UNIVERSITETET I OSLO

Jobbnorge ID: 248170
Deadline: 8/13/2023
Website: http://www.uio.no/
Scope: Fulltime
Duration: Engagement

Postdoctoral Research Fellow in Solid-State Electrochemistry

Job description

Position as Postdoctoral Research Fellow available at Centre for Materials Science and Nanotechnology (SMN), Department of Chemistry, University of Oslo.

Starting date is October 1, 2023.

The appointment is a fulltime position and is for a period of four years (25 % of which is devoted to required duties, usually in the form of teaching activities).

No one can be appointed for more than one Postdoctoral Research Fellowship at the University of Oslo.

Project description:

The postdoctoral researcher will be affiliated with the research group for Electrochemistry at UiO, located in Oslo Science Park, which consists of around 30 highly dedicated professors, researchers, postdocs, PhD fellows, engineers, admin and master students. The group is among the world-leading in solid-state electrochemistry and materials science of proton-conducting oxides for electrochemical energy conversion technologies such as proton ceramic fuel cells and electrolysers. These technologies are central in the transition to renewable energy and in the electrification of industrial processes.

The project will broadly address the topic of redox exsolution of transition metal nanoparticles from perovskite oxide electrocatalysts for application in solid-state electrochemical energy conversion devices. The postdoctoral researcher will be able to collaborate and benefit from an on-going PhD project that utilizes novel combinatorial pulsed-laser deposition techniques to fabricate thin films with graded compositions and a range of structural, chemical and electrical characterization methods to uncover the underlying mechanisms of the exsolution processes.

The content of the project can be tailored according to the qualifications and academic interest of the top candidates including the possibility for combining experimental, simulation and theoretical methods such as density functional theory (DFT).

The postdoctoral researcher will exist in an innovative environment with the possibility for collaboration with a range of academic and development projects on related topics. The Electrochemistry group is part of SMN, which is an interdisciplinary research centre in materials science and nanotechnology at UiO. The Centre is an international leader in basic science within functional materials and nanoscience, with applications within energy, life science, environment and ICT.

Knowledge development in a changing world - Science and technology towards 2030

Centre for Materials Science and Nanotechnology (SMN)

Video: https://www.youtube.com/watch?v=t4wvWQEhDEs

More about the position

Postdoctoral fellows who are appointed for a period of four years are expected to acquire basic pedagogical competency in the course of their fellowship period within the duty component of 25 %.

The main purpose of a postdoctoral fellowship is to provide the candidates with enhanced skills to pursue a scientific top position within or beyond academia. To promote a strategic career path, all postdoctoral research fellows are required to submit a professional development plan no later than one month after commencement of the postdoctoral period.

Qualification requirements

The Faculty of Mathematics and Natural Sciences has a strategic ambition to be among Europe's leading communities for research, education and innovation. Candidates for these fellowships will be selected in accordance with this, and expected to be in the upper segment of their class with respect to academic credentials.

- Applicants must hold a degree equivalent to a Norwegian doctoral degree in solid state or inorganic chemistry, materials chemistry or materials science. Doctoral dissertation must be submitted for evaluation by the closing date. Only applicants with an approved doctoral thesis and public defence are eligible for appointment.
- Fluent oral and written communication skills in English

Applicants are desired to have experience with advanced structural or spectroscopic characterization of functional oxides, characterization of solid oxide electrochemical cells, and/or first-principles modelling of defects in oxides, e.g., using density functional theory (DFT).

Personal skills

- Ability to conduct high-quality independent research
- Interpersonal communication skills and strong teamwork ability
- Willingness to collaborate with PhD and/or Master/Bachelor students in a specialty field
- Self-motivation, creativity, genuine curiosity concerning the field of study, work discipline, professional ethics, and ambition

We offer

- Salary NOK 544 400 - 626 300 per annum depending on qualifications in position as Postdoctoral Research Fellowship (position code 1352)
- Attractive welfare benefits and a generous pension agreement
- Professionally stimulating working environment
- Vibrant international academic environment
- Postdoctoral development programmes
- Oslo's family-friendly surroundings with their rich opportunities for culture and outdoor activities

How to apply

The application must include

- Cover letter (statement of motivation, summarizing scientific work and research interest)
- CV (summarizing education, positions, pedagogical experience, administrative experience and other qualifying activity)
- Copies of educational certificates, academic transcript of records
- A complete list of publications and up to 5 academic works that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number)

The application with attachments must be delivered in our electronic recruiting system, please follow the link "apply for this job". Foreign applicants are advised to attach an explanation of their University's grading system. Please note that **all** documents should be in English or a Scandinavian language.

In assessing the applications, special emphasis will be placed on the documented, academic qualifications and the quality of the project, as well as the candidates motivation and personal suitability. Interviews with the best qualified candidates will be arranged.

It is expected that the successful candidate will be able to complete the project in the course of the period of employment.

Formal regulations

Please see the guidelines and regulations for appointments to Postdoctoral fellowships at the University of Oslo.

No one can be appointed for more than one Postdoctoral Fellow period at the University of Oslo.

If an applicant has applied for and been granted funding for a fulltime research stay abroad while being employed as a Postdoctoral Research Fellow, the employment will be prolonged with the equivalent time as the research stay, but for no longer than of twelve months (thus extending the employment to a maximum of four years)

The research area for the position may include technologies referred to in the Ministry's export control regulations and all candidates will be evaluated in accordance with these regulations:
https://www.uio.no/english/studies/admission/master/export-control.html.

The University of Oslo has an agreement for all employees, aiming to secure rights to research results a.o.

According to the Norwegian Freedom of Information Act (Offentleglova) information about the applicant may be included in the public applicant list, also in cases where the applicant has requested non-disclosure.

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Inclusion and diversity are a strength. The University of Oslo has a personnel policy objective of achieving a balanced gender composition. Furthermore, we want employees with diverse professional expertise, life experience and perspectives.

If there are qualified applicants with disabilities, employment gaps or immigrant background, we will invite at least one applicant from each of these categories to an interview.

Contact information

For further information please contact: Jonathan Polfus, phone: +47 228 40683,e-mail: jonathan.polfus@kjemi.uio.no

For questions regarding Jobbnorge, please contact HR Adviser Olga Holmlund, e-mail: olga.holmlund@mn.uio.no

About the University of Oslo

The University of Oslo is Norway’s oldest and highest rated institution of research and education with 28 000 students and 7000 employees. Its broad range of academic disciplines and internationally esteemed research communities make UiO an important contributor to society.

Centre for Materials Science and Nanotechnology (SMN) is an interdisciplinary focus field for material and energy research at the University of Oslo. SMN has focused on basic research in renewable energy and environmentally friendly use of fossil energy sources.

The center consists of research groups from the Department of Physics (Fi) and Chemistry (Ki), has about 100 employees from around the world and manages more than 80 projects funded by the EU, the RCN and others.

Additional information

Place of service:

Sem Sælandsvei 26 0371 Oslo (Oslo Municipality)