University of Antwerp
ELCAT | Applied Electrochemistry and Catalysis

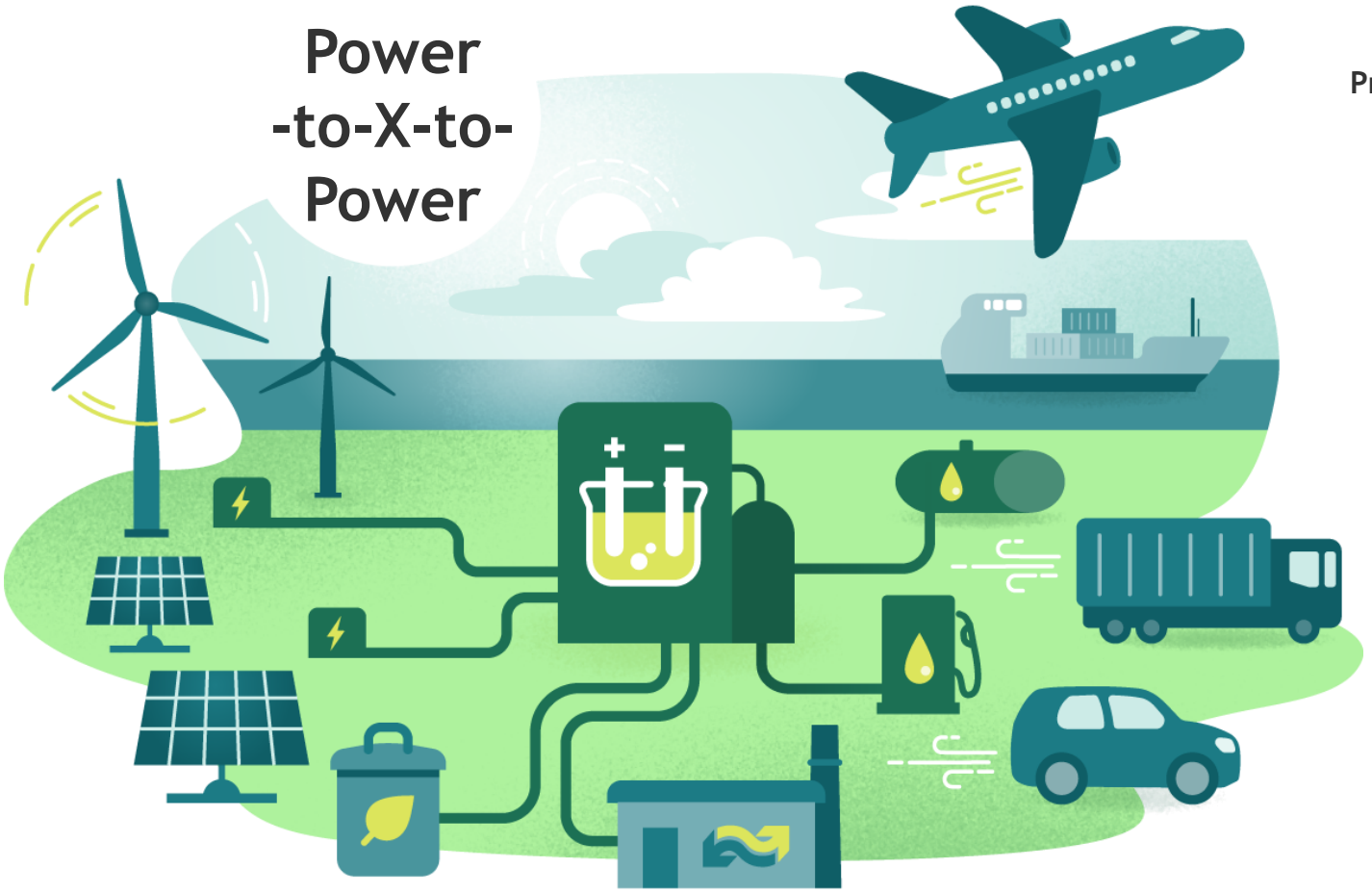
Electrification Institute
Powered by UAntwerp

Applied Electrochemistry & Catalysis

Prof. Jonas Hereijgers

Our mission

Power
-to-X-to-
Power



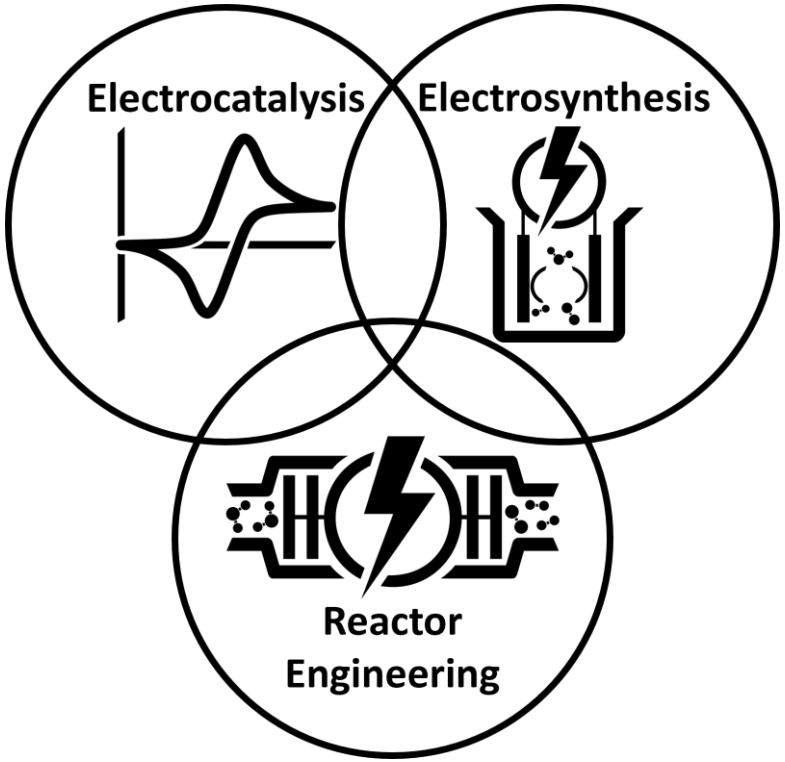
Power-to-X

X-to-Power

Prof. Tom Breugelmans

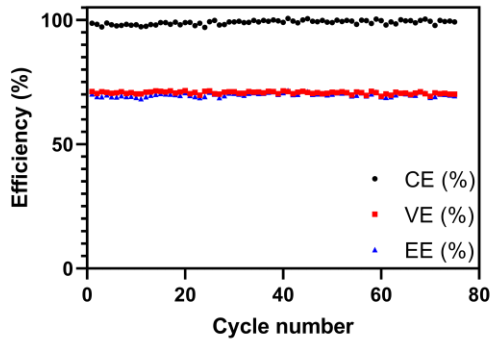
Prof. Jonas Hereijgers

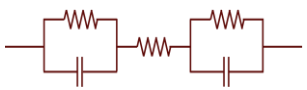
45+ Researchers

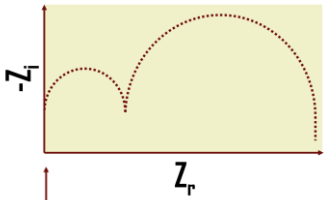


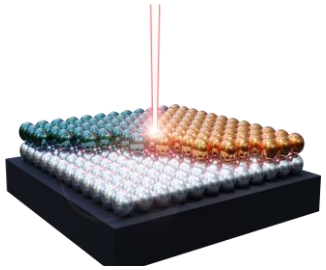
Expertise on battery screening

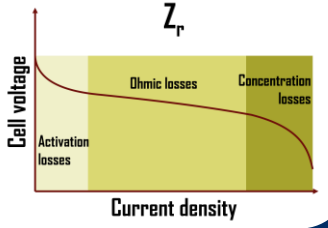
Electrochemical characterization



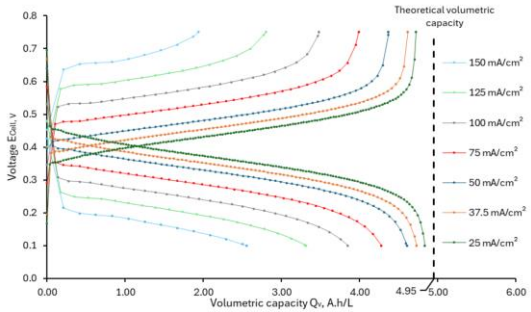




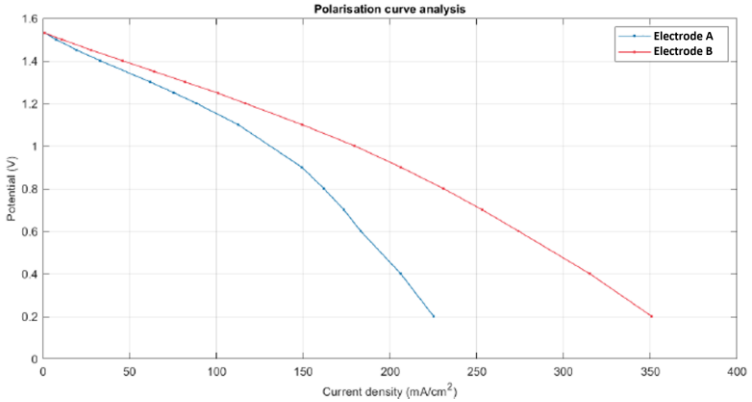


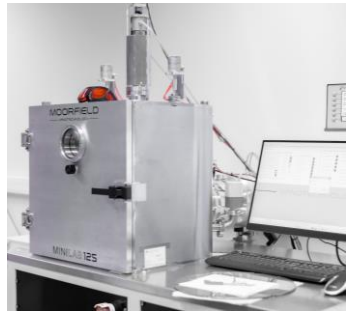


Accelerated ageing testing



Electrochemical engineering





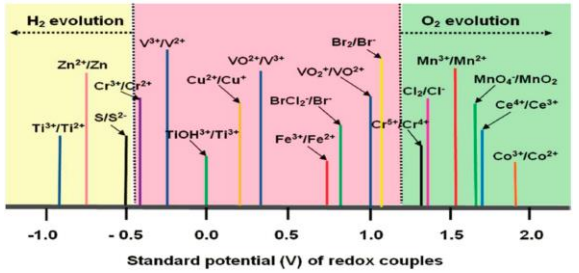
Project I: Screening of new materials

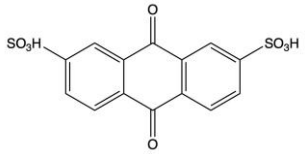
Accelerated ageing testing

- Temperature
- Charge rate
- SoC, DoD, cut-off voltage
- Cell-in-series



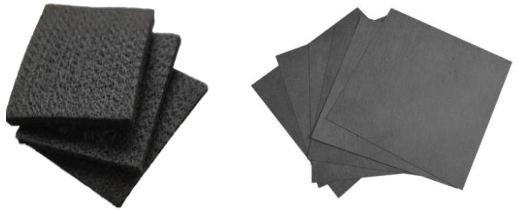
Chemistry





Battery materials

Electrodes

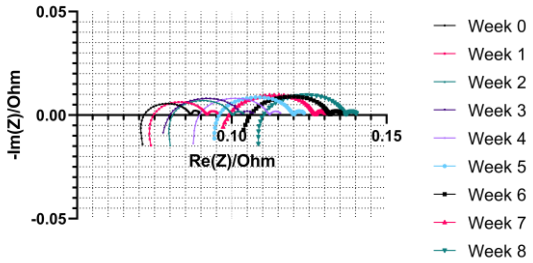


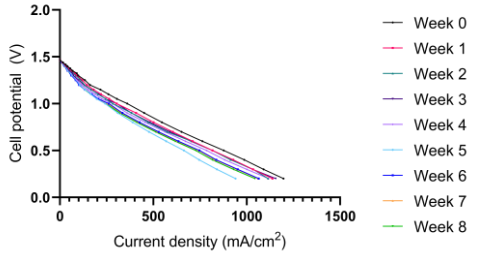
Membranes

Project II: State of Health modelling

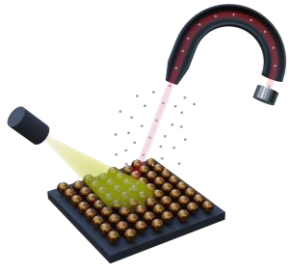
Topic: assessment of the State of Health and Remaining useful Life

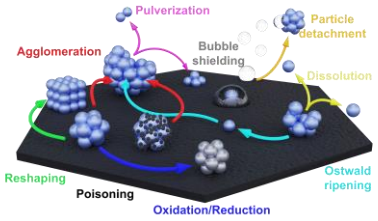
Acquire operational data



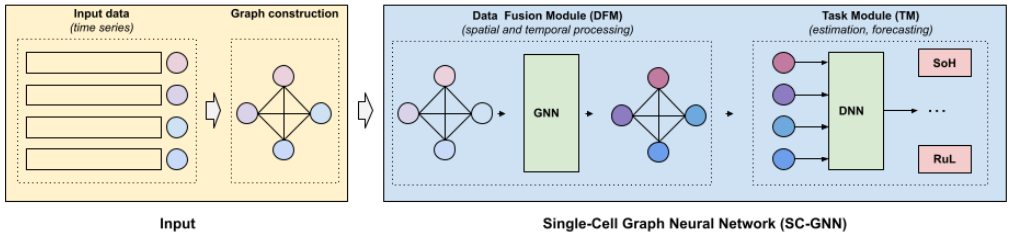


Assess ageing mechanisms





Develop SoH & RuL models



Thank you!

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