Post-doc in design and development of membraneless alkaline electrolyzers

Applications are invited for a 28-month post-doc position in the field of modeling and experimental testing of alkaline water electrolyzers at the Departments of Mechanical & Production and Biological & Chemical engineering, Aarhus University, Denmark.

Expected start date and duration of employment

This is a 28–month position from 1 September 2026 or as soon possible.

Job description

The project is focused on model-based design, development, and testing of a membraneless alkaline electrolyzer as part of a collaborative research project at the Departments of Mechanical & Production and Biological & Chemical Engineering, Aarhus University. The goal of the project is to develop a lab-scale prototype of a high-temperature membraneless electrolyzer cell, with superior efficiency and current density compared to state of the art. The selected candidate is responsible for conceptualization, design, and model-based optimization of the cell and will significantly contribute to the construction and testing of the prototype. The project involves close collaboration with team members - both academic and technical, and the selected candidate is expected to be the main driver of the project. The post-doc will also be involved in dissemination activities and teaching at the Department of Mechanical & Production Engineering.

Your profile

Applicants should hold a PhD in Mechanical or Chemical Engineering or similar or expected to receive one by the time of employment. We are looking for highly motivated candidates who are able to work independently but also show competence in team work. The successful applicant is expected to have a background in CFD modeling (preferably in OpenFoam) and design of alkaline electrolyzers, a strong academic background, and good English communication skills.

Who we are

Both departments of Mechanical & Production Engineering and Biological & Chemical Engineering offer a lively research environment with a collaborative and supportive culture.

What we offer

Moreover, the departments offer:

- access to lab and all necessary equipment,
- an exciting interdisciplinary environment with many national, international and industrial collaborators
- a research climate encouraging lively, open and critical discussion within and across different fields of research
- a workplace characterised by professionalism, equality and a healthy work-life balance.

Place of work and area of employment

The position includes two permanent workplace addresses in Aarhus. Attendance at each workplace address is by agreement with your immediate supervisor. At the time of employment, the distribution between the workplace addresses is expected to be 28 days with the first place of employment in Aarhus (Katrinebjergvej 89G, 8200 Aarhus N). The other place of work is Åbogade 40A, 8200 Aarhus N. The area of employment is Aarhus University, Department of Mechanical & Production Engineering and Department of Biological& Chemical Engineering.

Contact information

For further information, please contact: Associate Professor Pourya Forooghi +45 9352 2303, forooghi@mpe.au.dk or Professor Anders Bentien bentien@bce.au.dk

Deadline

Application Deadline:
24 June 2026

Institute/Faculty:
Department of Mechanical and Production Engineering

Faculty:
Faculty of Technical Sciences

Academic contact person:
Pourya Forooghi
Lektor
+4593522303
forooghi@mpe.au.dk

Vacant positions:
1

Number of months:
28

Hours per week:
37

Expected date of accession:
01/09/2026

Applications must be received no later than 24 June 2026.

Application procedure

Shortlisting is used. This means that after the deadline for applications – and with the assistance from the assessment committee chairman, and the appointment committee if necessary, – the head of department selects the candidates to be evaluated. All applicants will be notified whether or not their applications have been sent to an expert assessment committee for evaluation. The selected applicants will be informed about the composition of the committee, and each applicant is given the opportunity to comment on the part of the assessment that concerns him/her self.

Letter of reference

If you want a referee to upload a letter of reference on your behalf, please state the referee's contact information when you submit your application. We strongly recommend that you make an agreement with the person in question before you enter the referee's contact information, and that you ensure that the referee has enough time to write the letter of reference before the application deadline.
Unfortunately, it is not possible to ensure that letters of reference received after the application deadline will be taken into consideration.

If you wish to add a referee **after** you have submitted your application, you must send this person's details (name, job title, place of work, and email address) as well as the name of the position you have applied for to: HR.Nattech@au.dk

Formalities and salary range

Technical Sciences refers to the Ministerial Order on the Appointment of Academic Staff at Danish Universities under the Danish Ministry of Science, Technology and Innovation.

The application must be in English and include a curriculum vitae, degree certificate, a complete list of publications, a statement of future research plans and information about research activities, teaching portfolio and verified information on previous teaching experience (if any). Guidelines for applicants can be found here.

Appointment shall be in accordance with the collective labour agreement between the Danish Ministry of Taxation and the Danish Confederation of Professional Associations. Further information on qualification requirements and job content may be found in the Memorandum on Job Structure for Academic Staff at Danish Universities.

Salary depends on seniority as agreed between the Danish Ministry of Taxation and the Confederation of Professional Associations.

Aarhus University's ambition is to be an attractive and inspiring workplace for all and to foster a culture in which each individual has opportunities to thrive, achieve and develop. We view equality and diversity as assets, and we welcome all applicants.

Research activities will be evaluated in relation to actual research time. Thus, we encourage applicants to specify periods of leave without research activities, in order to be able to subtract these periods from the span of the scientific career during the evaluation of scientific productivity.

Aarhus University offers a broad variety of services for international researchers and accompanying families, including relocation service and career counselling to expat partners. Read more here. Please find more information about entering and working in Denmark here.

Aarhus University also offers a Junior Researcher Development Programme targeted at career development for postdocs at AU. You can read more about it here.

The application must be submitted via Aarhus University's recruitment system, which can be accessed under the job advertisement on Aarhus University's website.

Aarhus University

Aarhus University is an academically diverse and research-intensive university with a strong commitment to high-quality research and education and the development of society nationally and globally. The university offers an inspiring research and teaching environment to its 37,000 students (FTEs) and 8.700 employees and has an annual revenue of EUR 1.106 billion. Learn more at www.international.au.dk/