

TcSUH SPECIAL SEMINAR

Univ.-Prof. Dr.-Ing. Thomas von Unwerth

Director, Institute for Automotive Research, Technical University Chemnitz
Chemnitz, GER

Thursday, April 27, 2023

In Person: Houston Science Center (HSC), 102
10:45 a.m. – 11:45 a.m.

Hydrogen As Future Energy Carrier for Mobility



ABSTRACT: Many countries around the world are turning towards climate friendly energy usage. One of the main options appreciated is seen in electricity won from renewables and then used in a direct way for stationary and mobile applications. Taking into account that there is still a big lack for electric energy storage, hydrogen as an energy carrier more and more plays an important role. Producibile via many different ways from almost any primary energy with different sizes of carbon footprints, it can be stored in large quantities, transported by pipelines, road or sea, and can be used in a lot of applications.

In the long run, when global transformation of energy systems towards hydrogen economy proceeds, hydrogen production is located especially in the sun-favoured regions and transport lines are established, the use of hydrogen will also become increasingly interesting for mobile applications. The amounts needed are relatively low, compared to other energy intensive sectors and can be provided as energy feedstock.

The presentation will show how hydrogen can play an important role in the energy and mobility transition towards a cleaner and healthier future.

BIO: Prof. Dr. Thomas von Unwerth is the Director of the Institute for Automotive Research and Head of the Department for Advanced Powertrains at the Technical University Chemnitz. He studied mechanical engineering and received the Ph.D. at TU Dortmund. From 2001 until 2010 he was with corporate research at VolkswagenAG Wolfsburg. He worked on fuel cell systems from 2006 to 2010 and was responsible for the fuel cell car fleet at Shanghai VW (China). Since 2010 he has been Head of professorship in advanced powertrains at TU Chemnitz, and since 2014 has served as Director of the Institute for automotive research. Since 2017, Prof. von Unwerth has served as chairman of the board of Hzwo e.V. – Innovation cluster hydrogen and fuel cells in the State of Saxony. In 2018 he became a shareholder and CTO of FCP Fuel Cell Powertrain GmbH, Chemnitz, and in 2022 he became scientific director of the Hydrogen and Mobility Innovation Centre in Chemnitz (funded by the German government – ministry BMDV). In addition, Prof. von Unwerth is head of the working group on hydrogen and fuel cells for the Association of German Engineers VDI. He is also head of the working group for intelligent mobility for Energy Saxony e.V., a member of the VDI consulting committee on propulsion and energy management, and a member of the VDI commission on hydrogen and fuel cells.

TcSUH Host: Prof. Zhifeng Ren

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in attending this lecture should call 713-743-8212 as soon as possible.**