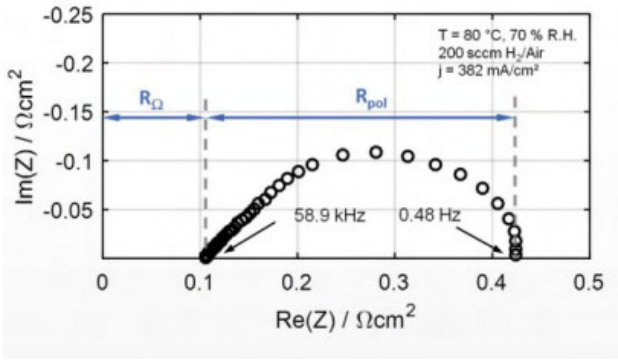
Literature research of state-of-health monitoring concepts for PEM fuel cells



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 bachelor thesis is therefore to systematically investigate various monitoring approaches for fuel cells in order to demonstrate their potential for practical application.

Content / Time table:

- Getting started with the project, its objectives, and the tasks of the bachelor thesis (1 week)
- Literature review and analysis of existing State of Health (SoH) monitoring methods (6 weeks)
- Evaluation and comparison of different SoH monitoring approaches (2 weeks)
- Documentation of the results and preparation of the bachelor thesis (3 weeks)

Start: as of now

Duration: approx. 3 months

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