

Appointment plan for position as Professor in High-Temperature Chemistry and Technology

Åbo Akademi University (ÅAU) opens a position as professor in high temperature chemistry and technology at the Faculty of Science and Engineering.

The Faculty of Science and Engineering at Åbo Akademi University offers education within natural sciences, bio sciences, pharmacy, chemical engineering and information technology. The position as professor in high-temperature chemistry and technology is placed at the Laboratory of Molecular Science and Engineering, which is part of the subject cluster Chemistry and Chemical Technology.

The Laboratory of Molecular Science and Engineering conducts teaching and research in chemistry, with a focus on analytical, physical, organic and inorganic chemistry as well as polymer technology. The laboratory teaches within the bachelor's and master's degree programmes in Chemical and Process Engineering, and is responsible for the bachelor's and master's programmes in chemistry within the study programme in natural sciences.

Information about research conducted at the Laboratory of Molecular Science and Engineering can be found on <https://www.abo.fi/en/laboratory-of-molecular-science-and-engineering-research-and-personel/>.

1. The field of activity

The field of activity of the position is high-temperature chemistry and technology. The area of responsibility includes teaching and supervision at bachelor's, master's and doctoral level.

The professor will lead and further develop a large research group in the field of inorganic chemistry, with a focus on thermochemical energy conversion. The group also conducts materials research focused on ceramics and glass. The research is closely linked to the green transition in areas such as utilization of biomass-based fuels, new methods of chemical recycling in pulp mills, and the introduction of hydrogen and ammonia in industrial high-temperature processes.

The research group collaborates extensively with industry, both nationally and internationally, with companies in the energy sector and in the ceramics industry. The research group is active in networks such as Finnish Thermal Energy Research Association, Scandinavian-Nordic Section of the Combustion Institute, International Energy Agency-Fluidized Bed Conversion Technology Collaboration Programme, European Ceramic Society, and European Federation of Corrosion.

In the Regulations for Personnel at Åbo Akademi University is generally stated a professor's duties and tasks. A professor shall carry out scientific research, provide research-based education,

follow developments in science, participate in societal interaction, and in national and international cooperation within one's field of responsibility in accordance with the Universities Act (558/2009).

2. Employment

The employment begins in the summer of 2025 or as agreed. A trial period of 6 months is applied. The position is placed in Turku, Finland. Salary setting for professors follow the collective agreement of the universities. The salary depends on the appointee's qualifications and merits. Teachers and researchers have a total working time of 1,612 hours per year. The teaching responsibilities of professors are defined within the total working hours in accordance with the university collective agreement, chapter 5, 5§. The detailed work tasks are defined in an annual work plan ahead of each academic year.

3. Qualification criteria

The person appointed to the position must have the education and experience required for successfully managing the tasks.

A professor is required to have a doctoral degree, solid scientific and pedagogical competence, the ability to lead research projects and acquire research funding, experience from international research collaboration and leadership skills.

4. Evaluation criteria

Scientific competence 50 %

In the evaluation of scientific competence, the quality and number of the applicant's scientific publications and other research results, the ability to lead research projects, as well as experience in international research or international assignments will be assessed. Particular attention in the evaluation of scientific competence for the position in question will be paid to the applicant's recent development in publishing activities as well as the ability to obtain external research funding. Participation in postgraduate education and supervision of doctoral candidates are required for the position.

Pedagogical competence 25 %

In the evaluation of teaching skills, the following will be considered: the applicants' approach to teaching and learning, pedagogical training, experience of teaching and supervision as well as course evaluation and pedagogical development. The results of a possible teaching demonstration will also be considered.

Leadership and interactive competence 25 %

For the assessment of leadership and interactive competence, attention is paid to supervision and development of the activities in a research group, co-operative skills, the ability to interact with industry and the surrounding society, as well as international collaboration within the relevant field. The evaluation is based on a review of submitted documentation and interviews conducted in connection to the recruitment process.

In weighing the applicant's competence, the scientific merits account for 50 %, pedagogical competence for 25 % and leadership and interactive skills for 25 % of the evaluation. When assessing the applicant's merits, the time elapsed since obtaining the doctoral degree, as well as any leaves of absence such as maternity, paternity or parental leaves, military or non-military service, or other leaves for a good reason, will be considered.

The evaluation will be based on written documentation, interviews and possible trial lectures. The trial lectures are public. An appointment will be based on an overall assessment of the applicant's potential for development and competencies concerning the necessary qualities to carry out the tasks for the position successfully.

The recruitment and evaluation will be in accordance with the Åbo Akademi University principles of equality and equal treatment. Åbo Akademi University is working for equal gender distribution and diversity in all staff categories.

Language skills

The administrative language of Åbo Akademi University is Swedish. To be considered for a position, an applicant can demonstrate the required language skills after the set application deadline has passed if this will not delay the process. Language requirements for teachers at Åbo Akademi University are prescribed in Section 78 of the Universities Act (558/2009), and in the Guideline for proficiency in Swedish and Finnish required of teachers at Åbo Akademi University (approved by the University Board on 25 February 2010). In order to successfully manage the duties, proficiency in English is also required.

Requirements for native Finnish citizens

For teaching and research positions at Åbo Akademi University, excellent knowledge of Swedish and the ability to understand Finnish are required. Excellent knowledge of Swedish is proved if:

- 1) The applicant has received school education in Swedish and has passed a written exam in Swedish as part of a Bachelor's or Master's degree, or
- 2) The applicant has passed the Åbo Akademi University test in Swedish, or
- 3) The applicant has passed the national language test in Swedish with the mark of excellent oral and written knowledge of Swedish, as specified in the decree on the requisite proficiency in Finnish and Swedish in state administration (481/2003).

If the applicant has passed a national Swedish language test at level 6, the language skills must be proven in an additional language test in Swedish arranged by the Language Board of Åbo Akademi University.

If the certificate of passing the language test for state administration or a national language test is more than 10 years old, the language skills shall be demonstrated for the Language Board of Åbo Akademi University.

Requirements for foreigners and non-native Finnish citizens

Foreigners and non-native Finnish citizens can be exempted from the requirement to have proficiency in Swedish and Finnish and still be eligible for the position as professor. Swedish skills are considered a merit. However, as the administrative and teaching language of the university primarily is Swedish, the person appointed is expected to acquire such knowledge of Swedish that he or she will be able to participate successfully in teaching and administrative tasks in Swedish in the future.

Excellent oral and written knowledge of English is necessary for managing the duties of a position successfully.

5. Application

A written application is needed for the position. Details of the application deadline is available in a separate announcement.

The application documents should include the following attachments in English:

- 1) A curriculum vitae (CV) and a complete list of publications in compliance with the TENK model (The Finnish National Board on Research Integrity)
<https://tenk.fi/en/advice-and-materials/template-researchers-curriculum-vitae>
- 2) A teaching portfolio. Instructions for the portfolio are available at https://web.abo.fi/befattningar/Pedagogical_portfolio2021.pdf
- 3) A separate list of a maximum of 10 publications that the applicant has chosen to demonstrate his or her competence. The publications must be available electronically and the applicant should provide links to the publications in the list of publications or upload them to a separate system for file transfer.
- 4) A short research plan (max. 5 pages).
- 5) A description of the applicant's view on the position, on the development of the research group and on leadership (max. 4 pages).

6. The appointment committee and external evaluators

An appointment committee is appointed by the dean of the faculty to support the decision makers, i.e., the dean and the faculty board, during all stages of the recruitment process. The composition and duties of the appointment committee are stated in Article 11 in the Regulations on Personnel at Åbo Akademi University (1.4.2022).

Upon a proposal of the appointment committee, the Faculty Board will appoint three expert evaluators to give a written assessment of the applicants and their qualifications and merits. In selecting the experts, the different schools within the subject field represented by the applicants should be taken into account. Also, in other respects, objectivity will be observed.

Before the expert evaluators are appointed, the applicants will be given an opportunity to comment on any legal challenges or other aspects as stated above with regard to the possible expert evaluators' eligibility. The comments must be submitted within 14 days from the time the possibility to comment on the intended expert evaluators has been offered to the applicants. Provisions concerning the possibility of legal restrictions on eligibility are stated in sections 27–29 of the Administrative Procedure Act (434/2003).

The expert evaluators will submit separate statements. The statements should be submitted within six weeks after the expert evaluators have been appointed, unless special circumstances justify that the statement is delayed. The expert evaluators must give motivated statements for the applicants they find most qualified for the position. The expert evaluators shall place the applicants in ranking order. The expert evaluators are not allowed to participate in the further handling of the recruitment process after they have submitted their statements.

7. Demonstration of teaching skills and interview

The applicants who by the appointment committee are considered most qualified for the position can be offered the possibility to demonstrate their teaching skills. Information about a possible teaching demonstration will be given later. The appointment committee will also arrange an interview either separately or with the possible teaching demonstration.

8. Proposal of appointment or decision on discontinuation

Upon receiving the statements from the expert evaluators, the Faculty Board shall assess the qualifications of the applicants deemed as the most merited for the position and submit a proposal for employment or a decision to discontinue the process.

A decision regarding qualifications and a proposal for an appointment can also be made even if not all of the expert evaluators have submitted their statement, if

- the deadline for submitting the statement has passed, and
- statements have been received from at least two expert evaluators, and
- it is found that the remaining statements can be omitted without compromising an objective evaluation of the applicants.

At Åbo Akademi University (ÅAU), we offer research and education in humanities, pedagogics and theology, social sciences, business, natural sciences and technology, including systematic, high-level and supervised doctoral training. Our special research profile areas are Minority Studies, Solutions for Health, Technologies for a Sustainable Future, and The Sea.

Our activities are steered by the values of academic tradition in terms of freedom of research and education as well as ethical responsibility. We are a workplace that recognizes and utilizes the knowledge and competencies of the staff and students. We value and endeavor diversity, inclusion, equality, health and sustainability in all our activities as well as continuous well-being and career possibilities for staff.

Established over 100 years ago, ÅAU operates at the historical campus in Turku and Vaasa. With our 5,500 graduate and postgraduate students and 1,100 employees, we are an international and unique university. Join us and work for a better world!

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Do research with us: <https://www.abo.fi/research-at-aau/>