

Vak: Power2Hydrogen

credits: 5

Vakcode ZVWH19P2U
Naam Power2Hydrogen
Studiejaar 2021-2022
ECTS credits 5
Taal Engels
Coördinator J. Bekkering

Werkvormen Onderwijs
Toetsen Assignment 1 - Opdracht
Assignment 2 - Opdracht

Leeruitkomsten

By completing the module the student demonstrates knowledge and understanding of:

E2.2.a.1 theoretical constructs and scientific frameworks relevant to power-to-hydrogen

E2.2.a.2 main sources of energy dissipation in electrolyzers and fuel cells

E2.2.b.1 power-to-hydrogen value chains for mobility

And is able to:

E2.1.c.1 design scientific experiments to analyse the performance of electrolyzers

E2.3.e.1 define and measure the energy efficiency of electrolyzers

E1.1.c.1 archive and communicate effectively experimental results

Inhoud

Theory (3 EC):

- Electrochemistry basics
- Electrochemical storage - overview on electrochemical storage, including fundamentals of batteries and fuel cells. Limits and applications
- Electrolysis: theory and electrolyser design
- Fuel cells: theory and design

Experiments (2 EC):

- Electrolyser and fuel cell measurements

Adsorption (storage) measurements

Opgenomen in opleiding(en)

European Master in Renewable Energy

School(s)

Instituut voor Engineering

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