PREDICTING ELECTRODIALYSIS FOULING: A MODEL-BASED APPROACH

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Motivation

Electrodialysis applications

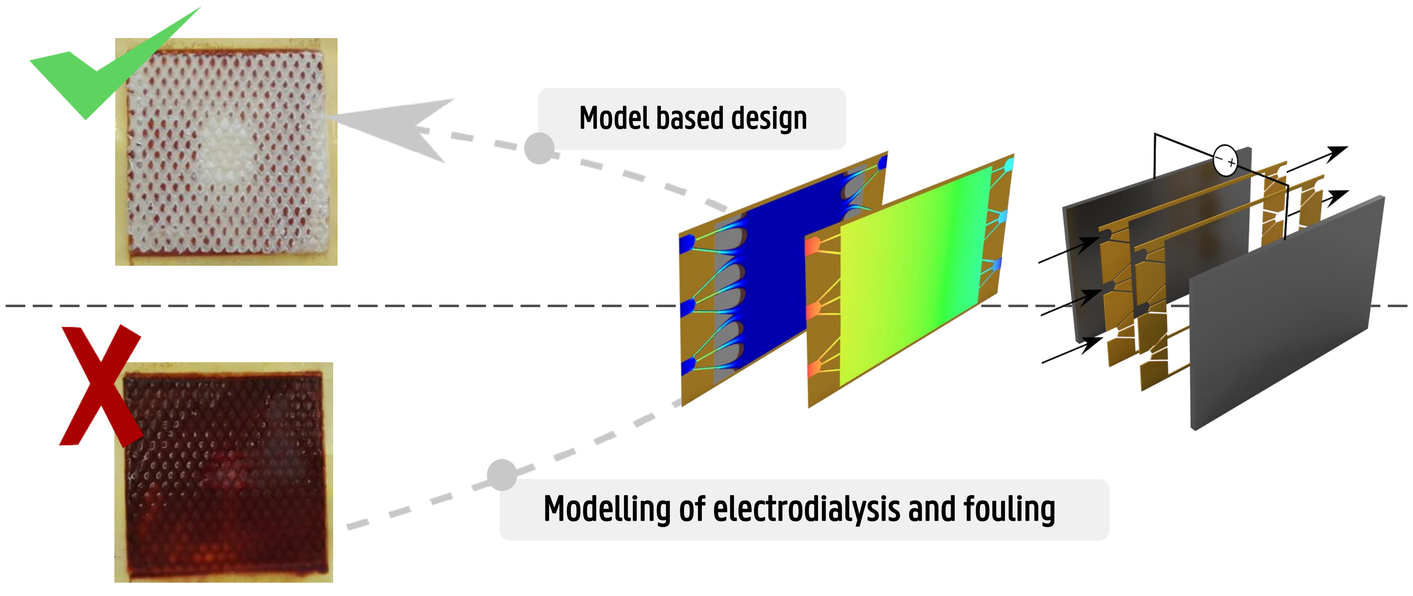
State of the art:

- Seawater desalination
- Desalination of whey
- Tartrate removal from wine
- . . .

Beyond state of the art:

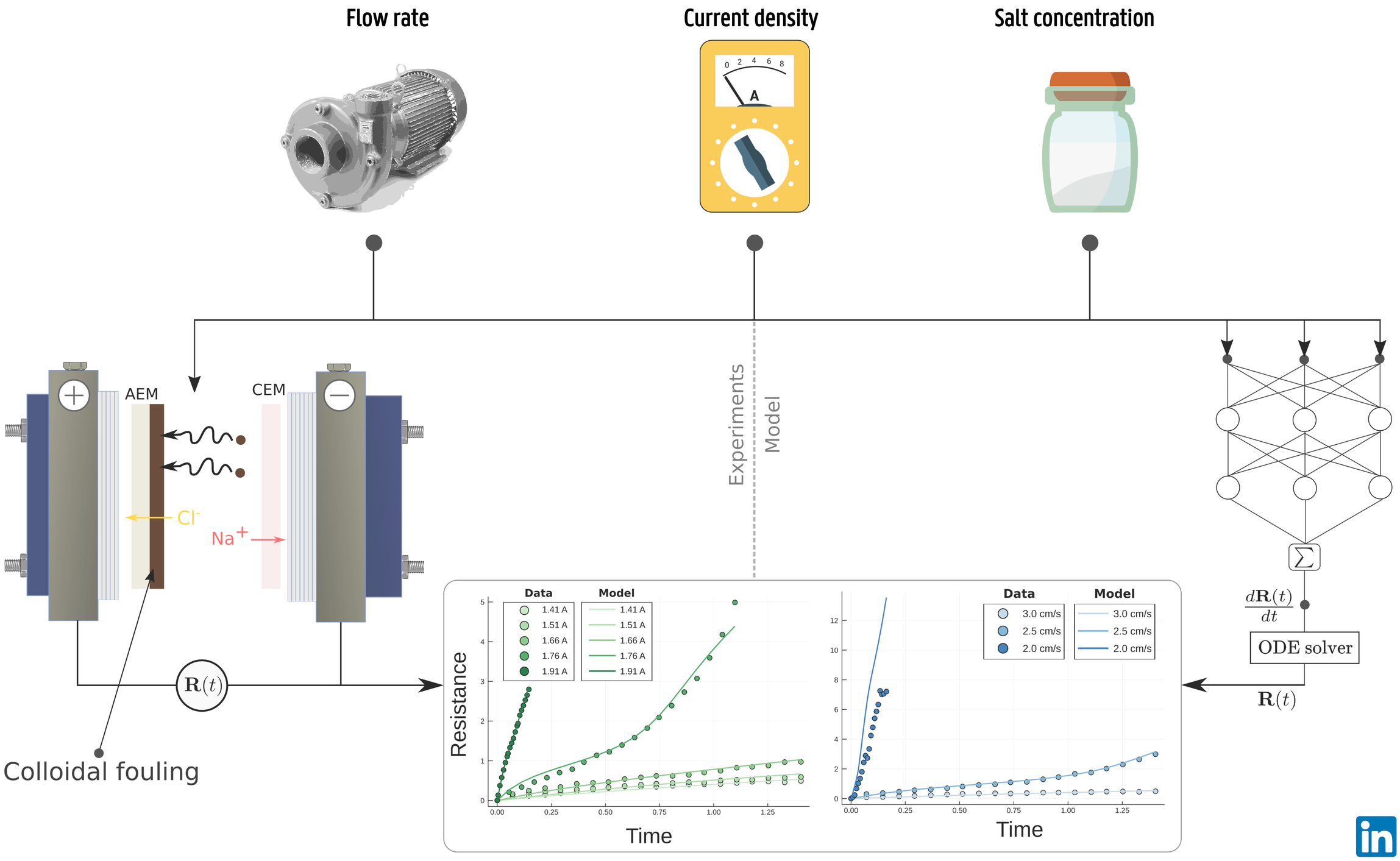
- **Pretreatment** of bio-based streams
  - Desalination/detoxification of feed stream
- **Downstream processing** of fermentations
  - Desalination of product streams
  - Selective extraction of amino acids
- In-situ product recovery of organic acids

- Excessive fouling
- High CIP frequency
- Increased energy usage



It is important to predict the **fouling rate** during electrodialysis as a function of the process settings in order to improve the **applicability** of electrodialysis in the **bio-based industry**.

Results & Methodology



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