



Professor in Advanced Energy Materials

Aalto University
School of Science



Aalto University



Aalto University

Aalto University is a multidisciplinary community of bold thinkers where science and art meet technology and business.

Aalto University is a university where research, art and education are promoted hand in hand. We are committed to **identifying and solving grand societal challenges** and building an innovative future.

With high-quality research we aim at creating significant impact on the international scientific community, industry and business, as well as the society at large. Disciplinary excellence is combined with **multidisciplinary** activities, engaging both students and the local innovation ecosystem.

Aalto has over 13 000 students and **six schools** with more than 400 professors. We are an international community: more than 45% of our academic personnel have an international background.

Aalto University was **founded in 2010** as three leading Finnish universities, Helsinki University of Technology, the Helsinki School of Economics and the University of Art and Design Helsinki, were merged. Our campuses are located in Espoo and Helsinki, Finland.

The University campus in Espoo is developing into a unique, open innovation hub and a center of collaboration that attracts partners from all around the world. It encourages sharing of ideas, inter-disciplinary encounters, creativity, growth and entrepreneurship. The core of the campus will be a vibrant city with versatile services and attractive places to meet.

A''

Aalto University

More info at
aalto.fi



School of Science

Changing the world for the better through high-level research, making a significant impact on society.

At the school, the research carried out meets the highest of international scientific standards in our focus areas and scientific and technological applications on the basis of research findings are developed. The school is an important research partner and has strong connections with many international networks.

Moreover, the school is committed to having an **active role in society** and promoting the societal effectiveness of research findings at both a national and international level. During the last twenty years, the school has generated approximately **100 patents and tens of research-based enterprises**.

The School has **five departments**: Applied Physics, Computer Science, Industrial Engineering and Management, Mathematics and Systems Analysis and Neuroscience and Biomedical Engineering

Around **3 500 students** are taught by the School of Science. Over 250 master's degree students and 90 doctoral candidates graduate from the school every year. In total, there are **1 500 members of academic staff** at the school, of which 110 are professors, 400 are doctoral candidates, and other research and teaching personnel 600.

A''

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More info at
sci.aalto.fi



Department of Applied Physics

The Department of Applied Physics hosts 26 research groups that pursue vigorous research in the field of physical sciences with important industrial applications and technological potential. Much of this research focuses on condensed matter and materials physics, quantum physics, and nano-optics, and on advanced energy sciences, with topics extending from fundamental research to important applications of societal relevance. For the future, growing emphasis will be given to quantum technology and engineering, designer matter, and database-driven machine learning in materials research.

The department educates future generations of research professionals, data specialists, technology experts, inventors, and scientists for industry and society. We are a **highly international community**: on average 53% of our research and teaching personnel have an international background, including six of our current 21 professors. 45% of our PhD students and 74% of our postdocs come from abroad. Among our tenure track professors, five have been recruited in the past five years.

The department has an extremely successful track record in national and European **competitive funding calls**. External funding represents over 50% of our total income. Our researchers have received 22 ERC grants (> €30m) since 2010 (in quantum, solid state and soft matter physics). The department also currently coordinates an Academy of Finland Centre of Excellence in Quantum Technology Finland (QTF)] and the Centre for Quantum Engineering (CQE), an Aalto strategic initiative. These contribute significantly to interdisciplinary research collaboration locally, nationally and internationally. Many of our researchers also participate in Aalto University's cross-cutting Materials and Energy platform activities, and a number of our staff manage Aalto's participation in the activities of the Helsinki Institute of Physics (HIP).

We also coordinate the OtaNano national open-access research infrastructure, which includes two major facilities hosted at the department, the Nanomicroscopy Center and the Low Temperature Laboratory.

Aalto offers excellent **computational resources** at two levels. At the university level, Science-IT (science-it.aalto.fi) provides mid-range scientific computing and special resources needed by researchers in the School of Science, offering high-quality support and even research-project-level customization. These resources are integrated into the Aalto IT environment, with regular local training in scientific computing practice for entry-level users. At the national level, Aalto has excellent access to the neighbouring Centre for Scientific Computing (csc.fi), which offers a state-of-the-art supercomputing environment, cloud services, HPC training and an extensive selection of scientific software, as well as access to international computing resources. These facilities are free for academic users. Aalto is also a node in the CECAM network (cecam.org), playing a part in a vibrant network of computational workshops and seminars.

Our researchers' strong local and international **collaborative relationships** foster innovation and scientific impact. We host c. 150 visitors and 10-15 international conferences per year. We also nurture public outreach by our faculty and encourage activities that increase the visibility of physics in the media to attract future generations of innovative thinkers to the field.

More info at
aalto.fi/en/department-of-applied-physics



Professor in Advanced Energy Materials

Aalto University School of Science invites applications for a tenure-track professor position in the field of advanced energy materials.

Your role and goals

The tenure-track position in advanced energy materials is open to individuals holding a doctorate in physics or a closely related field, with the intent for pursuing an academic career at the Department of Applied Physics. Materials is one of the strategic focus areas of Aalto University, and the development of advanced materials in energy production and storage are among the key research areas at the Department of Applied Physics. Applicants who have demonstrated outstanding research in experimental materials physics are invited to apply. In particular, we seek candidates with scientific expertise in experimental materials physics in the field of renewable energies and energy storages. Materials for nuclear applications are omitted from the call. The posted position is at the assistant professor level, but exceptional candidates would be also considered for associate or full professor levels.

We seek expertise in energy materials for applications in energy production, conversion, transmission, or storage or for reducing the power consumption and increasing the efficiency of existing devices. Example areas of interest include photovoltaic materials and devices, fuel cells, batteries, supercapacitors, and materials for hydrogen generation and storage.

The successful candidate is expected to develop and lead an outstanding research program integrated into the general experimental and theoretical research in the Department of Applied Physics and utilizing the existing infrastructure at the department, for example the Otanano Micronova Cleanroom and Nanomicroscopy Center for the fabrication and characterization of energy materials. The development of own laboratory facilities is encouraged.

The nominated candidate is expected to contribute to education in the fields of energy and materials at the Bachelor's and Masters' level, to develop curricula for new courses in the department and to supervise students at the Bachelor's, Masters' and doctorate level.

Your experience

Candidates in the academic tenure track system are expected to exercise and guide scientific research, to provide related higher academic education, to follow advances in their field, to participate in service to the Aalto University community, and to take part in societal interaction and international collaboration in their field.

We seek applicants who have

- ❖ A doctorate in physics or a closely related field.
- ❖ Potential to carry out research independently and to attract research funding at the highest level.
- ❖ Potential to collaborate in an interdisciplinary environment.
- ❖ Potential to take responsibility for education and researcher training in material sciences and renewable energies.
- ❖ Ability to be an effective teacher in the undergraduate and graduate degree programmes of the School of Science.

The applicants will be reviewed on the basis of their merits in research, teaching, academic/technological leadership, and activities in the scientific community, including in R&D, in accordance with their career stage. A more detailed description of the tenure track system at Aalto University is available at <https://www.aalto.fi/en/tenure-track/tenure-track-career-path>



Principles and benefits

Aalto's recruitment principles

Aalto University is committed to promoting diversity, equality and non-discrimination in all its activities. Thus, we promote equal opportunities to learn, acquire knowledge, participate and to make a difference. We encourage qualified candidates from all backgrounds and especially women, who are underrepresented in this field, to apply. As an equal-opportunity employer, Aalto University founds its recruitment decisions on applicants' competencies, skills and aptitudes. Aalto's recruitment processes are clearly defined, transparent and fair, and allow the relevant areas to be emphasized when recruiting people to positions in the various career systems and levels. Career breaks due to periods of parental leave and other obligatory absences, such as military service, will be taken into account to your benefit when considering applications.

Scientific environment

- ❖ For existing experimental infrastructure see the [equipment of the Department of Applied Physics](#), and [Otanano national infrastructure](#), which includes [Micronova](#), and [Nanomicroscopy Center](#)
- ❖ For existing computational infrastructure see [Triton high-performance computing cluster](#), [CSC – IT Center for Science](#), and [LUMI supercomputer](#).

What we offer?

The professor will join an inspiring and supportive work community of experienced professionals and high-quality students. Aalto University follows the salary system of Finnish universities, but applicants may also provide salary requirements. As an employer, Aalto University provides excellent staff training and mentoring programmes as well as occupational health care services, commuter ticket benefits and campus sport facilities.

In addition, we offer extensive research support services such as grant writing and project management. The position will be located at the Aalto University Otaniemi Campus.

Why Finland?

For applicants selected for tenure track positions, the university provides relocation support, such as assistance with finding housing and kindergartens/schools located on campus and nearby, and career support for accompanying partners. Aalto University encourages flexible working hours to allow a healthy balance between work and family life. For all new staff members and their families, Aalto University provides dedicated introductory social and cultural events around the year. The university has six schools with nearly 11 000 students and 400 professors committed to building both foundations and innovative applications that shape the future through science, technology, art, and business, with excellent opportunities for collaboration with local partners at Aalto University, VTT Technical Research Centre of Finland and University of Helsinki. In addition to its strong academic community, the Helsinki region is a vibrant technology and innovation hub with easy access to major partners, both private and public.

The Department of Applied Physics is located at the main Otaniemi Campus of Aalto University, 15 metro minutes away from the center of Helsinki. Helsinki International Airport (HEL) is one of the primary hubs of air traffic between Europe and Asia, with direct flights to many destinations around the world.

More info at
position.aalto.fi



Applying

Ready to apply?

The application material for the tenure track position includes:

- ❖ Cover letter
- ❖ Curriculum Vitae (using template recommended by The Finnish Advisory Board on Research Integrity (TENK)).
- ❖ Summary of merits and highest achievements in research (max. 2 pages)
- ❖ List of publications in which the 10 most significant publications/patents are highlighted
- ❖ A teaching portfolio, including information on teaching, responsibilities regarding course preparation, experience on supervising theses and development of teaching in general (4-10 pages)
- ❖ A research statement describing past research and plans for future research (4-10 pages). Please include a description of the facilities you need and a cost estimate, as well as of your possibilities of utilizing the existing infrastructure and/or sharing your equipment.

All material should be submitted in English and must be enclosed as a single standard pdf file with file name

“lastname_firstname_application.pdf”. The first document of the pdf file is the cover letter, followed by the appendices in the order given in the list above. Applications should be written using a minimum font size of 11 pt.

The application materials will not be returned. Please also note that our recruitment system will accept only a limited number of attachments - consequently please abide by our request to combine materials to a single pdf-file.

Applications for tenure track positions should be addressed to the Dean of Aalto University's School of Science and sent through the electronic recruitment system.

The deadline for applications is midnight 31.05.2023 Eastern European Time / Eastern European Daylight Time. Please refer to the title of the position concerned in your application.

Aalto University reserves the right for justified reasons to leave the position open, to extend the application period or to consider candidates who have not submitted applications during the application period.

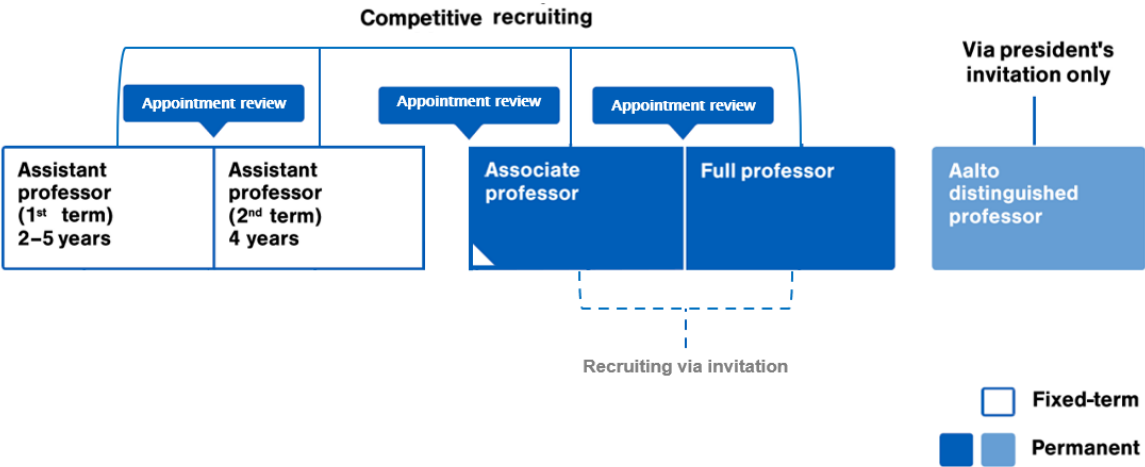
[Apply here!](#)



Tenure Track Career

Aalto University's tenure track career system offers a well-supported and clear career path.

- **Clear and transparent** criteria and processes for recruitment, evaluation, and promotion.
- **Compensation of success** – Adequate salary and compensation to motivate towards Aalto's vision and objectives.
- **Equal opportunity to succeed** – Motivation and cooperation increase as people in tenure track compete only with themselves, not against one another.



More info at aalto.fi/tenuretrack



Tenure Track

General time allocation for tenure track professors

	Assistant Professor (1)	Assistant Professor (2)	Associate Professor	Full Professor	Aalto Distinguished Professor
<input type="checkbox"/> Fixed term					
<input checked="" type="checkbox"/> Permanent					
Research/ artistic/ professional work	65% +/-10%	60% +/-10%	50% +/-10%	40% +/-15%	Negotiable
Teaching	30% +/-10%	30% +/-10%	30% +/-10%	30% +/-15%	30% +/-15%
Service	5% +5%	10% +/-5%	20% +/-10%	30% +/-15%	Negotiable

Key principles

- Research emphasis high in the beginning to obtain research portfolio.
- Teaching relatively constant to maintain required teaching scale and senior professors in touch with students.
- Contribution for academic leadership and collaboration in research and artistic community increase with seniority through increased leadership, committee membership and societal interaction.
- Mandatory teaching for Distinguished Professors, otherwise work profile negotiated.

More info at
aalto.fi/tenuretrack



Working at Aalto University

Why join us?

Established in 2010 as a merger of three leading Finnish Universities, we are both **challenger of the old, and traditional with strong history** and legacy.

Our unique combination of fields in **art and design, technology and business enable multi-disciplinarity** and finding clever solutions for the world's most wicked problems in the interfaces of these fields.

We aim for **societal impact**, educating game changers to drive sustainability.

We enjoy working at our evolving **collaborative campus close to the heart of Helsinki**, with good connections, great architecture and amazing nature.

We are **international and diverse**: more than 40 % of our faculty comes from outside of Finland. Our working environment is multi-cultural, widely English-speaking and its easy to settle in, despite of wherever you come from.

We have strong academic standing and reputation in our key fields – Aalto University is among top 10 of New Universities in the world (QS ranking).

Our **well-functioning and fair Tenure Track career system** enables building a successful academic career, providing support for fulfilling your professional ambitions.

Culture that inspires and includes everyone. It's the people that create Aalto, now and in the future. We want to be an open community where equality and inclusion enable curiosity, innovation, collaboration and wellbeing. We constantly keep learning to find the most impactful ways to empower – and invest in – our people.



What do we offer?

Meaningful and inspiring environment

We are proud of our purpose to shape a sustainable future. We spark the game changers of tomorrow, and renew society with research-based knowledge, creativity and an entrepreneurial mindset.

Culture that inspires and includes everyone

All our work is guided by the values of the university: responsibility, courage, and collaboration. It's the people that create Aalto, now and in the future. We want to be an open community where equality and inclusion enable curiosity, innovation, collaboration and wellbeing.

Collaboration reimaged

At Aalto University, a unique combination of science, art, tech, and business brings talent together. We have over 12 000 students and 4 000 employees joining forces to shape a sustainable future. Together with the surrounding companies, startups and technology parks at the Otaniemi campus, we are committed to driving ground-breaking research, educating the game changers of tomorrow, and renewing society.

Vibrant campus at a central location

The vibrant Otaniemi campus, only 10 km away from Helsinki city centre, is the home of a bold and curious community, where science and art meet technology, business and innovation. Finland is famous for being the Happiest Country in the World, and having the world's best education system, world class academic freedom, cleanest air, high trust, and a low hierarchy – themes also important to Aalto.



Aalto University



Living in Finland

Finland is among the best countries in the world according to many quality of life indicators, including being the happiest country in the world (UN study 2022).

We are humble people, but dare to say we have **one of the most advanced education systems in the world**.

The Nordic values of **equality and co-operation** are rooted deeply into our society. We are one of the world's top countries in press freedom and consider the many voices in our society a strength.

With high investments in R&D, a strong innovation culture, open data and advanced state of digitalization, we are a nation of **innovation and entrepreneurship**.

Gender equality, flexibility and low hierarchy are at the core of our **Nordic working environment**. Professional ambitions can be combined with a fulfilling personal life.

We are one of the world's most **reliable and stable** nations with low levels of corruption and high level of safety. We are proud to provide exceptionally high standards of social security and healthcare, financed by the state.

Having four distinct seasons, clean air and thousands of lakes, we are some nature-loving people and take good care of our **unique environment**. We enjoy our midnight sun in the summer and northern lights in the winter.

Finnish language is known to be a bit on the complicated side, but don't worry, we Finns are fluent in English, and have an **international mindset**.

We have **wide and reliable transport networks**, with Helsinki airport serving over 100 direct destinations. The comprehensive public transport makes it easy to commute. Our campus is situated within a 10 minute metro ride from the heart of Helsinki.

Want to live in the best country in the world?

More about [Helsinki](#)

More about [Espoo](#)

More about [Finland](#)

More about [working at Aalto](#)



Recruitment process





**We want *you* to be part of our
community – join us in shaping
the sustainable future!**

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**Aalto University –
a community of
game changers**
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