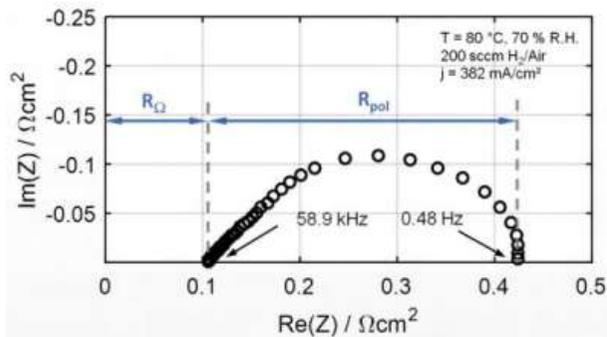


Development of state-of-health monitoring concepts for PEM fuel cells



Short Description:

Fuel cells are considered a key technology for a sustainable and climate-friendly energy supply. However, for their economical and reliable operation, precise monitoring of the system condition (State of Health, SoH) over the entire lifetime is essential. A well-founded SoH monitoring approach enables the early detection of degradation mechanisms, contributes to extending service life, and reduces operating and maintenance costs.

The aim of this master's thesis is therefore to systematically investigate and experimentally evaluate various monitoring approaches for fuel cells in order to demonstrate their potential for practical application.

Content / Time table:

- Literature review and analysis of existing State of Health (SoH) monitoring methods (1 month)
- Development and comparison of different SoH monitoring approaches (2 weeks)
- Planning and execution of tests to verify the developed monitoring approaches (3 months)
- Evaluation, interpretation, and critical assessment of the measurement results (2 weeks)
- Documentation of the results and preparation of the master's thesis (1 month)

Start: as of now

Duration: approx. 6 months

Compensation: paid master thesis

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