

Postdoc Position in Computational Astrochemistry

Are you interested in astrochemistry and grain surface reactions? Within the Center for Interstellar Catalysis at the Department of Physics and Astronomy at Aarhus University, we have an exciting postdoc opening within these research topics in the group of Assoc. Prof. Mie Andersen. The project is co-supervised by Asst. Prof. Thanja Lamberts from Leiden Observatory and the Institute of Chemistry at Leiden University in the Netherlands.

Complex organic molecules, e.g. sugars and amino acids, discovered in interstellar space are believed to originate from reactions taking place at nanoscale dust grain catalysts. Primarily, these grains are made up of Mg- or Fe-rich silicates or carbon-based materials. In cold and dense gas clouds, the grains are increasingly covered with ices of molecules such as water, carbon monoxide and carbon dioxide, which may impact their reactivity.

In this postdoc project, the successful applicant will employ *ab initio* methods to study reactions towards complex organic molecules. The chosen reactions will be guided by experimental results from collaborators in the Center for Interstellar Catalysis. It will also be possible to pursue more independent theory-driven projects, including the development of new theoretical methods. In the group, we have extensive experience with machine learning (ML) methods, and it will be possible to include these approaches in the work. The ML methods could include approaches to accelerate structure optimization or the calculation of binding energies, diffusion and reaction barriers through ML interatomic potentials.

The project will be physically anchored at the Center for Interstellar Catalysis at Aarhus University in Denmark and will take place in close collaboration with partners engaged in computational modelling and simulations, laboratory experiments and astrochemical observations. Visits to partners in Leiden are anticipated.

You can learn more about InterCat [here](#), Mie Andersen's group [here](#) and Thanja Lamberts's group [here](#).

Starting date and period

The starting date is flexible, from August 2026 onward. The duration of the employment is two years.

Academic qualifications

Applicants must hold a PhD degree in physics, chemistry, nanoscience or related. Previous experience with *ab initio* calculations in astrochemistry or physical chemistry is required. Experience with programming in Python and/or ML methods will be considered a plus.

Personal qualifications

The ability to work in teams as well as proficient oral and written communication skills (in English) are required.

The Center for Interstellar Catalysis brings together research teams within theory, laboratory experiments and observational astrochemistry situated at Aarhus University and Copenhagen University in Denmark and Leiden University in the Netherlands.

You will become part of a highly collaborative, supportive and international research environment that welcomes new ideas.

Place of work and area of employment

The place of work is Ny Munkegade 120, 8000 Aarhus C and the area of employment is Aarhus University with related departments.

Further information may be obtained by e-mailing Mie Andersen (mie@phys.au.dk) or Thanja Lamberts (a.l.m.lamberts@lic.leidenuniv.nl). Please use as e-mail subject: "postdoctoral position 26".

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

Application Deadline:
22 May 2026

Institute/Faculty:
Department of Physics
and Astronomy

Faculty:
Faculty of Natural
Sciences

**Academic contact
person:**
Mie Andersen
Lektor
mie@phys.au.dk
+4520958162

Vacant positions:
1

Number of months:
24

Hours per week:
37

**Expected date of
accession:**
01/08/2026

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

Natural 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](#).

At the Faculty of Natural Science at Aarhus University, we strive to support our scientific staff in their career development. We focus on competency development and career clarification and want to make your opportunities transparent. On [our website](#), you can find information on all types of scientific positions, as well as the entry criteria we use when assessing candidates. You can also read more about how we can assist you in your career planning and development.

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/