Further Development of an multidimensional Anion Exchange Membrane Fuel Cell Electrochemical Simulation Model

Task description

Fuel cells are on the verge of becoming one fundamental player of the decarbonization process. Anion Exchange Membrane (AEM) fuel cells are a promising solution to reduce fuel cell costs and optimize the lifecycle impact. Due to the tremendous development pace of new membranes, this technology is experiencing an exponentially growing interest within the international research community.

Scope of this master thesis is the further development of an electrochemical simulation model to gather an insight understanding of the cell behavior and to support and enhance the parallel experimental investigation at cell level.

Knowledge of ANSYS Fluent and basics in numerical methods are an advantage.

Assignment

- Getting familiar with AEMFC basics (2 weeks)
- Getting familiar with existing AEMFC model (4 weeks)
- Further development of electrochemical model in ANSYS (14 weeks)
- Writing of thesis report (4 weeks)

Start: as of now

Duration: ca. 6 months

Paid Master Thesis

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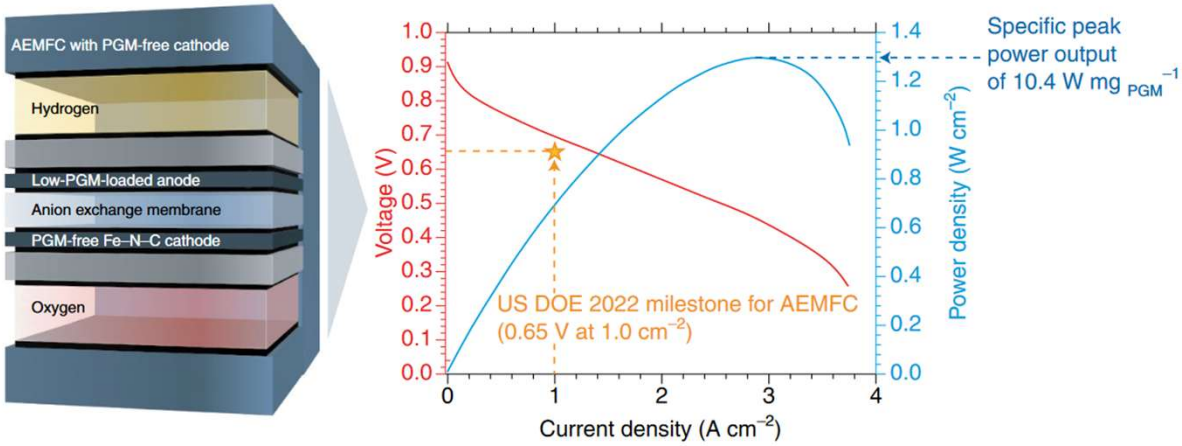

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