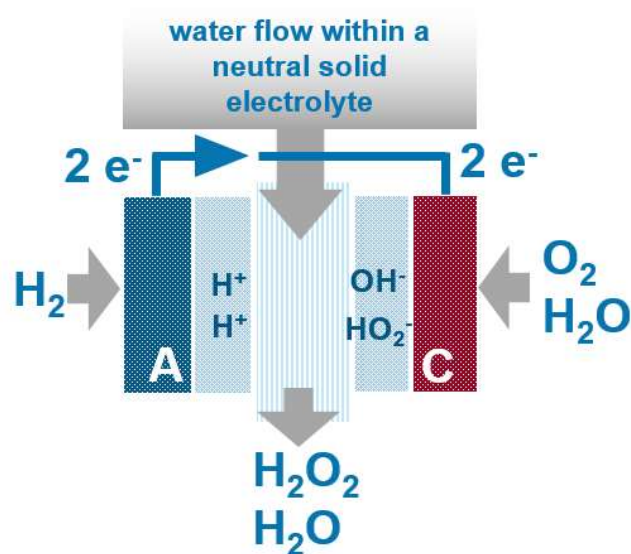


Electrochemical H_2O_2 production

Description:

Hydrogen peroxide is an important and widely used industrial chemical for oxidation of other chemical molecules, disinfection and bleaching as well as cleaning. Today, the most commonly used manufacturing process is the synthesis via anthraquinone. However, this method has several disadvantages such as possibly carcinogenic materials, purification and extraction steps necessary as well as energy intensive. With the use of green hydrogen, H_2O_2 can be produced electrochemically with high purity, aligning with the growing emphasis on sustainability and technological innovation in chemical manufacturing.



Content:

- Literature research on electrochemical H_2O_2 production (1 month)
- Ex-situ analysis of cell components (1 month)
- Electrode manufacturing (1.5 month)
- Single cell development as proof-of principle (1.5 month)
- Thesis writing (1 month)

Start: 01.02.2024

Duration: approx. 6 months

Compensation: € 2 600

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