Research Assistant in Green Biorefinery Pathways for Carbon Capture and Fiber Valorisation into Biobased Materials

We are seeking a Research Assistant for a fixed-term position in the Green Biorefining Technologies research group at Aarhus University, Department of Biological and Chemical Engineering. The position is part of the GrassCO2mposites project and focuses on developing green biorefinery pathways that couple carbon capture in grassland biomass with fibre valorisation into biobased materials. The position will involve experimental processing and characterization of lignocellulosic fibres derived from grass biorefinery.

Application Deadline:
17 June 2026

Institute/Faculty:
Department of Biological and Chemical Engineering

Faculty:
Faculty of Technical Sciences

Academic contact person:
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Vacant positions:
1

Number of months:
12,5

Hours per week:
37

Expected date of accession:
15/08/2026

Expected start date and duration of employment

This is a fixed-term position from 15 August 2026 to 31 August 2027 (12.5 months).

Job description

The position involves experimental research within green biorefinery processing and valorisation of fibre-rich biomass streams into biobased materials. The work focuses on how processing affects the structure and functionality of lignocellulosic fibres for material applications.

Main tasks

- Experimental processing of grass biomass using green biorefinery technologies
- Development and testing of pretreatment and conditioning methods for fibre-rich streams
- Characterisation of lignocellulosic fibres and biopolymers using relevant analytical techniques
- Operation of laboratory and pilot-scale equipment
- Data collection, documentation, and analysis
- Contribution to reporting and scientific dissemination
- The position may include increasing responsibility for planning experimental work and contributing to method development.
- The Research Assistant is expected to:
- Conduct experimental work independently and collaboratively
- Ensure structured and reproducible research practices
- Follow laboratory safety procedures and quality standards
- Deliver tasks within agreed timelines

Your profile

Applicants must hold an MSc degree in Chemical Engineering, Biotechnology, Biorefinery Engineering, Materials Science, or a related field.

Required qualifications:

- Knowledge of biomass processing and/or lignocellulosic materials
- Experience with experimental laboratory work
- Strong data handling and documentation skills
- Proficiency in written and spoken English

Preferred qualifications:

- Experience with green biorefinery processes or biomass fractionation
- Knowledge of biopolymer chemistry (cellulose, hemicellulose, lignin)
- Experience with relevant analytical techniques (e.g. chromatography, spectroscopy, thermal analysis, rheology)
- Experience with pilot-scale or process equipment

Personal qualifications:

- Ability to work independently and in a structured manner
- Strong analytical skills and attention to detail
- Ability to collaborate in an interdisciplinary research environment
- Good communication skills

Who we are

The Department of Biological and Chemical Engineering offers a dynamic research environment with close collaboration between researchers, students, and external partners, and a strong focus on sustainability and applied research.

What we offer

The Green Biorefining Technologies research group focuses on the development of sustainable biorefining processes that enable high-value utilisation of green biomass. A key strategic goal of the group is to contribute to the transition towards a circular bioeconomy by converting residual biomass streams into value-added products.
The Research Assistant will contribute to research activities related to the processing and valorisation of fibre-rich side streams from green biorefining of grassland biomass. The position supports ongoing research by performing experimental work, fibre processing, and analytical characterisation, thereby contributing to the development of biobased materials and processing pathways that enable carbon storage in long-lived applications.

Place of work and area of employment

The position includes two permanent workplace addresses in Aarhus and AU Viborg respectively. The 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 approximately 4 days a week with place of employment in Aarhus and 1 day a week with place of employment in Foulum. In Aarhus the place of work is Hangøvej 2, 8200 Aarhus N. In Foulum the place of work is Blichers Allé 20, 8830 Tjele. The area of employment is Aarhus University with affiliated institutions.

Contact information

For further information, please contact: Morten Ambye-Jensen, +45 93 50 80 09, maj@bce.au.dk.

Deadline

Applications must be received no later than 17 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/