitic Structures	Galina	Sádovská	Czech Academy of Sciences

1468	Immobilization of Pd Single Atoms in UiO-66: Unveiling the Role of Pd Speciation for CO2 Hydrogenation to Methanol	Sahra	Ahmed	University of Oslo
1475	Dynamic Activation and Deactivation of Cu-Embedded TiO_2 for Solar CH_4 Generation from CO_2	Shahzad	Ali	University of Oulu
1527	Tandem Process for CO_2 and Ethylene Conversion to Propanol Using a Noble Metal-Free MOF	Dalmo	Mandelli	Universidade Federal do ABC
1534	Highly active nickel-based fibrous silica ZnO (NSZF) catalyst for efficient syngas production through dry reforming of methane	Khalid	Alhooshani	King Fahd University of Petroleum & Mine
1552	Palladium recovered from Spent Nuclear Fuels as an electrocatalyst for CO2 reduction into CO	Anthony	Ropp	Orano Support

Poster ID	**Tuesday September 2 Special session1: Light as a reagent**			**Aurora, Clarion**
17	Thiol-modified BiOBr designed for enhanced photocatalytic nitrogen fixation	Wei	Cai	Nanjing University of Science and Technology
21	Synergistic catalysis of copper-nickel-oxide nanoparticles and TEMPO for electrochemical coupling of LLM-116	Yuqiu	Wang	Nanjing university of science and technology
328/ 1579	Photolytic Activation of Ni(II)-X Bonds Explains Initiation and C-H Activation in C(sp2)-C(sp3) Bond Forming Reactions	Max	Kudisch	National Renewable Energy Laboratory
472	On-Surface Synthesis of Polypyrrole on Rutile TiO2 (110) for Model Photocatalysis	Aaron Rasmus	von Seggern	Carl von Ossietzky Universität
505	Synthesis and characterization of mixed metal NH2-MIL-125 based metal-organic frameworks for use in Rhodamine B degradation.	Javier	Narciso	University of Alicante
692	Au-Supported Plasmonic Nanoparticles for Selective Oxidation of 5-HMF.	Arthur	Reymond	University of Lorraine
753	Chemometric optimisation of the solution combustion synthesis experimental parameters of TiO_2 photocatalysts	Giacomo	Luzzati	University of Bologna
917	Controlling Composition and Shape in AuPt Plasmonic-Catalytic Nanomaterials for the Hydrogen Evolution Reaction	Ibrahim	Abdelsalam	University of Helsinki
939	A Strategy to Avoid X-ray Induced Effects at High Brilliance Synchrotron Beamlines	Johannes	Wieser	ETH Zürich
940	Photoinduced redox activity in Ce-UiO-67 metal organic framework	Valeria	Finelli	University of Turin
1005	High-Pressure CO2 Photoreduction on Z-scheme hybrid materials	Gianguido	Ramis	Università degli Studi di Genova
1366	Supported Nanoalloys for Sustainable Hydrogen Production	Samuel	Balmer	University of Nottingham
1466	Immobilization of g-C3N4 in PVDF spheres for the photodegradation of cytostatic drugs	Sergio	Morales-Torres	University of Granada
1467	Metal catalysts supported on carbon-TiO2 composites for the photooxidation of ethylene under dynamic conditions	Sergio	Morales-Torres	University of Granada

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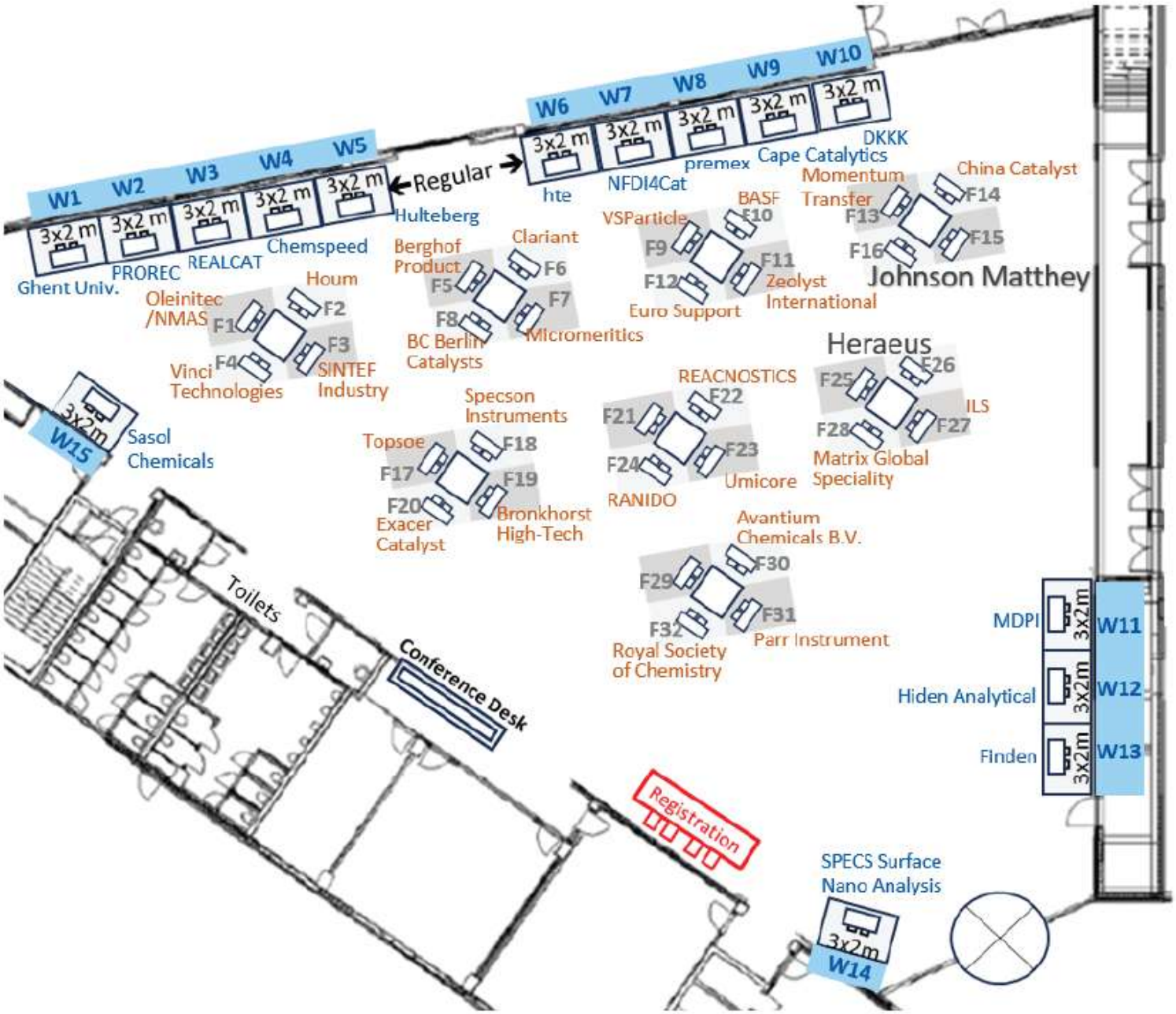

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