

Doctoral Researcher, Wood-based Functional
Biocomposites
Aalto University

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Posted Jun. 23, 2025, set to expire Dec. 31, 2025

Job Title Doctoral Researcher, Wood-based Functional
Biocomposites
Department T107 Bioproducts and Biosystems
Institution Aalto University
, , Finland

Date Posted Jun. 23, 2025

Application Deadline Open until filled
Position Start Date Available immediately

Job Categories Professional Staff

Academic Field(s) Biology - General

Job Website https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Doctoral-Researcher--Wood-based-Functional-Biocomposites_R43622

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 120 nationalities, 14 000 students, 400 professors and close to 5000 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.

The Department of Bioproducts and Biosystems (BIO2) is now looking for a

Doctoral Researcher in Wood-based Functional Biocomposites

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Job description

A four-year Doctoral Researcher position is available in the [url=https://www.aalto.fi/en/department-of-bioproducts-and-biosystems/wood-material-science]Wood Materials Science Group at [url=https://www.aalto.fi/en/department-of-bioproducts-and-biosystems]the Department of Bioproducts and Biosystems, Aalto University, Finland. The thesis work will be carried out as part of the COOLWOOD project, led by Academy Research Fellow Dr. Shennan Wang and funded by the Research Council of Finland. The project aims to harness and enhance wood's natural properties for climate regulation, with a particular focus on developing sustainable wood-based materials for passive cooling applications.

Your role and goals *

Explore sustainable wood modification techniques to enhance the cooling potential of wood, inspired by natural systems and enabled by bio-based solutions and nanoscale structural control. *

Investigate structure-property-function relationships in novel wood-based biocomposites. *

Build competitive skills and interdisciplinary knowledge in wood ultrastructure, biorefinery concepts, and advanced materials characterization. *

Collaborate with leading research groups at internationally renowned universities and participate in international research visits. *

Present your research at domestic and international conferences and workshops. *

Prepare research manuscripts for submission to top-tier scientific journals. *

Supervise bachelor's and master's students to develop pedagogical and mentoring skills.

Requirements

The successful candidate should have: *

An MSc in a relevant field, such as Wood Science, Materials Science, Fiber and Polymer Science, Composite Science, Bioproducts Engineering, or similar. *

Excellent grades in MSc studies and thesis work. *

High motivation, openness to learning new skills, and critical thinking. *

Strong written and oral communication skills in English. Language requirements for doctoral admissions at Aalto University are described [url=https://www.aalto.fi/en/doctoral-education/eligibility-and-language-requirements-in-doctoral-admissions#8-language-proficiency-requirements-2025]here. *

Ability to conduct independent research and work in a team environment.

Skills, knowledge and abilities in the following areas are highly desirable: *

Solid understanding of wood structure and biopolymers. *

Experience with material characterization techniques, including but not limited to electron microscopy,

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spatially resolved spectroscopy, and X-ray scattering. *
Prior experience working in a biocomposites or wood science laboratory. *
Track record of publishing in peer-reviewed journals.

What we offer

We offer an open, inclusive, and interdisciplinary research environment that values academic freedom and collaboration. The starting salary for a Doctoral Researcher is approximately €3,000/month (gross), with increases based on progress in the doctoral studies. The contract includes Aalto University's occupational health care services, holiday bonus, and access to a wide range of staff benefits. Finland also offers a comprehensive social security system. The position is expected to begin on 1 September 2025, with flexibility to agree on a later start date.

For more information

Please contact Dr. Shennan Wang (shennan.wang@aalto.fi) or Prof. Lauri Rautkari (lauri.rautkari@aalto.fi).

Ready to apply?

The application should include the following: *

A cover letter explaining your background and motivation *

A curriculum vitae *

Degree certificates and academic transcripts *

Names and contact details of at least 2 references (or letters of recommendation)

Please submit your application in English as soon as possible and no later than 15 August 2025 through the online recruitment system (link below, "Apply now"). Aalto University's employees should apply for the position via our internal HR system Workday (Internal Jobs) by using their existing Workday user account (not via the external webpage for open positions). If a suitable candidate is found before 1 August, we may proceed with the hiring and close the position early.

Want to know more about us and your future colleagues? You can watch these videos:

[url=<https://www.youtube.com/watch?v=i8zawpNMVG8>]This is Aalto University!

[url=https://www.youtube.com/watch?v=5k_og_6zUJQ]Aalto University - Towards a better world
and [url=https://www.youtube.com/watch?v=ZK6pDWm1_CE]Shaping a Sustainable Future.

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

Check out our new virtual campus experience: [[url=https://virtualtour.aalto.fi](https://virtualtour.aalto.fi)]<https://virtualtour.aalto.fi>

About Finland

Finland is a great place for living with or without family - it is a safe, politically stable and well-organized Nordic society. Finland is consistently ranked high in quality of life and was listed again as the happiest country in the world: [[url=https://worldhappiness.report/news/world-happiness-report-2025-people-are-much-kinder-than-we-expect-research-shows/](https://worldhappiness.report/news/world-happiness-report-2025-people-are-much-kinder-than-we-expect-research-shows/)]World Happiness Report 2025

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

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

Finland