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## Join us for “THE ELECTRIC DECADE” workshop!

Discover how electrification technologies support the EU’s climate goals

17<sup>th</sup> of January 2024 | 9.00 -12.00 CET

### Agenda Highlights:

- Discussion on challenges and innovative catalytic reactor solutions for the process industry
- Participating Horizon Europe Projects: e-CODUCT, EReTech, eQATOR, TITAN and STORMING

### Hosted by:

Organizer: Ghent University [[e-CODUCT](#)]

Co-organizers: Technical University of Munich [[EReTech](#)], SINTEF [[eQATOR](#)], CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS [[TITAN](#)] and UNIVERSITY OF BOLOGNA [[STORMING](#)]

Venue: ONLINE

### Why Attend?

- Gain insights into electrification's role in realizing the Green Deal
- Explore CO<sub>2</sub> emission reduction strategies
- Engage in discussions with experts from leading projects

Ready to be part of the transformation? [[REGISTER](#)]

We look forward to your active participation in shaping the future of sustainable technologies!



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## FINAL PROGRAM 17 January 2024

8:45	Participants welcome
9:00	Introduction and objectives of the day <i>Prof. dr. Joris W. Thybaut, Ghent University</i>
9:05	How electrification can help meet the circularity goals? <i>Franz Hörzenberger, ArcelorMittal</i>
9:20	Electrification technology <i>Walter Vermeiren, Total Corporate R&amp;D</i>
9:35	Presentation of the e-CODUCT project <i>Dr. Gleb Veryasov, TotalEnergies</i>
9:50	Presentation of the EReTech project <i>Dr. Gianluca Pauletto, SYPOX GmbH</i>
10:05	Presentation of the eQATOR project <i>Dr. Richard Heyn, SINTEF</i>
10:20	Break
10:30	Presentation of the TITAN project <i>Dr. David Farrusseng, IRCELYON</i>
10:45	Presentation of the STORMING project <i>Assoc. Prof. dr. Patricia Benito, University of Bologna</i>
11:00	Panel / round table <i>Moderator: Prof. dr. Georgios Stefanidis, National Technical University of Athens</i>
11.30	Discussion: more promising technologies, Q&A <i>Moderator: Prof. dr. Joris W. Thybaut, Ghent University</i>

e-CODUCT, EReTech and eQATOR are sister projects under [HORIZON-CL4-2021-RESILIENCE-01](#)

Follow @e-CODUCT for more information!





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## SPEAKERS

### Joris W. Thybaut



Joris W. Thybaut is senior full professor in catalytic reaction engineering at the Laboratory for Chemical Technology at **Ghent University**. Since 2005, he has been involved in numerous research projects as a partner, leader or coordinator, investigating a variety of large-scale hydrocarbon conversion reactions and the rational design of the corresponding catalysts and reactors. He is one of the leading academics in the Eurokin consortium for kinetics and reactors. His research activities have evolved from classical refining reactions to renewables valorization. Recently, the range of chemistry studied has been further extended to inorganic reactions, pharmaceutical applications and circular chemistry. He is coordinator of the **e-CODUCT** and scientifically involved in the modelling and simulation of COS synthesis and decomposition.

### Franz Hörzenberger



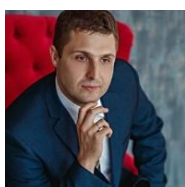
Franz Hörzenberger is Head of EU Affairs at **ArcelorMittal Global R&D** with over 25 years of experience in various positions. He is co-chair of the Clean Steel Partnership (CSP), which was developed within the EU with the long-term vision to support European leadership in transforming the steel industry into a climate-neutral sector. He is A.SPIRE Vice-Chair for Climate and Energy. A.SPIRE is the European association dedicated to the management and implementation of the Processes4Planet co-programmed partnership. A.SPIRE's mission is to ensure the large-scale development of enabling technologies and best practises along all stages of the value chain that contribute to a resource-efficient process industry. He is co-chair of the European Strategic Energy Technology Plan Implementation Working Group for Action 6 (SET-Plan IWG6).

### Walter Vermeiren



Walter Vermeiren is Head of Technology and Scientific Intelligence at **Total Corporate R&D**. He is chairman of the "Cracker of the Future" consortium, in which petrochemical companies are jointly investigating how naphtha or gas steam crackers can be powered by renewable electricity instead of fossil fuels. The aim is to produce basic chemicals while significantly reducing carbon emissions. He is a member of GDR Tamarys, which brings together material science and heat transfer specialists to address the complex and physical barriers to developing industrial processes and systems dominated by radiative transfer.

### Gleb Veryasov



Dr. Gleb Veryasov is an R&D team leader in **TotalEnergies**. Gleb obtained a Master's degree in physical chemistry at Lomonosov Moscow State University (Moscow, Russia), and a PhD in engineering at the Jozef Stefan Institute (Ljubljana, Slovenia). After graduation, he has held multiple assignments in France, Belgium, and Japan in the areas of electrolytes for batteries, gas storage, and automotive lubricants. Today his activities are mostly focused on new electrified and low-carbon processes for the production of hydrogen and base chemicals. In **e-CODUCT**, he is responsible for project management, working on strategic topics. TOTB will also be the main user of the project results to ensure the techno-economic feasibility of e-CODUCT and potential future deployment of the technology in refineries and energy sector.

### Gianluca Pauletto



Dr. Gianluca Pauletto received his M.Sc. in Chemical and Process Engineering at University of Padua in 2016. He completed his Ph.D. at Polytechnique Montréal in 2020, working on conversion of stranded gas into liquid fuels. As a Ph.D. he focused on syngas production and collaborated with many research groups in Canada, Italy, Germany, France, and USA from both academia and industry. Since 2020 he is working on electrification of the chemical industry. He is the inventor of an innovative electrically heated chemical reactor and also an entrepreneur having raised approximately €1.5M in non-dilutive fundings. Currently he is the CEO of **SYPOX GmbH**, a deep tech startup coming from the Technical University of Munich. Since June 2022, he is leading the **EReTech** consortium that is focusing on the electrification via resistive heating of high temperature thermochemical processes.



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### Richard Heyn



Dr. Richard H. Heyn is Chief Researcher at **SINTEF Industry** in Oslo, Norway. Richard has a Ph. D. in organometallic chemistry from the University of California, San Diego and has been employed at SINTEF since 1998. His primary area of research is within homogeneous catalysis for sustainable chemistry, with a particular interest in the use of CO<sub>2</sub> for the production of chemicals and materials. He is the Vice-Chair of Circularity Innovation in the Advisory and Programming Group of the EU's Private-Public Partnership Processes4Planet and is coordinator of the **eQATOR** project.

### David Farrusseng



Dr. David Farrusseng is a permanent researcher at **IRCELYON** (Research Institute for Catalysis and the Environment in Lyon) and co-leader of the Engineering and Process Intensification (ENG) team. He is the author of over 140 peer-reviewed articles and 15 patents. He is responsible for activities related to i) the design of nanoscale catalysts (mixed oxides including Ce-Zr systems and metallic nanoparticles) and ii) the development of combinatorial methods and parallel high-throughput reactors. He is a consultant to leading energy, petrochemical and materials companies and Vice President of the International Association of Catalysis Societies (IACS). In the **TITAN** project, he coordinates the project consortium.

### Patricia Benito



Patricia Benito is Associate Professor of Industrial Chemistry at the **University of Bologna** (Italy). She has consolidated expertise in industrial chemistry and heterogeneous catalysis, in particular in the field of structured catalysts for thermo- and electrocatalytic applications. Her research work currently focuses on the development of catalytic processes and catalysts for the conversion CO<sub>2</sub> and the electrification of the chemical industry to produce CO<sub>2</sub>-free H<sub>2</sub> and to valorize biomass-derived compounds. In the **STORMING** project, she is the scientific coordinator and she is involved in the optimization of catalytic formulations and catalytic reactors for electrified methane cracking.

### Georgios Stefanidis



Prof. Georgios Stefanidis holds an M.Sc. degree in Chemical Engineering from the **National Technical University of Athens** and a Ph.D. in the same field from **Ghent University**. He is co-author of more than 100 peer-reviewed publications in the broad field of process intensification, mostly focusing on alternative energy forms and transfer mechanisms (mainly microwaves and plasma), as well as the first book on the "Fundamentals of Process Intensification" (Wiley VCH, 2019). His research activities include the modelling of concurrent flow, chemistry and multiscale transport phenomena in electromagnetic and plasma fields, and the design and development of tailored devices for microwave and plasma-assisted processes, including CO<sub>2</sub>, CH<sub>4</sub> and waste recovery processes, among others. He currently chairs the EFCE working group on process intensification and is on the board of the Association of Microwave Power in Europe for Research and Education (AMPERE).