

Postdoctoral Researcher Position in Epitaxial Growth of III-Nitrides  
Aalto University

Direct Link: <https://www.AcademicKeys.com/r?job=249466>

Downloaded On: Nov. 23, 2024 10:37am

Posted Nov. 22, 2024, set to expire Mar. 24, 2025

<b>Job Title</b>	Postdoctoral Researcher Position in Epitaxial Growth of III-Nitrides
<b>Department</b>	T410 Dept. Electrical Engineering and Automation
<b>Institution</b>	Aalto University , , Finland
<b>Date Posted</b>	Nov. 22, 2024
<b>Application Deadline</b>	Open until filled
<b>Position Start Date</b>	Available immediately
<b>Job Categories</b>	Post-Doc
<b>Academic Field(s)</b>	Electrical and/or Electronics
<b>Job Website</b>	<a href="https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Postdoctoral-Researcher-Position-in-Epitaxial-Growth-of-III-Nitrides_R41498">https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Postdoctoral-Researcher-Position-in-Epitaxial-Growth-of-III-Nitrides_R41498</a>

**Apply By Email**

**Job Description**

Electronics Integration and Reliability (EILB) is a research group at Aalto University School of Electrical Engineering focused on exploring innovative materials and design concepts for advanced electronics. We are developing high-efficiency, sustainable semiconductor substrates and devices for power electronics, RF, and smart sensor applications. Our mission is to achieve transformative device innovations by leveraging high crystal quality and single crystal aluminum nitride (AlN) thin film-based technologies.

We are seeking a Postdoctoral Researcher with strong expertise in the epitaxial growth and characterization of III-nitrides. In this role, you will contribute to various ongoing projects in the group, covering topics such as thermally conductive Silicon on Insulator (SOI), AlN polarization-doped field effect transistors, AlN on Si for single photon emitters and RF filters, and vertical wall-grown AlN for 3D-

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MEMS applications.

Key Responsibilities: \*

Grow high-quality III-nitride thin films using techniques such as metal-organic vapor phase epitaxy (MOVPE). \*

Develop and optimize epitaxial processes to enhance crystal quality and performance. \*

Conduct thermal, electrical, and microstructural characterization of grown samples to evaluate material and device properties. \*

Collaborate with international partners and contribute to several EU-funded projects, gaining valuable exposure to European research in electronic components and systems.

Requirements: \*

Doctoral degree in a suitable area (e.g. electrical engineering, physics, or materials science) \*

Hands-on experience and solid understanding of epitaxial processes, ideally in MOVPE or MBE \*

A strong track record of research in III-V or III-Nitride semiconductors \*

Experience and solid understanding of relevant characterization methods, such as HRXRD, AFM, Photoluminescence (PL), SEM, and TEM \*

Experience on probe-station based measurements for electrical characterization is a plus \*

Experience in micro- and nanofabrication \*

Good understanding of semiconductor device physics and WBG semiconductor devices \*

Experience in writing grant proposals and securing research funding is an advantage

We offer: \*

Fixed-term position for 3 years (1&#43;2) \*

Opportunity to conduct independent research in OtaNano (<http://www.aalto.fi/en/otananano>]OtaNano | Aalto University) using cutting-edge infrastructure in Micronova and Nanomicroscopy Center \*

Possibility to participate in already funded public-private-partnership projects, network with major European industrial and academic project partners and contribute to new research funding applications \*

Possibility to co-advise graduate students and participate in teaching \*

The starting salary for a postdoctoral researcher ranges from 4000-4200 €/month, depending on previous experience \*

The contract includes Aalto University occupational healthcare

The appointment is available immediately.

How to apply

To apply, please submit the documents indicated below using our online recruitment system ("Apply

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now!" link below, by January 6th, 2025. Application materials should be submitted in a single pdf file and in English. Your application should include the following attachments: \*

a short cover letter stating your motivation for the position \*

a CV \*

a copy of study records \*

the names and contact details of 2 references

The application materials will not be returned.

#### Additional information

For additional information in recruitment process related questions, please contact HR partner Camilla Hanganpää, [[url=mailto:camilla.hanganpaa@aalto.fi](mailto:camilla.hanganpaa@aalto.fi)]camilla.hanganpaa@aalto.fi.

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

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.

#### Contact Information

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

#### Contact

Finland