

Doctoral Researcher in field(s) of organic photoemitters
and/or self-assembled cellulosic materials
Aalto University

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Posted Jul. 8, 2024, set to expire Dec. 30, 2024

Job Title	Doctoral Researcher in field(s) of organic photoemitters and/or self-assembled cellulosic materials
Department	T107 Bioproducts and Biosystems
Institution	Aalto University , , Finland
Date Posted	Jul. 8, 2024
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Graduate Student
Academic Field(s)	Biology - General
Job Website	https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Doctoral-Researcher-in-field-s--of-organic-photoemitters-and-or-self-assembled-cellulosic-materials_R40249

Apply By Email

Job Description

Aalto University is where science and art meet technology and business. We shape a sustainable future by making research breakthroughs in and across our disciplines, sparking the game changers of tomorrow and creating novel solutions to major global challenges. Our community is made up of 13 000 students, 400 professors and close to 4 500 other faculty and staff working on our dynamic campus in Espoo, Greater Helsinki, Finland. Diversity is part of who we are, and we actively work to ensure our community's diversity and inclusiveness. This is why we warmly encourage qualified candidates from all backgrounds to join our community.

Circular Materials Bioeconomy Network (CIMANET) is an interdisciplinary doctoral education network to support the renewal of the bio-based industry through new sustainable materials and processes.

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CIMANET is part of the doctoral education pilot program established by Finland's Ministry of Education and Culture, providing scientific and technological competences to promote sustainable growth. It strengthens the knowledge base required to enhance the Finnish forest and bio-based industry with novel solutions unveiling the full potential of biomass. CIMANET consists of nine universities: Aalto University, Hanken School of Economics, LUT University, Tampere University, University of Helsinki, University of Jyväskylä, University of Oulu, University of Turku, and Åbo Akademi University.

CIMANET operates in close collaboration with the industry, research organizations, as well as other stakeholders to create economic and societal impact by addressing the major challenges of our century: resource sufficiency, access to clean water, and climate change. Check out the [\[url=https://www.aalto.fi/en/doctoral-education-pilot/cimanet-doctoral-education-pilot\]](https://www.aalto.fi/en/doctoral-education-pilot/cimanet-doctoral-education-pilot)CIMANET pilot website.

We are now looking for a

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We are now looking for a doctoral researcher to manage circular polarized emitters at Aalto University's department of Bioproducts and Biosystems. In this position you will have a chance to make an impact by developing novel biobased materials to be applied in 3D displays, and optical information storage/encryption. Join us in shaping the future!

In the OptoCell project you will develop cellulose-based circular polarized emitters, based on self-organized cellulose films. The chirality arising from this biomaterial will be transferred to aggregation-induced emitters that, upon interaction with the film, will turn on their brightness and inherent resistance to photodegradation.

Scientific environment

The work will be conducted in between [\[url=https://www.aalto.fi/en/department-of-bioproducts-and-biosystems/photoactive-organic-materials\]](https://www.aalto.fi/en/department-of-bioproducts-and-biosystems/photoactive-organic-materials)the Photoactive Organic Materials group and [\[url=https://www.aalto.fi/en/department-of-bioproducts-and-biosystems/materials-chemistry-of-cellulose\]](https://www.aalto.fi/en/department-of-bioproducts-and-biosystems/materials-chemistry-of-cellulose)the Materials Chemistry of Cellulose group, both at [\[url=http://www.aalto.fi/en/department-of-bioproducts-and-biosystems\]](http://www.aalto.fi/en/department-of-bioproducts-and-biosystems)the Bioproducts and Biosystems department. You will have access to a wide range of expertise and infrastructure, ranging from organic chemistry lab to colloidal and thin-film cellulose characterization. Your scientific and personal development will be nurtured mainly by Dr. Eduardo Anaya-Plaza, in close liaison with Prof. Eero Kontturi.

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In the first weeks, you will be assigned your own onboarding buddy who will help you get started with your work and studies at Aalto.

Your role and goals

During this project, you will be expected to develop new organic molecular emitters, based on the existing expertise in the group. Second, you will unravel the delicate interplay between structure, electrostatic interaction, and optical properties. Last, the gathered knowledge will enable colloidal and thin-film materials to be applied in 3D displays and optical information storage/encryption.

Your experience and ambitions *

Previous experience in organic chemistry lab and/or chemical modifications of cellulosic materials. Good command on typical characterization techniques will be a valuable asset (NMR, TGA, elemental analysis, FTIR, etc). *

A keen interest to work in the lab, learn how to build your own instruments, perform your own experiments, and analyze your results. *

Excellent student track records

Before the beginning of employment, the selected candidate must have completed: *

a master's degree awarded by a university, or *

a study programme that in the awarding country gives eligibility for doctoral level studies

in chemistry, with particular focus on organic chemistry, biobased materials, or a closely related field. A good command of English is required, Finnish language is not.

Applicants must fulfill the admission criteria of the Aalto Doctoral Programme and, if chosen for a position, apply for, obtain and accept the right to pursue doctoral studies at Aalto University. For more information on the general requirements and the application process for doctoral studies, please visit [[url=https://www.aalto.fi/en/doctoral-education/how-to-apply-for-doctoral-studies.](https://www.aalto.fi/en/doctoral-education/how-to-apply-for-doctoral-studies)][https://www.aalto.fi/en/doctoral-education/how-to-apply-for-doctoral-studies.](https://www.aalto.fi/en/doctoral-education/how-to-apply-for-doctoral-studies)

What we offer *

Opportunity to work in a dynamic community of world-class researchers and professionals where students are rigorously selected and highly motivated. This leads to an exceptionally interactive and intellectually challenging atmosphere at Aalto. *

We have a flexible modern work culture. We value the balance and well-being of work and leisure in all aspects of life. *

We offer you an interesting job in an inspiring work environment. You will be able to work in a

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community where we promote socially significant goals in science and education. We will familiarize you with your tasks and you will be part of a nice and competent team that will provide you with support for your work tasks also in the future. We encourage and offer opportunities for continuous development of your own expertise. *

The expected starting date in the position is in the autumn of 2024 or at the latest on 1st January 2025. Presence in Finland for the duration of the contract is compulsory. *

The employment contract will be made for three years with the funding from the Finnish Ministry of Education and Culture. The contract includes a prerequisite to apply, receive and accept doctoral study right within the probation period of the first 6 months. *

The annual workload of research and teaching staff at Aalto University is 1612 hours. *

Aalto University follows the salary system of Finnish universities. The starting salary is approximately 3000 €/month (gross). *

The contract includes Aalto University occupational healthcare. Aalto University provides excellent learning and development opportunities, and a commuter ticket benefit. Unisport offers versatile sports facilities and exercise services with a staff discount. *

We work in a hybrid way, and the primary workplace is Otaniemi, Espoo. The Otaniemi campus is a thriving and connected community of 100 nationalities. Life at the transformed campus is vibrant and filled with amazing architecture, calming nature, and a variety of cafes, restaurants, services and good connections along the metro and city train lines. See how the campus looks like on our virtual tour: <https://virtualtour.aalto.fi/>

Join us!

To apply, please submit the following application materials through our aalto.fi recruitment site by August 18th 2024 . Click “Apply now”.

Please note: Aalto University’s employees should apply for the position via internal HR system Workday (Internal Jobs) by using their existing Workday user account (not via the external webpage for open positions). Aalto University’s students and visitors should apply as external candidates with personal (not aalto) email.

All material should be submitted in English and in a pdf-file. Application materials should include:

1. Letter of motivation (max. one page). Please describe your background and future plans, and in particular the reasons for applying for this project.
2. A curriculum vitae and possible list of publications with complete study and employment history, contact details of referees from 2 senior academic people. We will contact your referees, if recommendation letters are required. (Please see CV example

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[url=https://view.officeapps.live.com/op/view.aspx?src=&https%3A%2F%2Ftenk.fi%2Fsites%2Fdefault%2F06%2FTENK_CV_template_2020.docx&wdOrigin=&BROWSELINK]TENK_CV_template_2020.docx (live.com))

3. A study transcript provided by the applicant's university that lists studies completed and grades achieved.
4. A copy of the M.Sc. degree certificate or equivalent. (For doctoral study application it will need to be officially translated into Finnish, English or Swedish). If the degree is still pending, then a plan for its completion must be provided.
5. Plan for obtaining a certificate of language proficiency for doctoral study application if position is offered (in order to have it on time for application, see more from [url=https://www.aalto.fi/en/doctoral-education/how-to-apply-for-doctoral-studies]https://www.aalto.fi/en/doctoral-education/how-to-apply-for-doctoral-studies)

We will go through applications, and we may invite suitable candidates to interview already during the application period. The position will be filled as soon as a suitable candidate is identified. The chosen candidate should apply for doctoral study right immediately after accepting the position.

Any questions?

For additional information, kindly contact Dr. Eduardo Anaya (eduardo.anaya@aalto.fi). Aalto University reserves the right to leave the position open, extend the application period, reopen the application process, and consider candidates who have not submitted applications during the application period.

Want to know more about us and your future colleagues?

You can watch these videos: [url=https://www.youtube.com/watch?v=&5k_og_6zUJQ]Aalto University - Towards a better world, [url=https://www.youtube.com/watch?v=&dUfEGVM-ZP8&feature=&youtu.be]Aalto People , and [url=https://www.youtube.com/watch?v=&ZK6pDWm1_CE]Shaping a Sustainable Future.

For more information about living in Finland: [url=https://www.aalto.fi/en/careers-at-aalto/for-international-staff]https://www.aalto.fi/en/careers-at-aalto/for-international-staff .

Read more about working at Aalto: [url=https://www.aalto.fi/en/careers-at-aalto]https://www.aalto.fi/en/careers-at-aalto

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Contact Information

Please reference Academickeys in your cover letter when
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Contact

Finland