UNIVERSITETET I OSLO

Jobbnorge-ID: 257235
Søknadsfrist: 29.02.2024
Nettside: http://www.uio.no/
Omfang: Heltid
Varighet: Engasjement

PhD Research Fellow in Materials Science

About the position

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

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

Starting date no later than October 1, 2024.

The fellowship period is 3 years.

A fourth year may be considered with a workload of 25 % that may consist of teaching, supervision duties, and/or research assistance. This is dependent upon the qualification of the applicant and the current needs of the department.

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

The Faculty of Mathematics and Natural Sciences

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

Job description

We are seeking a PhD research fellow with a genuine interest in materials physics and solar energy applications. You must be a team player with the ability to work well independently and in interdisciplinary scientific teams.

The position is part of the interdisciplinary flagship project SOLARIS, which addresses fundamental materials science for solar energy materials and solar energy harvesting with an application-oriented focus. In particular, photovoltaic and solar fuel production by photo- or PV-driven electrocatalysis will be investigated, for which novel functional compounds need to be discovered through combinatorial materials science.

The overall objective of SOLARIS is to significantly advance the field of solar energy materials science and by promoting the shift towards green economy in long-term perspective.

The Centre for Materials Science and Nanotechnology (SMN) comprises UiO's focus on renewable energy, materials science, and nanotechnology. The Centre is an interdisciplinary collaboration between five research groups in physics and chemistry, and spearheads the MN Faculty's efforts for sustainable energy solutions.

The successful candidate is expected to work as part of a team in SMN and together with other fellows in the SOLARIS project.

The PhD research fellow will utilize and develop non-standard approaches in photoelectron spectroscopy to improve our understanding of material and electronic properties relevant to solar energy harvesting. For example, depth-dependent XPS or photoemission measurements to determine band bending, interfacial band alignment, doping, etc. will be performed. This includes concurrent method development (e.g., advanced data handling and instrument modification).

As a PhD research fellow, your role will involve participating in measurement campaigns at synchrotron beamlines. You will also present experimental results at national and international conferences and workshops, providing opportunities to establish your scientific network. Additionally, you are expected to be the first author or contribute to the publication of results in peer-reviewed scientific journals.

The PhD research fellow will be affiliated with the semiconductor physics group LENS (Light and electricity from novel Semiconductors) with around 30 highly dedicated professors, researchers, postdocs, PhD fellow researchers, engineers, admin and master students.

The research group has an excellent infrastructure covering chemical, structural, optical and electrical characterization methods, device fabrication and simulations. The infrastructure includes the Micro- and Nanotechnology Laboratory (MiNaLab) with a clean room area in excess of 400 m2 with a multitude of modern fabrication and characterization facilities.

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.

- Master’s degree or equivalent in materials physics, nanoscience or materials science
- Foreign completed degree (M.Sc.-level) corresponding to a minimum of four years in the Norwegian educational system
- Fluent oral and written communication skills in English
- Candidates without a Master’s degree have until 30 June, 2023 to complete the final exam
- The position's subject area may require licensing under the Norwegian Export Control Act. In order to be considered for the position, it is a prerequisite that UiO must be able to be granted such licence. Må også lenke til denne siden: https://www.uio.no/english/studies/admission/master/export-control.html

Desired qualifications:

- Condensed matter physics background
- Experience with relevant experimental methods and apparatus (including ultra-high vacuum, XPS, UPS, PEEM, ARPES, photoemission in general, synchrotron methods in general)
- Experience with analytical and numerical evaluation of XPS and related data
- Experience with hands-on equipment maintenance or upgrades

Grade requirements:
The norm is as follows:

- The average grade point for courses included in the Bachelor’s degree must be C or better in the Norwegian educational system
- The average grade point for courses included in the Master’s degree must be B or better in the Norwegian educational system
- The Master’s thesis must have the grade B or better in the Norwegian educa-tional system
- English requirements for applicants from outside of EU/ EEA countries and exemptions from the requirements:

https://www.mn.uio.no/english/research/phd/regulations/regulations.html#toc8

The purpose of the fellowship is research training leading to the successful completion of a PhD degree.

The fellowship requires admission to the PhD programme at the Faculty of Mathematics and Natural Sciences. The application to the PhD programme must be submitted to the department no later than two months after taking up the position.

For more information see:

http://www.uio.no/english/research/phd/

http://www.mn.uio.no/english/research/phd/

Personal skills

- Good social, communication and collaboration skills
- Ability to work independently and in an interdisciplinary scientific environment

We offer

- Salary NOK 532 200 - 575 400 per annum depending on qualifications and seniority as PhD Research Fellow (position code 1017)
- Attractive welfare benefits and a generous pension agreement
- Vibrant international academic environment
- Career 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 and research interests
- CV (summarizing education, positions and academic work - scientific publications)
- Copies of the original Bachelor and Master’s degree diploma and transcripts of records
- Documentation of English proficiency if applicable
- List of publications and academic work 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.

Interviews with the best qualified candidates will be arranged.

Formal regulations

Please see the guidelines and regulations for appointments to Research Fellowships at the University of Oslo.

According to the Norwegian Freedom and 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.

UiO has an agreement for all employees, aiming to secure rights to research results a.o.

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 about the position please contact:

Professor Holger Von Wenckstern, e-mail: h.von.wenckstern@fys.uio.no

Professor Justin Wells, e-mail: j.w.wells@fys.uio.no

For technical questions regarding recruitmentsystem 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 and the Department of Chemistry, has about 100 employees from around the world and manages more than 80 projects funded by the EU, the RCN and others.

Tilleggsinformasjon

Arbeidssted:

Problemveien 7 0313 Oslo (Oslo Kommune)