EFCE Spotlight Talks

Working Party on Electrochemical Engineering

6 November 2024

13:00-15:30 CET

EFCE

Electrifying the chemical industry: challenges and perspectives in green hydrogen and electrochemical CO_2 conversion

The transition to a net-zero chemical industry is one of the biggest challenges of our modern society, since the current industry mostly relies on fossil-based feedstock and fuels. In this context, industrial electrolysis is recognized as a promising solution for the production of green hydrogen and chemicals from CO2. However, despite a fast-growing interest from industry and academia, several technical and engineering challenges are still ahead for a full roll-out of the electrolysis industry. In this spotlight talk we will discuss the latest developments, technical challenges, and perspectives on the production of green hydrogen via water electrolysis, and the production of green chemicals via electrochemical CO2 conversion. We will discuss technical aspects related to technology performance and scale-up, with a strong emphasis on the industrial point of view.

PROGRAM

13:00	**Welcome and introduction** Prof. Karel Bouzek, Chair Working Party on Electrochemical Engineering, UCT Prague – Czech Republic Dr. Michele Tedesco, Netherlands delegate Working Party on Electrochemical Engineering, TNO - The Netherlands Giorgio Veronesi, EFCE President
13:15	**Next generation electrolysers: why future electrolysers will still be much better** Dr. Arend de Groot, TNO - The Netherlands
13:45	**Challenges of implementing water electrolysis at large scale, the end-user perspective** Dr. Paola Granados Mendoza, HyCC - The Netherlands
14:15	**System and process development for industrial carbon-dioxide electroreduction** Dr. Czaba Janáky, University of Szeged/eChemicles - Hungary
14:45	**An engineering perspective on the development of electrochemical CO2 reduction for sustainable chemicals and fuels** Dr. Gareth Williams, Johnson Matthey - UK
15:15	**Discussion and closing remarks** Prof. Karel Bouzek, Chair Working Party on Electrochemical Engineering Dr. Michele Tedesco, Netherlands delegate Working Party on Electrochemical Engineering

REGISTRATION

free of charge but mandatory

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