

Jobbnorge ID: 276159
Deadline: 5/2/2025
Website: <http://www.ntnu.no>
Scope: Fulltime
Duration: Temporary

We are looking for a

PhD fellow in Intermediate Band Solar Cell Research

This is NTNU

NTNU is a broad-based university with a technical-scientific profile and a focus in professional education. The university is located in three cities with headquarters in Trondheim.

At NTNU, 9,000 employees and 43,000 students work to create knowledge for a better world.

You will find more information about working at NTNU and the application process [here](#).

Video: <https://youtu.be/Xt-yHCN5QS0>

About the position

Are you motivated to take a step towards a doctorate and open up exciting career opportunities? As a PhD Candidate with us, you will work to achieve your doctorate, and at the same time gain valuable experience that qualifies you for a further career in higher education and research, in and outside academia.

Your immediate leader will be the Head of Department. You will be supervised by Professor Turid Reenaas and Professor Morten Kildemo.

The position is at the Department of Physics at NTNU and focuses on development of materials for use in intermediate band solar cells and/or tandem cells.

The PhD fellow will be part of the newly established national research centre [FME SOLAR](#). It consists of more than 50 partners joining excellent R&D institutions with innovative user partners responsible for the majority of industrial activity, exports and turnover in Norway's PV industry. The centre is led by Erik Stensrud Marstein at the Institute for Energy Technology (IFE). There will be in total around 20 PhDs and Postdocs across four Norwegian universities: NMBU, NTNU, UiA and UiO. The PhD fellow will have the possibility to perform research in contact with the research and user partners of FME Solar, and with other partners at NTNU also involved in materials and solar cell research.

Duties of the position

- Carry out research of good quality within the framework described above.
- Literature review of relevant topics.
- Fabrication of materials typically in the form of thin films, using pulsed laser deposition or other relevant techniques.
- Characterization of the materials with emphasis on optoelectronic and structural properties.
- Fabrication and testing of demonstrator type solar cell devices.
- Co-supervision of master students.
- Complete the doctoral education until obtaining a doctorate.
- Write academic publications and participate in popular science dissemination.
- Participate in the research group.
- Participate in national and international activities such as conferences and/or research stays at foreign educational institutions.

Be prepared for changes to your work duties after employment.

Required selection criteria

- You must have a professionally relevant background in physics, physical electronics or materials science. Your course of study must correspond to a five-year Norwegian course, where 120 credits have been obtained at master's level. Master's students can apply, but the master's degree must be obtained and documented by October 1st 2025
- Solid background in semiconductor or materials physics, including experience thin film deposition and/or characterization, or material/semiconductor optics.
- Strong data analysis skills.
- You must have a strong academic background from your previous studies and have an average grade from your Master's degree study, or equivalent education, which is equal to B or better compared to [NTNU's grading scale](#). If you do not have letter grades from previous

studies, you must have an equally good academic foundation. If you have a weaker grade background, you may be considered if you can document that you are particularly suitable for a PhD education.

- Fluent oral and written communication skills in English.
- You must meet the requirements for admission to the [faculty's Doctoral Programme](#).

The appointment is to be made in accordance with [Regulations for the Universities and Colleges Act \(university and colleges regulations\) and Regulations for the degrees philosophiae doctor \(ph.d.\) and philosophiae doctor \(ph.d.\) in artistic development work at the Norwegian University of Science and Technology \(NTNU\)](#) for general criteria for the position.

Preferred selection criteria

- Experience with doped oxides.

Personal characteristics

To complete a doctoral degree (PhD), it is important that you are able to:

- Work in a team and establish positive relationships with other students and staff.
- Work independently.
- Work in a structured way, set goals and make plans to achieve them, together with the supervisors.
- Present and discuss your research with other professionals.
- Analyze data, assess different perspectives and draw well-founded conclusions.
- Be flexible and open to adjusting the plan for the project as needed.

Emphasis will be placed on personal qualities.

We offer

- An exciting job with an important [mission](#) in society
- Developing tasks in a strong and international professional environment
- Career guidance and [follow-up during the PhD period](#)
- Open and inclusive working environment with committed colleagues
- [Working capital](#) that can be used to implement the project
- [Mentor programme](#) as a [new employee at NTNU](#)
- As a public employee, you have favourable benefits as a member of the [Norwegian Public Service Pension Fund \(SPK\)](#)

You will be employed as a PhD Candidate at NTNU and will have access to [employee benefits and discounts](#).

Diversity

Diversity is a strength, and at NTNU we aim to be an employer that reflects the diversity in society and that makes use of the potential of the population's collective skills. Our vision is [Knowledge for a better world](#) and [our values are creative, critical, constructive and respectful](#). We believe that an organization that is equal, diverse and gender-balanced is essential for us to achieve our goals.

We strive to attract employees with different skills, life experiences and perspectives to contribute to even better problem solving of our societal mission in research and education.

If you think this position is relevant and interesting, we encourage you to apply, regardless of gender, functional ability and cultural background, or whether you have been out of work for a period of time.

Salary and conditions

In the position of PhD Candidate, code 1017, your gross salary will normally be NOK 536 200,- per annum. A 2% statutory contribution to the State Pension Fund is deducted from the salary.

The employment period is 3 years.

For employment as a PhD Candidate, it is a prerequisite that you gain admission to the PhD programme in [physics](#) within three months of your employment contract start date, and that you participate in an organized doctoral programme throughout the period of employment.

As an employee at NTNU, it is important that you keep yourself up to date with academic and organizational changes and adapt to them.

For the necessary academic and social interaction, it is a prerequisite that you are physically present and available to the institution on a daily basis.

The appointment is carried out in accordance with the principles of the [State Employees Act](#), and [Export control](#) (legislation that regulates the export of knowledge, technology and services). Candidates who, after assessment of the application and attachments, are considered to be in conflict with the criteria in the latter act, will not be able to be employed.

About the application

The attachments (including a description of your scientific work) must accompany the application as these documents form the basis of the application assessment. The documents must be in English.

Please note: the application will only be assessed on the basis of the information we have received by the application deadline. Therefore, make sure that your application clearly shows how your skills and experience meet the criteria described above. The application and all

attachments must be sent electronically via Jobbnorge.no. If you are invited to an interview, you must bring certified copies of certificates. The application must include:

- CV and certificates
- Transcripts and diplomas for bachelor's and master's degrees. If you have not completed the master's degree, you must submit a confirmation that the master's thesis has been started and when it will be submitted.
- A copy of the master's thesis. If you have not submitted your master's thesis, you can attach a draft of the thesis or a description of the work. Documentation of a completed master's degree must be presented before taking up the position.
- Name and contact information of three referees
- If you have publications or other relevant research work

If all, or parts, of your education has been taken abroad, we also ask you to attach documentation of the scope and quality of your entire education, both Bachelor's and Master's education, in addition to other higher education. If your institution uses "diploma supplement" (normal for most European institutions), you must attach this. A description of the documentation required can also be found [here](#). If you already have a statement from [Norwegian Directorate for Higher Education and Skills \(HK-dir\)](#), please attach this as well.

Joint works will be considered. If it is difficult to identify your contribution to joint work, you must attach a brief description of your participation.

When assessing the best qualified, we emphasize necessary qualifications such as education, experience and personal suitability. Motivation for the position, ambitions and potential for research will also count when assessing the candidates.

NTNU recognizes a wide range of academic contributions and has committed itself to The San Francisco Declaration on Research Assessment and CoARA (responsible assessment of research and recognition of a greater breadth of academic contributions in accordance with NTNU's social mission).

General information

A public list of applicants with name, age, job title and municipality of residence is prepared after the application deadline. If you wish to be exempt from entry on the public applicant list, this must be justified. Assessment will be made in accordance with [current legislation](#). You will be notified if the exemption is not granted.

If you think this position looks interesting and in line with your qualifications, you are welcome to apply.

If you have any questions about the position, please contact Turid Reenaas, telephone +47 7359 0386, email turid.reenaas@ntnu.no. If you have any questions about the recruitment process, please contact Magnus Gautvik, e-mail: magnus.gautvik@ntnu.no

Application deadline: 02.05.2025

For practical information about [working at NTNU](#), please visit [this webpage](#).

[The city of Trondheim](#) is a modern European city with a rich cultural scene. [Trondheim is the tech capital of Norway](#), with a population of 200,000. The Norwegian welfare state, including healthcare, schools, kindergartens and overall equality, is probably the best of its kind in the world. Professional subsidized day-care for children is easily available. Furthermore, Trondheim offers great opportunities for education (including international schools) and possibilities to enjoy nature, culture and family life and has low crime rates and clean air quality.

NTNU - knowledge for a better world

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The Norwegian University of Science and Technology (NTNU) creates knowledge for a better world and solutions that can change everyday life.

Department of Physics

Our research and teaching are both experimental and theoretical, covering a wide range of disciplines. Our activities contribute to development of new medical technology and to finding solutions for the next generation's communication technology, energy utilization and development of materials. [The Department of Physics](#) is one of eight departments in the [Faculty of Natural Sciences](#).

Additional information

Place of service:

Høgskoleringen 1 7491 Trondheim (Trondheim Municipality)