Doctoral Researcher in Electrocatalytic Valorization of Biomass
Aalto University

Job Title	Doctoral Researcher in Electrocatalytic Valorization of Biomass
Department	T105 Chemistry and Materials
Institution	Aalto University , , Finland
Date Posted	Jan. 20, 2025
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Graduate Student
Academic Field(s)	Chemistry - General
Job Website	https://aalto.wd3.myworkdayjobs.com/aalto/job/Otaniemi-Espoo-Finland/Doctoral-Researcher-in-Electrocatalytic-Valorization-of-Biomass_R42010
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.

The Department of Chemistry and Materials Science is at the forefront of research in micro-, nano-, and atomic-scale engineering of materials. Our focus areas include advanced and functional materials, chemical synthesis, energy storage and conversion, as well as molecular and materials modeling.

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Within this department, the Electrochemical Materials and Applications (EMA) research group ([url=https://dyerga.org]https://dyerga.org), led by Prof. Daniel Martin-Yerga, is seeking a highly motivated Doctoral Researcher to join our team.

The position is funded by the collaborative NordForsk project AGRI-WASTE2H2, which aims to develop electrocatalysts and processes for the simultaneous production of green hydrogen and value-added chemicals from cellulose. As a Doctoral Researcher, you will engage in cutting-edge research in experimental electrocatalysis, contributing to high-impact projects within a dynamic and supportive team environment.

Your responsibilities will include: *
Implementing experimental approaches for high-throughput screening of electrocatalysts. *
Investigating the physicochemical properties of selected electrocatalysts for cellulose oxidation and decomposition into valuable chemicals. *
Developing cellulose dissolution methods compatible with electrochemical conversion. *
Mastering advanced electrochemical, analytical, and materials characterization techniques.

Other tasks related to the position include: *
Preparing detailed reports and scientific articles. *
Presenting your research findings in group meetings and to collaborators *
Participate in national and international conferences. *
Conduct studies required to complete the Doctoral Programme in Chemical Engineering (typically four years). Find more information and check you fulfil the admission criteria here: [url=https://www.aalto.fi/en/study-options/doctoral-programme-in-chemical-engineering]https://www.aalto.fi/en/study-options/doctoral-programme-in-chemical-engineering.

You will be a key member of the newly established EMA research group at Aalto University, where we prioritize collaboration and foster a supportive, inclusive environment. We expect you to embrace these values and contribute to creating a welcoming workplace for everyone in the group, department, and school.

The project involves collaboration with Prof. Helena Lundberg (KTH in Sweden) and Prof. Maksim Ošeka (TalTech in Estonia). The primary workplace will be Aalto University but short-term research visits to these institutions are planned to enhance your research experience and collaboration.

To succeed in this role, your qualifications are *
A Master’s degree in Chemistry, Materials Science, Chemical Engineering, or a related field. *
Previous experience in experimental electrochemistry or biomass chemistry, and a willingness to

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develop skills in both areas. *
Experience with data analysis, programming (e.g., Python, LabVIEW), and/or electronics (e.g., Arduino) is advantageous. *
A cooperative mindset and the ability to work effectively within diverse teams are essential. *
Strong command of English, both written and spoken. Proficiency in Finnish is not required.

What we offer / key employment details
Aalto's School of Chemical Engineering is considered the most attractive environment for scientific research in electrochemistry and biomass valorization in Finland. The position offers a starting gross salary of 3000 euros per month. The appointment will be made by a fixed-term contract, initially for one year during which you will apply for the study right in doctoral studies at Aalto University School of Chemical Engineering, with extensions available until the end of the project on December 31, 2028. The role also includes occupational health benefits and access to Finland's comprehensive social security system. The starting date for the position is as soon as feasible, ideally on April 1, 2025, or shortly thereafter, to be agreed upon with the selected candidate.

Your supervisor at Aalto's School of Chemical Engineering adopts a people-centered approach, providing extensive support. This support includes encouraging your scientific independence and the development of your own ideas. Additionally, the supervisor will assist you with a personalized development plan tailored to your career aspirations. You will be integrated into a creative and stimulating scientific community that fosters both professional and personal growth. Moreover, you will be equipped with essential skills in electrochemistry, materials science, and sustainable chemistry.

How to apply
Please submit your application through our online system by 16.2.2025, using the "Apply Now!" button below. Include the following documents in English (PDF format): *
Curriculum vitae, including contact details for two referees. *
A letter of motivation specifically prepared for this role, explaining how your background and expertise align with the position, particularly the required experience in electrochemistry or biomass chemistry. *
Copy of your Master's degree certificate and a transcript of your studies.

Applications will be reviewed on a rolling basis and suitable candidates may be invited for an online interview before the deadline.
For more information, contact Prof. Daniel Martin-Yerga (daniel.martinyerga(a)aalto.fi). Applications sent via email will not be considered; only submissions through the "Apply Now!" button are accepted.

Please note: 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

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open positions).

Aalto University is committed to equality and diversity in our work community. We encourage qualified applicants from all backgrounds to apply and join our innovative research team.

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 just listed again as the happiest country in the world: [url=https://worldhappiness.report/news/its-a-three-peat-finland-keeps-top-spot-as-happiest-country-in-world/]https://worldhappiness.report/news/its-a-three-peat-finland-keeps-top-spot-as-happiest-country-in-world/.

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

Contact Information

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

Contact

Finland