

3-year Postdoctoral Researcher in Biocatalysis at Aarhus University, DENMARK

Are you interested in developing enzymes and using them for sustainable ammonia synthesis and can you contribute to the development of the project ENGREENIT? Then the Department of Biological and Chemical Engineering invites you to apply for a 3-year Postdoctoral position.

Expected start date and duration of employment

This is a 3-year position from 1 October 2025 or as soon as possible hereafter.

Job description

The key tasks of the postdoc in this position will be:

- Engineering nitrogenase from *Azotobacter vinelandii* to enhance catalytic rates, increase protein stability and improve oxygen tolerance;
- Screening nitrogenases from extremophiles to discover orthologs with higher stability and/or oxygen tolerance;
- Enzyme immobilization for stability, oxygen sensitivity, and reusability;
- Collaborating closely with the ENGREENIT's PhD candidate (starting 12 months later than the PostDoc researcher), supervised by the Assoc. Prof. Emil Dražević, and will jointly develop the heterogeneous nitrogenase catalyzed ammonia synthesis in the triple-phase reactor.

Your profile

- Completed PhD in the field of Biotechnology, Biochemistry, Biochemical Engineering, Molecular Biology, or a relevant,
- Strong background in enzymology and/or biocatalysis (protein expression and purification, enzyme characterization, enzyme kinetics),
- Practical experience in molecular biology techniques, especially those related to protein engineering and molecular cloning,
- Experienced in bioinformatic genome analysis and computational tools related to protein structure analysis and prediction,
- Sufficient expertise in standard chemical analysis methods,
- Experience in at least one or more of the following areas is a plus: oxygen-sensitive enzymes (glovebox), metalloenzymes, cultivation of different bacterial cells, enzyme immobilization, biocatalytic reactor design, flow biocatalysis, and computational tools for mutation predictions,
- Self-motivated, pro-active, team- and goal-oriented personality,
- Full command of the English language.

Who we are

Department of Biological and Chemical Engineering was established on 1 January 2021 in connection with Aarhus University's reorganization of the engineering area. The department employs around 175 people and is responsible for research and education within the department's scientific areas. We educate both Bachelors and Masters of Science in Engineering and around 825 students are enrolled in our study programs. Furthermore, we also offer an ambitious PhD program. Our PhD students have high academic ambitions and deliver high-quality results for both the private and the public sectors.

At the Department of Biological and Chemical Engineering, focus is on living systems, the biology of organisms, efficient production, and transformation of chemicals, materials and energy. We translate knowledge within biotechnology, food technology,

Application Deadline:
01 August 2025

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:
36

Hours per week:
37

**Expected date of
accession:**
01/02/2026

environmental technology, chemical engineering, industrial biotechnology, medical biotechnology and electrochemical engineering, and more into new technologies and value-creating solutions that can also be used in the business community. Many of our research and development activities are based on companies' specific innovation needs or specialist application areas. Close collaboration with the public sector and private businesses ensures that the knowledge and technology generated in the department's research environments has a clear anchoring in reality and benefits the surrounding society. We also provide research-based public sector consultancy and advice on technology in agriculture and food.

What we offer

The Department of Biological and Chemical Engineering offers:

- a well-developed research infrastructure, laboratories and access to shared 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 work environment with close working relationships, networking and social activities
- a workplace characterised by professionalism, equality and a healthy work-life balance.

Place of work and area of employment

The place of work is Gustav Wiedes Vej 10, 8000 Aarhus, DENMARK, and the area of employment is Aarhus University with related departments.

Contact information

For further information, please contact Prof. Selin Kara (selin.kara@bce.au.dk), +45 2237 8964; and Assoc. Prof. Bekir Engin Eser (bekireser@bce.au.dk) +45 5382 4813.

Deadline

Applications must be received no later than 1 August 2025.

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. Once the recruitment process is completed a final letter of rejection is sent to the deselected applicants.

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 38,000 students (FTEs) and 8,300 employees, and has an annual revenues of EUR 935 million. Learn more at www.international.au.dk/