Electrochemical capture of CO\textsubscript{2} from ambient air

<table>
<thead>
<tr>
<th>Type of project:</th>
<th>Thesis / Internship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration:</td>
<td>6-8 months, starting from March, 2021</td>
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<tr>
<td>Location:</td>
<td>Wetsus, European centre of excellence for sustainable water technology, Leeuwarden</td>
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</tbody>
</table>

Project description

Climate change is one of the most critical global challenges. Increasing atmospheric CO\textsubscript{2} concentration brought by anthropogenic emissions is the primary driver of climate change. Capturing CO\textsubscript{2} from emission points and even directly from the air provides a potential solution to mitigate the amount of CO\textsubscript{2} emissions and reduce the atmospheric CO\textsubscript{2} concentration.

At Wetsus, under the theme Sustainable Carbon Cycle (https://www.wetsus.nl/sustainable-carbon-cycle), we aim to develop novel CO\textsubscript{2} capture technologies that could be potentially energy efficient and environmentally benign. Based on the extensive knowledge we have on water technologies, current studies focus on applying electrochemical systems for CO\textsubscript{2} capture.

Your tasks

- Operating an electrochemical system
- Characterizing the performance of the system based on several parameters
- Optimizing the operation conditions in terms of energy consumption and CO\textsubscript{2} capture efficiency

Requirements

- Specialized in environmental science, chemical engineering, or related fields, the experience of working with electrochemical or carbon capture system will be a bonus
- Actively enrolled in undergraduate (BSc) or graduate (MSc) studies
- Interest in practical laboratory experience and analytical work
- Fluent in English (speaking, writing and communication skills)
- Highly motivated, enthusiastic and independent who also like to work in a team

How to apply

For application, please send a motivation letter (max. 1 page) and a CV (max. 2 pages) to Qingdian Shu (qingdian.shu@wetsus.nl). Suitable applicants will be invited for a Skype interview.

Please note that Wetsus can offer internships to EU citizens only. Non-EU citizens need to be enrolled at a Dutch university to be eligible for this project.

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